

# **An Exploration of Blended Learning in Academic English for Postgraduates—A Case Study from China**

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## DECLARATION

This work has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

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## STATEMENT 1

This thesis is the result of my own investigations, except where otherwise stated. Where correction services have been used the extent and nature of the correction is clearly marked in a footnote(s). Other sources are acknowledged by footnotes giving explicit references. A bibliography is appended.

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## STATEMENT 2

I hereby give consent for my thesis, if accepted, to be available for deposit in the University's digital repository.

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## Acknowledgement

Looking back on the past five years, they were five years of struggle and harvest. The year I spent studying and living in the UK was a year of enrichment and growth for me and my life. After returning from a year of study in the UK, I was promoted to dean of the School of Foreign Languages in my university, so as to enable me to devote even more time to the service for both the faculty and students; my husband, too, made many breakthroughs in his field of research; our parents were still in good health and were starting to enjoy a good life in their old age; our son had successfully adapted to life in primary school. Following a successful ear surgery, he is also growing up healthily. I am sincerely thankful for all of these gifts.

Though it has been a long time since I finished my thesis, I have yet to write the acknowledgements. I am afraid that I cannot recount the whole process of completing my doctoral thesis in just a few words, let alone express my gratitude to all the teachers and students who guided and helped me in this process.

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## **Abstract**

Blended learning which integrates online and offline learning has received widespread attention and gradually been implemented in the academic English course by many universities in China. However, there are relatively few empirical research studies at postgraduate level and many teachers and students begin to complain about their unsuccessful blended learning experiences.

Therefore, within the context of information technology, global education and the influence of the COVID-19, this study primarily aimed to explore and inform good teaching practices by evaluating the impact of an intervention on blended learning in the academic English course for the postgraduates.

Based on the data analysis of the questionnaire, the pre-test and the post-test as well as the interviews, along with the combination and adjustment of the innovative teaching practices applied in the experimental classes, the researcher gained the following findings.

Findings for Research Question 1 revealed the current study situations of postgraduate learners on the academic English course and achieved the useful information in designing the teaching practices in this empirical research.

Findings for Research Question 2 explored the good teaching practices directed by theories and approaches of teaching and learning. The results of the pre-test and post-test revealed that the postgraduates taught by blended learning in the experimental classes had progressed at a significantly higher rate than those in the control classes using the traditional classroom teaching. Therefore, these teaching practices had been verified to be beneficial to improve English language proficiency and attainment for postgraduates in blended learning of the academic English course.

Findings of Research Question 3 illustrated the recommendations from three perspectives, such as the university, the teachers and the postgraduates to improve the teaching quality and effects as well as strengthen the English language proficiency of the postgraduates.

Therefore, this study could increase the understanding of blended learning's application field, provide some valuable new insights and guidelines for English teachers and promoting the English language proficiency of the postgraduates, thus make a good contribution to the body of knowledge in blended learning.

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## Chapter 1 Introduction

In this introduction, I briefly introduce the background of this research and state the aims and significance of my study. Furthermore, I provide an overview of the entire thesis so as to offer the reader a road map through the text.

### 1.1 Background of the Study

As an important part of higher education in China, academic English has become a key part of the postgraduate teaching reform due to its important status in degree courses, its extended commitment the course requires and large audience. The principles and policies of teaching academic English have been changed and adjusted along with the improvement and development of educational requirements in China since the beginning of the reform and opening-up period in 1978. *Teaching Requirements for College English Course* (2007), *Ten-Year Development Plan for Education Informatization (2011-2020)*, and *College English Teaching Guide* (2017) all stipulate that college English courses should combine traditional face-to-face courses with computer/network-based online courses (Khan, 1997; Carliner, 2004) to construct various blended learning modes (Ellis, et al., 2006; Garrison and Vaughan, 2008), ensuring that students at different levels of studying English are comprehensively educated in this foreign language.

Moreover, following the breakout of COVID-19, the Chinese Ministry of Education encourages teachers to develop their online classes to supplement or replace offline classes. The frequent lock-downs have interrupted the teaching in conventional classrooms. In order to keep on track with prescribed teaching schedules, teachers in China have overcome difficulties and carried out diverse online teaching interactions, which triggered a reform of the education system and led to the implementation of blended learning.

Against this background, blended learning, which can integrate online and offline learning (Garrison and Vaughan, 2008), has received widespread attention and has gradually been implemented in academic English courses by many universities, such as Tsinghua University (Yang, et al., 2017), Peking University (Wang and Feng, 2017), Shanghai Jiaotong University, Shenzhen University (Yuan and Liu, 2014) or Shandong University of Technology (Guan, et al., 2020).

However, along with the increase of blended learning in academic English at undergraduate level (Zhao and Yuan, 2010; Lu, et al., 2011; Sun, et al., 2017; Zheng, 2019), there are relatively few empirical research studies focused at postgraduate level (Yin and Huang, 2015). Furthermore, having practiced blended learning at postgraduate level, many teachers and postgraduates complain about difficulties and obstacles they have met (Wang and Wei, 2020). For instance, some teachers who consider themselves to be lacking in information literacy and proficiency skills, have commented on the difficulties and additional burden they experienced when having to apply blended learning in their teaching (Wang and Wei, 2020). Postgraduates, who are used to traditional classroom teaching, believe that blended learning cannot provide them with adequate emotional support because of the difficulty of receiving immediate feedback from teachers and peers when studying asynchronously online (Zhao and Yuan, 2010). Therefore, in this context, a key concern for educators is to conduct more studies at postgraduate level as well as to explore and inform good teaching practices by evaluating the impact of an intervention on blended learning in postgraduate-level academic English courses.

On the other hand, as a result of the global integration of education, countries such as the United States (Graham, 2006; Sawyer, 2006, 2014), Australia (Stacey and Wiesenber, 2007; Jones, et al., 2014). and Singapore (Khine and Lourdasamy, 2003) have developed blended learning successfully. There are many western scholars mainly focusing on teaching effectiveness (Ushida, E. 2005; Bernard, et al., 2014), teaching design (Carmen, 2002; Bersin, 2004; Picciano, 2009), impact factors (Eom, et al., 2006; Diep, et al., 2017), learning analysis and management (McGill and Klobas, 2009; Zacharis, 2015) and so on. Compared with thriving discussions in the field of higher education (Allan, et al., 2019), there are less studies of blended learning at postgraduate level (Dzakiria, et al., 2006; Hong and Lee, 2008; Smyth, et al., 2012, Wahab, et.al, 2016), especially studies related to foreign language learning (Orsini-Jones, M. et al., 2017). However, despite limited research and academic discussion by western scholars on blended learning in English language education in China, western research methods and academic approaches have been shown to be both inspiring and useful for empirical research in this area.

Therefore, it is the aim of this researcher to rethink how to construct a quality blended learning experience based on an empirical study of academic postgraduate English courses. My objectives are to improve the postgraduates' English proficiency while also addressing

the discrepancies between the experiences from blended learning of teachers and postgraduate learners. Thirdly, I aim to contribute to the development of pedagogical theory by providing fresh evidence from my case study.

## **1.2 Aims of the Study**

The primary aim of the thesis is to explore and inform good teaching practices by evaluating the impact of an intervention on blended learning in an academic English course for postgraduates. Based on the empirical study of the thesis, the researcher hopes to provide better pedagogical support for English teachers engaged in the delivery of academic English courses for postgraduates through the blended learning mode.

Informed by the primary aim, the study has the following three main purposes.

The first one is to comprehensively describe the current study situation in academic English courses at postgraduate level in China, including postgraduates' demographic information and online experience, their attitudes, influencing factors, and requirements for the academic English course. This information will offer the foundation for the design, refining and implementation of my empirical study.

The second purpose is to identify teaching practices appropriate for improving postgraduates' English language proficiency based on the practical teaching and learning needs in blended learning environments, based on the testing and evaluating the impact of the intervention of these teaching practices in the empirical study.

The third purpose is to provide recommendations and to consider their implications for the university, teachers and students, respectively, while emphasising the need to satisfy the practical teaching needs in blended learning on academic English courses.

Therefore, it is hoped that this study can provide valuable new insights into the perspectives mentioned above, and thus make a significant contribution to the body of knowledge in the field of blended learning pedagogy.

## **1.3 Significance of the Study**

This study has significance for research in the field of blended learning in several respects:

Firstly, this study systematically surveys blended learning as well as other theories of teaching and learning in China and other countries to form a solid theoretical framework

and illustrate the specific context of the academic English courses in China. My study thus contributes to a better understanding of the current situation of academic English courses for postgraduates taught through blended learning.

Secondly, this study enriches the empirical studies of English language education at Chinese postgraduate level within the blended learning context and provides future researchers with a foundation for integrating blended learning into other courses. On the one hand, academic English courses for postgraduates represent a distinct category, not only because they have the highest hourly and credit value, but also because most postgraduates (with the exception of those majoring in English) are required to select English as a compulsory course. On the other hand, most postgraduates give significant attention to the academic English course based on two reasons: One is that they are required to publish papers indexed by international journals (written in English), the other is that English proficiency is an essential skill in their job applications and further education. As a result, they place comparatively higher demands on their postgraduate English course. Moreover, as mentioned in the background section above, compared with studies of blended learning at other levels, there are relatively few empirical research studies focused on the postgraduate level. Therefore, focusing on blended learning of academic English courses for postgraduates will enrich the corpus of available research.

Thirdly, this study suggests specific teaching practices for use in scaffolding the English language study of postgraduate students. It does so by identifying a gap in blended learning pedagogies aimed at improving the English language proficiency of postgraduate learners based on an empirical study conducted in a Chinese provincial university.

Fourthly, the findings and implications that emerge from the empirical research (using a mixed-method approach consisting of detailed analysis of the questionnaire, comparison and contrast of pre-test with post-test data, and interviews with teachers and postgraduates) have generated new knowledge and insights relevant to future studies into blended learning.

## **1.4 Thesis Overview**

This thesis consists of 6 chapters.

Chapter 1 is the introduction of the thesis, introducing the background, aims, and significance of the study, as well as an overview of the structure of the thesis.

Chapter 2 is the critical literature review. Following a review of definitions, types and studies related to blended learning, the second major part critically engages popular theories of teaching and learning used in English language teaching and learning in China and other countries, such as research into communicative language teaching, cooperative learning, multiple intelligences, flipped classroom teaching, sociocultural theory and production-oriented approach, in order to provide useful teaching practices in the empirical research.

Chapter 3 contains the research methodology, explaining how the study has been designed and implemented. The researcher firstly introduces the research questions and research design, then describes the participants and the teaching context of the empirical research. Based on the descriptions of the quantitative and qualitative methods, the researcher presents the data collection and ethical considerations of the study.

Chapter 4 contains the data analysis and results, based on the analysis of the questionnaire, the comparison and contrast between the pre-test and the post-test as well as the detailed discourse analysis of the interviews of the teachers and the postgraduates.

Chapter 5 is the discussion chapter, exploring the current study situation of a specific type of academic English course, the teaching practices employed in scaffolding English language study, as well as containing some insightful recommendations for the university, the teachers and the postgraduates.

Chapter 6 presents the conclusions from this research, discussing limitations of the study and making suggestions for future work.

## **Chapter 2 Critical Literature Review**

### **2.1 Introduction**

In this chapter, the intention is to organise, analyse, and summarise the existing literature on blended learning to provide an overview of the research field, identify research gaps, and establish a conceptual framework for this study.

The primary aim of the thesis is to explore and inform good teaching practices by evaluating the impact of an intervention on blended learning in an academic English course for postgraduates. Because blended learning (hereafter referred to as BL) is “to combine various pedagogical approaches ... to produce an optimal learning outcome” (Driscoll, 2002, p: 2), the researcher faces the challenge of finding out which teaching practices are appropriate in facilitating blended learning based on the practical teaching and learning needs in academic English courses for postgraduates.

Therefore, in order to make better use of teaching practices in the empirical research, the researcher first discusses some widely accepted theories of teaching and learning. The aim of this review is to identify teaching strategies and best practices that can be utilised in the blended learning of the academic English course for postgraduates.

### **2.2 Blended Learning**

E-learning, the short term for electronic learning, refers to a learning mode that uses the internet or electronic devices to deliver content. E-learning, which became prevalent at the end of the last century in the wake of the development of information technology, has had unprecedented impact on the traditional teaching mode centred on “classroom, textbook and teacher”. In e-learning, teachers and students do not need to communicate face-to-face, making it possible to conduct a whole course through websites, teaching by audio and video, and student discussion boards (Sands, 2002).

Along with the spreading of e-learning, in the early 1990s, there was a heated debate in the U.S. education community about whether “a walled university” (offline colleges) would be replaced by “a university without walls” (such as online colleges). Until the mid-1990s, both sides of the debate (the “replaceable” and the “irreplaceable”) held their own views, and neither side was able to convince the other. The debate not only caused great

repercussions in America, but also had a number of international (including in China) echoes, forming two long-standing schools of thought.

However, after nearly a decade of practice in online education, the international education community, especially the U.S. education community, in summing up both positive experiences of e-learning and online classes, but also acknowledging negative lessons learned in the process, has finally reached a consensus that the “replacement theory” was an overly radical, one-sided view. For the e-learning method did to some extent solve certain difficulties related to time, location, and economic factors, but it had some unavoidable drawbacks. For example, teachers and students tended to feel that the communication with each other was inadequate and highly dependent on the computer equipment, internet access and the online environment. As a result, the highly structured activities based on the course platform were unable to live up to the expectations set by teaching and learning concepts (Hara and Kling, 2000; Kinshuk and Yang, 2003).

Therefore, people began to rethink the purely technological environment of e-learning, and “blended learning” first emerged in the field of corporate trainings around the turn of the last century. In order to meet the diverse needs of training audiences in terms of time and location, companies then explored the possibility of combining online training with traditional training, using a combination of traditional face-to-face teaching and online or distance learning (Sharma and Barrett, 2008).

In December 2000, *The National Educational Technology Plan*, drafted by leading education experts in the Office of Educational Technology in America, stated: “e-Learning can achieve certain educational goals well, but it cannot replace traditional classroom teaching”; and “e-Learning will not replace schooling, but it will significantly change the purpose and function of classroom instruction” (*The National Educational Technology Plan*, 2000). This plan laid the groundwork for the new meaning of “blending learning” to emerge in America and globally. In December 2003, He (2005) formally advocated “blended learning” for the first time in China at the Seventh Global Chinese Conference on Computer Education Applications, which pushed forward the research on “blended learning” in China.

### 2.2.1 Definitions of Blended Learning

Blended learning is also referred to as hybrid learning, mixed learning, integrated learning, or multi-method learning (Franks, 2002). Strictly speaking, BL is not a new concept; the word “blend” means “mix or mingle” and the original meaning of BL is a combined learning or teaching, which has been around for many years (He, 2005). So far, scholars have not agreed on a single definition of BL and refer to different concepts of what the “blended” is.

Colis and Moonen (2001) define BL as a hybrid of traditional face-to-face learning and online learning. This means that learning takes place both in the classroom and online, with the online component being a natural extension of the classroom. In this way, BL is a flexible method that allows for a combination of learning at different times and places, providing some of the convenience of a fully online course, but without completely losing the face-to-face contact.

According to Driscoll (2002), blended learning refers to four different concepts:

- (1) To combine or mix modes of web-based technology (e.g., live virtual classroom, self-paced instruction, collaborative learning, streaming video, audio, and text) to accomplish an educational goal.
- (2) To combine various pedagogical approaches (e.g., constructivism, behaviorism, cognitivism) to produce an optimal learning outcome with or without instructional technology.
- (3) To combine any form of instructional technology (e.g., videotape, CD-ROM, web-based training, film) with face-to-face instructor-led training.
- (4) To mix or combine instructional technology with actual job tasks in order to create a harmonious effect of learning and working.

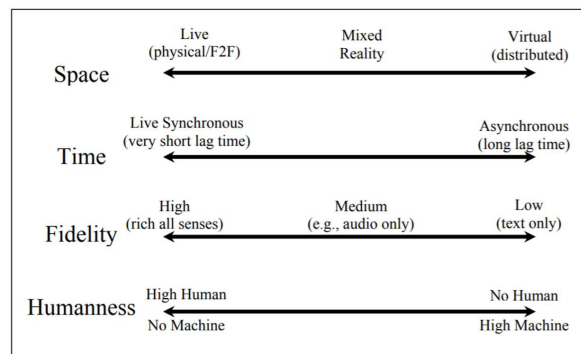
(Driscoll, 2002, p: 1-4)

Driscoll's definition it shows that the educational community, following the rapid spread of information technology, has taken advantage of the connotation of the term “hybrid or blended” but given it a whole new meaning, one that is closely related to information technology.

A number of scholars define BL from the perspective of a combination of various teaching elements. For instance, Procter (2003) believes that BL is the effective combination of different modes of delivery, models of teaching and styles of learning.

Thorne (2003) defines BL as the mix of traditional forms of classroom training and one-to-one coaching with multimedia technology, CD ROM, video streaming and virtual classroom. Whitelock and Jelfs (2003) describe BL from three aspects: the integrated combination of traditional learning with web-based online approaches; the combination of media and tools employed in an e-learning environment; and the combination of a number of pedagogical approaches, irrespective of learning technology use. Bersin (2004) gives a definition of BL as the combination of different training “media” (technologies, activities, and types of events) to create an optimum training programme for a specific audience.

Although many experts have defined BL from different perspectives, Graham still thinks that “[a]lthough blended learning has become somewhat of a buzzword in corporate and higher education settings, there is still quite a bit of ambiguity about what it means” (Graham, 2006, p.2). In his opinion, “Blended learning systems combine face-to-face instruction with computer-mediated instruction” (Graham, 2006, p.5). Graham also introduces four dimensions of interaction in face-to-face and distributed learning environments. The four dimensions are space, time, fidelity and humanness, which can be borrowed here to describe the variety of interactions in the blended environment (see Figure 2.1).



(F2F: Face to face)

**Figure 2.1 Four Dimensions of Interaction in Blended Environments (adapted from Graham, 2006, p.5)**

According to Graham, the space dimension can go from live in face-to-face to virtual reality. The time dimension develops from live synchronous with a very short lag time to asynchronous, which has a long lag time. The fidelity dimension reaches from a high level that can incorporate sound, pictures, movies and text to a low level that is using only one

of the senses. The humanness dimension addresses the ratio of human interaction and machine interaction (Graham, 2006, p. 7; Moebs and Weibelzahl, 2006, p: 2).

On the other hand, although these experts do not agree with each other to some extent, the current general understanding of BL in academia is that BL encompasses both face-to-face and online learning components and thus is a combination of both. The specific definition of BL can be further divided into the following types.

### **1. Only emphasizing the core components**

Some researchers' definitions of BL only emphasize its core components, which include both online and offline or face-to-face learning elements. Williams (2002) and Graham (2006) both define BL as the combination of face-to-face classroom instruction and online learning. Rovai and Jordan (2004), from the perspective of curriculum design, argue that if fully face-to-face instruction and fully online learning are viewed as a continuum, any model that lies in between is a BL model. However, this definition given by Rovai and Jordan has also been considered too broad (Clark, 2003; Bliuc, Goodyear and Ellis, 2007). For instance, Clark (2003) suggests that viewing BL only as a combination of face-to-face classroom instruction and online learning is not sufficient, which can lead many teachers to believe that they are implementing BL by simply adding a little online learning component to the traditional classroom instruction.

### **2. Focusing on whether face-to-face classroom instruction is partially replaced by online learning**

Some researchers argue that BL is more than just adding elements of information technology to the traditional classroom and therefore add the reduction of face-to-face instructional time to the definition of BL. In the second BL workshop held in 2005, the participants rejected the broad definition and defined BL as follows: "BL is a model of teaching and learning in which part of face-to-face instructional time is replaced by online activities" (Picciano, 2009). Furthermore, Staker and Horn (2012) consider BL as a learning mode in which students spend part of their time receiving classroom instruction and part of their time learning online, with the online portion being controlled by the student in terms of time, place, and/or pace of learning.

### **3. Focusing on the percentage of time spent online and in the classroom**

Allen and Seaman (2003) define BL according to the different weightings of the online learning component and the face-to-face classroom component, which are broadly

classified into several types: web-enhanced, hybrid, and fully online-based. Moreover, Watson, Murin et. al (2013) adopt the definition given by the Clayton Christensen Institute for Disruptive Innovation (Christensen, Horn and Staker, 2013), which also defines BL as an integrated learning experience with the emphasis on the percentage of time spent online and in the classroom, respectively.

#### **4. Emphasizing the quality of blended learning**

Singh and Reed (2001) define BL as the application of the right educational technology at the right time, for the right audience, through the right teaching method. Garrison and Kanuka (2004) define BL as a “*thoughtful*” combination of face-to-face classroom instruction and online learning experiences. Bliuc, Goodyear, and Ellis (2007) define BL as a “*systematic*” integration of face-to-face and technology-supported interactions between teachers, students, and learning resources.

These definitions mentioned above suggest that BL should be distinguished from fully classroom-based instructions and enhanced online learning experiences. Moreover, BL is not simply an overlay or a mix of online and face-to-face mediums, but requires careful instructional design.

Furthermore, the definition of BL by Chinese scholars focuses more on its role and meaning. Li and Zhao (2004) believe that the main idea of BL is to integrate two learning modes, face-to-face teaching and online learning, in order to reduce costs and increase efficiency. He (2005) points out that BL is to combine the advantages of traditional learning methods and e-learning; it could show the leading role of teachers and reflect the main position of students. At the same time, both definitions emphasize the essence of BL, such as, to take advantage of the strengths of both face-to-face teaching and online learning in order to achieve better learning outcomes than either face-to-face teaching or online learning would on their own.

Therefore, based on the definitions mentioned above, the researcher depicts BL as a thoughtful fusion of teaching and learning approaches which combines the offline learning experience to some extent with an online learning experience (at least online element). It also is a combination of the advantages of e-Learning (for instance, digital or networked learning) and traditional learning methods; that is, to play the leading role of teachers to guide, inspire, and monitor the teaching process, and to fully reflect the initiative, enthusiasm, and creativity of students as the main participants of the learning process.

However, it does not define the percentage for both learning ways, which depends on the teachers, students, the content, information technology and so forth (Colis and Moonen, 2001; Driscoll, 2002; Williams, 2002; Bersin, 2004; He, 2005; Graham, 2006; Picciano, 2009; Christensen, Horn and Staker, 2013).

Based on the above definition and the practical aim of the empirical research, the researcher considered that the “blended” in BL in the context of the academic English course for postgraduates of this research would be understood in two respects: one was the blending of online and offline teaching, the other was the blending of good teaching practices, in accordance with the definition by Driscoll (2002).

## 2.2.2 Types of Blended Learning Pedagogy

According to different criteria, BL can be divided into several different types. In this section, the researcher illustrates several classifications of BL from different perspectives.

Some researchers have categorized BL according to the extent to which face-to-face time in the classroom is replaced by online learning. The specific classification is shown in Table 2.1 below. (The ratio in the table indicates the proportion of online learning hours to total course hours)

**Table 2.1 The Classification of Blended Learning**

No.	Researchers	Classification		
		Web-enhanced	Blended	Fully Online
1	Allen & Seaman (2003)	Web-facilitated 1-29%	Blended/Hybrid 30-79%	Above 80%
2	Smith & Kurthen (2007)	a minimal number of web- based elements	Blended: below 45% Hybrid: 45%-80%	Above 80%
3	Dudeney & Hockly (2007)	Minimal online resources	75%	100%
4	Watson et. al. (2013)	Below 30%	Above 30%	100%

Allen and Seaman (2003) divide the learning into four parts according to the proportion of content delivered online. For those courses without any online technology used, they define it as *traditional course*; for instance, the content of a course is delivered orally/ verbally or in writing. If a course is delivered with web-based technology to support the classroom instruction, from 1 to 29%, for example by using Blackboard to post course syllabi or assignments, it can be called a *web-facilitated course* and essentially a face-to-face course as well. A course is defined as a *blended or hybrid course* based on its blending of the online and face-to-face parts, especially when the percentage of the online course is between 30% and 79%. If the online part occupies above 80%, it is called *online course*.

Smith and Kurthen (2007) believe that four categories—*web-enhanced*, *blended*, *hybrid learning* and *fully online*—are more practical. They define *web-enhanced learning* when only a minimal number of the web-based technology is used, such as posting announcements; *blended learning* when web activities replace some classroom activities, but not more than 45%; *hybrid learning* when web activities replace 45% to 80% of traditional face-to-face classroom teaching; and *fully online* when classes with or above 80% web-based learning.

Dudeney and Hockly (2007) also use time scaling to define the type of blended instruction in English language teaching and divide it into three types, arguing that a *fully online learning* course consists of 100% online instruction; *blended learning* means that 75% of the content is delivered via online and 25% of the content is delivered via face-to-face classroom teaching; and *traditional mode* refers to courses that have attached some additional web resources as an extension and support for face-to-face classroom instruction.

Watson, et al. (2013) consider the online learning component to be 30% or more to be a *blended learning*. If it is below 30%, it is called *web-enhanced* or *traditional classroom teaching*. And when it is 100%, it can be called *fully online course*.

Although they do not agree on the same percentage of online teaching content, which is critical to define whether it is a blended course or not, they all note the importance of defining how much the content is delivered by the teacher during the teaching process. However, the problem with these classifications is that it is not easy to quantify the percentage of online and face-to-face learning in a teaching and learning process. For example, if a teacher in a face-to-face classroom shows a picture of a panda, by searching

online, to make students understand that there are only two colours, white and black, in a panda's fur, it is difficult to define whether this method is a web-based technology or not.

Other researchers have divided face-to-face and online models based on the pairing of their respective functions. Adams, et al. (2009) distinguished four models of BL implementation: (1) online resources as a support for autonomous learning; (2) online learning resources linked to classroom instruction; (3) having an online platform that provides learning materials as well as facilitates interaction; and (4) the face-to-face component and online learning activities complementing each other.

There is also a category based on different approaches to instructional design. For instance, Alammery, Sheard, and Carbone (2014) categorize BL into three types: *low-intensity blended* (where only some online activities are added to an existing face-to-face course), *medium-intensity blended* (where online activities replace some of the existing face-to-face classroom activities), and *high-intensity blended* (where the entire course is completely redesigned to better integrate online and face-to-face instruction). Moreover, it seems that this classification is similar to the category designed by Dudeney and Hockly (2007) and the one by Watson, et al. (2013). Although these scholars divide BL into 3 categories respectively, their principles of dividing BL are not the same. The former focuses on the teaching activities and pedagogic instruction, the latter pays attention to the percentage of the online part in the whole teaching process.

Based on the literature review of types of BL and the practical needs of the academic English course, the researcher prefers to use the medium-intensity blended type to inform the empirical research. Therefore, in term of research design, the research would focus on how to apply the teaching practices to different teaching steps in the face-to-face classroom activities and online activities.

### **2.2.3 Studies of Blended Learning**

As a result of the global integration of education, countries such the United States (Graham, 2006; Sawyer, 2006, 2014), Australia (Stacey and Wiesenbergs, 2007; Jones, et al., 2014) and Singapore (Khine and Lourdasamy, 2003) have developed successful blended learning. Based on the articles and books published in BL studies, many western scholars focus mainly on issues related to the development and implementation of BL in

the following six aspects: teaching effectiveness (Chou and Liu, 2005; Baepler, Walker, and Driessen, 2014; Thai, De Wever and Valcke, 2017), instructional design and pedagogies research (Dziuban, et al., 2006; Picciano, 2009; Huang, et al., 2009; Tomlinson and Whittake, 2013; Lai, Lam, and Lim, 2016), learning analysis research (Zacharis, 2015; Gao, 2017; Lu, et al., 2018), influencing factors studies (Eom, Wen, & Ashill, 2006; Çakıroğlu, 2014; Diep, et. al, 2017), research related to teachers (Comas-Quinn, 2011; Tian, 2015), and institutional level research (Graham, Woodfield and Harrison, 2013; Ma, Ge and Hu, 2021).

Among the six issues mentioned above, the first two aspects have a close relationship with this study's primary aim, and are therefore illustrated in detail in this part. On the one hand, the researcher's study needs to achieve the good teaching effectiveness in order to evaluate the impact of an intervention on blended learning in the academic English course for postgraduates, which is based on the good teaching practices. On the other hand, good instructional design with employing appropriate teaching pedagogies is the prerequisite of the good teaching effectiveness (Ellis and Shintani, 2013). Thus, it was necessary for the researcher to learn from previous studies on teaching effectiveness, on instructional design and pedagogies research of BL before implementing the empirical research.

### **1. Teaching Effectiveness Study**

On the issue of assessing the effectiveness of BL, researchers have focused mainly on student achievement as well as satisfaction aspects, however, they have used different methods to explore the points.

One type of study is the comparative study, which compares BL with single face-to-face or online learning, respectively. For instance, Chou and Liu (2005) conducted a 14-week field experiment with students in a junior high school in Taiwan to compare the effectiveness of learning under BL and single face-to-face mode. Learning effectiveness in this study was defined by four variables: learning achievement, computer self-efficacy, satisfaction, and learning climate. The results showed that the blended model outperformed the single face-to-face model on all four variables. The findings suggested that students who possessed basic IT skills and computer self-efficacy had better learning effectiveness than their counterparts in traditional classrooms. Thai, De Wever and Valcke (2017) used an experimental method to compare the effects of four models: flipped classroom model,

BL model, a traditional learning model, and an E-learning model to examine students' academic achievement, self-efficacy beliefs and intrinsic learning motivation. The results found that academic achievement was better in the flipped classroom model than in the other models, followed by BL. The flipped classroom model and BL were also found to have a positive impact on students' self-efficacy beliefs and intrinsic motivation to learn.

The findings of the above studies confirm that blended learning can improve student achievements. Furthermore, variables mentioned above, such as self-efficacy and intrinsic motivation, are not only potential reasons for why blended learning improves student learning outcomes, but also the indicators showing the impacts of blended learning application as well as the preconditions for students to better adopt blended learning. So, in her empirical study, the researcher would consider these aspects when designing questions in the postgraduates' questionnaire and interview to facilitate better implementation of her research. On the other hand, the researcher would explore improved teaching practices to stimulate and inspire the postgraduates' positive attitudes towards BL, aiming to achieve better learning outcomes.

Another type of study examines whether student performance and satisfaction changes after the implementation of BL. Baepler, Walker, and Driessen (2014) investigated a chemistry course with two-thirds face-to-face instruction time. After the mode was replaced by online learning, the exam scores were shown to be at least as good as before. In addition to having had a positive effect on student perceptions of the learning environment, students' perceived satisfaction also improved compared to the traditional face-to-face mode.

Moreover, many other studies have examined the issue of student satisfaction with BL through questionnaires and interviews, and the results show that students have positive attitudes toward BL (Ushida, 2005; Chenoweth, Ushida & Murday, 2006; Scida & Saury, 2006; Stracke, 2007).

Furthermore, there is another category of meta-analytic studies on the effectiveness of teaching and learning. Means, et al., (2013) conducted a meta-analysis of 50 effect sizes from 45 studies on online or BL in higher education and earlier years of education. The mean effect size for purely online versus face-to-face contrast studies was 0.05 ( $p=0.46$ ,  $k=27$  effect sizes), which indicates that the effectiveness of purely online learning was no different from that of the traditional face-to-face model. Although the mean effect size for

blended learning versus face-to-face contrast studies was 0.35 ( $p < 0.0001$ ,  $k = 23$  effect sizes), it still showed that BL was modestly superior to a traditional face-to-face model. Similarly, Vo, Zhu, and Diep (2017) obtained a mean effect size of 0.385 ( $p < 0.001$ ,  $k = 51$  effect sizes), which was also considered as a small effect according to the standard criteria—Cohen's  $d$  (Cohen, 1988). They concluded that BL yielded better teaching and learning outcomes in the field of higher education.

A more important conclusion from research on the effectiveness of BL is that the key to achieving good results in BL is how face-to-face classroom instruction and online learning are blended. As Ross and Gage (2006) suggest, future research should focus more on how blending works, such as how to use the online and offline resources appropriately to improve the effectiveness and efficiency of BL as well as the teaching quality. Also, this is one of the reasons why the researcher aims to explore the useful teaching practices in BL.

Furthermore, based on the literature review of teaching effectiveness on BL programmes, the researcher applied a combination of the first two types of teaching effectiveness study in this empirical research. Therefore, the empirical research was a comparative study which compared BL with traditional face-to-face classroom teaching to see whether postgraduates' performance changes. In order to examine the changes of postgraduates' performance, the researcher needed to divide the postgraduate participants into two groups, the experimental classes (BL) and the control classes (traditional face-to-face classroom teaching), and teachers would apply different teaching practices to the two groups. At the end of the empirical research, the researcher would contrast the results of the pre-test and the post-test between the experimental classes and the control classes, respectively.

## **2. Instructional Design and Pedagogies Research**

Since BL aims to achieve better teaching and learning outcomes by taking advantage of both face-to-face and online learning environments, a proper “mixing” or “blending” is the only way to achieve this goal, so research on teaching design and teaching strategies for BL is an important source of insights.

There are two main types of research on instructional design: one is speculative research, in which researchers make suggestions based on their own theoretical foundations and perspectives. For example, Dziuban, et al. (2006) pointed out that the key to BL is

instructional design, including how to promote interaction; deciding which learning content was suitable for face-to-face instruction and which content was suitable for online learning; and how to motivate students to actively participate and take responsibility for their own learning. Picciano (2009) constructed a conceptual model of BL instructional design, which included six dimensions, such as content, social/emotional, reflection, collaboration/student generated content, dialectic/questioning, and synthesis/evaluation (assignment/assessment). His analysis was based on the analysis of the characteristics of the “digital native” generation and therefore emphasized the diversity of teaching methods and approaches to meet diverse learning needs.

The researcher does agree with Picciano that the postgraduates belong to the young generation—digital native—who have grown up with the innovation and development of information technology, although she cannot follow all the dimensions given by him. Therefore, in order to know more about the participants, the researcher decided to use a questionnaire for the postgraduate participants to explore the current studying situation in BL of the academic English course. Only when teachers consider the current learning situation of the postgraduates they teach, can they design and improve the appropriate instructional approaches and strategies during BL application.

Furthermore, Huang, et al. (2009) divided the BL curriculum design work into three stages: front-end analysis, activity and resource design, and instructional evaluation design. The front-end analysis marks the preparative stage, whose appropriate preparation would lead the BL application to success. The activity and resource design are the key part of the three stages, which depend on the former stage and show the skills and capability of the teachers. The last is equally important because correctly planned and executed evaluation of the two previous stages provides essential feedback of the teaching and learning process.

Moreover, Tomlinson and Whittake (2013) proposed a BL curriculum for courses, suggesting four issues for course designers to consider in BL courses, such as, the teaching and learning context, instructional design, participating subjects, and evaluation. The teaching and learning context requires that teachers and curriculum designers should consider the purpose and constraints of BL. Instructional design refers to the need to consider what information technology tools and components are included, how the ratio of face-to-face and online modes is arranged, how the two modes complement each other, and which instructional methods are applied. Participating subjects meant considering the types

of interaction and the respective roles of the participants, including teachers and learners. Evaluation refers to the assessment of the BL mode in various ways, such as the attitudes of the participating subjects toward the mode and academic performance.

Coincidentally, the first stage of Huang, et al. (2009) is to consider the issues (the teaching and learning context, participating subjects) of Tomlinson and Whittake (2013), which indicates that both of them pay attention to three aspects of BL application: preparation, instructional design and evaluation. Therefore, the ideas proposed in the curriculum design models introduced above determine the issues that should be considered during the application of BL. They also provide a useful framework for the researcher to apply during her own research.

The second type of the research obtains teaching design and teaching strategies in BL through an empirical approach. Cheung and Hew (2011) described a BL model that was implemented at the National Institute of Education in Singapore for 12 years. There were different variants, but it was basically a BL model combining face-to-face classroom instruction and asynchronous online discussions. Based on teaching practices, researchers made some instructional design recommendations, such as higher student satisfaction, only if students truly understood the intent of online discussions; online discussions could allow students to use anonymity to encourage participation.

The suggestions made by Cheung and Hew (2011) also gave the researcher some helpful tips when doing her research. For example, she would like to introduce the aims and goals of doing the empirical study to the teachers and the postgraduates, which could perhaps help to improve their satisfaction as well as their support and cooperation. Furthermore, teachers could allow these postgraduates to answer online questions anonymously, which would decrease their nervousness.

Lai, Lam, and Lim (2016), through a study of three BL cases, suggested that there are two models of face-to-face and online learning, respectively. One is consolidation, which aims to engage students in different modes of learning activities to reinforce and consolidate knowledge. The other is extension, which is designed to extend the learning space so that the different needs of students can be met.

In the researcher's mind, not only consolidation, but also extension, are beneficial modes for postgraduates to improve their English language learning and practicing. Therefore, in the empirical research, teachers in experimental classes need to think over

how to combine them or use them in the particular teaching activities to achieve a good learning outcome of postgraduates in BL academic English courses.

Ma and Liu (2018), based on their empirical study in a Chinese university, emphasised that the teaching strategies for different knowledge and different teaching steps, both online and offline, should also be different. The teaching of content and key points, and difficulties, such as subjunctive mood in grammar, can be taught by teacher-led strategies, while other content, such as oral speaking, can be taught by talking, discussing, demonstrating, or reading guides, which not only facilitates the teacher's focusing on the key and difficult points, but also mobilises the students' interest in learning and their participation level.

Therefore, based on the understanding of the two aspects of BL studies and the above literature review, the researcher identified the research gap, helping her determine the participants and formulate the research questions, all well as a basic idea for the research design.

On the one hand, from the perspective of participants of BL teaching effectiveness studies, compared with thriving discussions concerning other educational levels (Chou and Liu, 2005; Allan, et al., 2019, Cheung and Hew, 2011), there are fewer studies of blended learning at postgraduate level (Dzakiria, et al., 2006; Hong and Lee, 2008; Smyth, et al., 2012; Wahab, et.al, 2016), especially studies related to foreign language learning (Orsini-Jones, M. et al., 2017). As Academic English is a compulsory course for all non-English major postgraduates, the researcher hopes to explore the application of BL in academic English courses for postgraduates to complement existing studies in the field of BL.

On the other hand, previous studies of BL instructional design and teaching strategies have led many researchers to adopt provided a broader view of instructional design (Dziuban, et al., 2006; Huang, et al., 2009; Picciano, 2009), and to apply a particular teaching and learning theory or method to BL (Hubackova, et al., 2011; Bergman and Sams, 2012; Bishop and Verleger, 2013; Banditvilai, 2016). However, to use only one teaching strategy cannot achieve the best teaching effect due to the complexity of teaching process (Ellis and Shintani, 2013; Cui and Wang, 2014). Therefore, teachers would meet the needs of BL better if they could apply some teaching strategies blended together.

In view of the above points, the researcher will explore good teaching practices with “blended” strategies together by evaluating the impact of an intervention on blended

learning in the academic English course for postgraduates, which could not only enrich BL studies, but also provide better pedagogical support for English teachers in BL application.

### **2.3 Theories and Approaches of Teaching and Learning**

There are various pedagogical approaches and theories related to foreign language teaching and learning in China and abroad. As a result of global communication and developments in education studies, Chinese educators have adopted, adjusted, and innovated many of the current pedagogies and theories of teaching and learning.

However, not all these theories of teaching and learning can be adopted in BL because of pragmatic considerations (for example, the Natural Approach proposed by Tracy Terrell in 1977 has been believed to be designed for beginners, and it may not prove useful for learners at higher levels of language proficiency) and the different teaching contents and materials. In this part, the researcher discusses some of them, such as Communicative Language Teaching, Cooperative Learning, Multiple Intelligences, Flipped Classroom, Sociocultural Theory, and Production-oriented Approach.

There are four reasons for presenting the six approaches to teaching and learning in slightly more detail here. The first reason is to achieve the aim of the empirical research. In order to realize positive intervention on BL in the academic English course for postgraduates, the researcher needs to provide teaching strategies and practices specific and targeted enough for the teachers being able to use them as intervention in the teaching process of BL. The second reason is that the six approaches are on the pedagogy training list recommended by the Center for Teaching and Development of the university where the researcher works. Most teachers in the university have learned these theories and their relative strategies. This familiarity with key learning theories will help them to implement an intervention while participating in the empirical research. The third reason is that these theories, have been applied, tested and refined by researchers in both China and in various other countries, provide a methodologically robust framework for empirical research. This ensures the reliability and validity of teaching practices originating from these theories of teaching and learning. The fourth reason is these theories are the foundations of the teaching practices, which could help the researcher to understand and apply these teaching practices better in the empirical research.

The researcher illustrated the development and definitions of each theory in order to understand the theories and approaches better. Then she focused on the applications of each theory in China and managed to identify the teaching practices used in teaching academic English for postgraduates in BL. The main reasons why the researcher focuses on the applications not in western world but in the Chinese educational field are the following: Firstly, research by western scholars involving approaches to learning and teaching seldomly focuses on their application in China, let alone on the specific problems of English language learning at the postgraduate level in Chinese higher education (Bao, Wang and Gu, 2005). Secondly, the application of teaching and learning theories to the Chinese context promises to yield relevant information that the researcher can adjust or replicate due to the similar context in Chinese higher education.

The critical review of how key theories/approaches to teaching and learning have been applied in the Chinese context has the purpose to prepare the researcher for her own application of these theories to the teaching of the academic English course to postgraduates in BL.

### **2.3.1 Communicative Language Teaching**

One of the most popular pedagogical approaches in China is the communicative approach. The reason for the widespread acceptance and relatively diverse interpretations and applications of the communicative approach is that it can be recognized and interpreted differently by professionals from different educational traditions and contexts. One of the frequently cited dimensions is Communicative Language Teaching (hereinafter referred to as CLT) is the experience-based and learner-centred approach to foreign language teaching and instruction.

#### **2.3.1.1 Development of Communicative Language Teaching**

The origins of CLT can be traced back to the late 1960s. At that time, Situational Language Teaching (Rodgers, 2001) focused foreign language learning on repeatedly practicing basic structures according to some meaningful situational class activities. However, Noam Chomsky, in his book *Syntactic Structures* (1957), had shown that the standard structural language theory popular at that time was unable to take into account the

basic characteristics and features of language, especially the creativity and uniqueness of individual sentences. Then, Halliday developed his Systemic Functional Linguistics based on his study of language functions. In the 1960s and 1970s, he published several books, such as *Categories of the Theory of Grammar* (1976 [1961]), *A Brief Sketch of Systemic Grammar* (1976 [1969]), *Language Structure and Language Function* (1970), *Explorations in the Functions of Language* (1973), *Learning How to Mean* (1975), and *Language as social semiotic: towards a general sociolinguistic theory* (1978). In these books, he identified three functions of language—ideational function, interpersonal function and textual function—each with its own structure as a means of expression. According to this theory, the function of a language is directly related to the language system, that is, a language evolves as it fulfils its function, and its social function must affect the identity of the language itself. Therefore, in foreign language teaching and learning, more attention is paid to the context and the purpose of actual communication.

Almost in the same period, British applied linguistics, such as Michael Breen and Christopher Candlin (1980), and Henry Widdowson (1972), began to focus on the functional and communicative dimension of language, trying to find an innovative and effective approach to teach foreign languages. Later, an American sociolinguist Hymes (1971, 1972, 1974) put forward a communicative view of language based on Chomsky's theory of linguistic competence, which indicated a person who possesses communicative competence should acquire both linguistic knowledge and ability to use language. The significance of Hymes' theory was that it broadened the horizon of language teaching as well as enlightened the approaches of pedagogies. What's more, many linguists, such as Wilkins (1972, 1976), Widdowson (1978) and Brumfit and Johnson (1979), believed that "the fundamental dimension of language that was inadequately addressed in current approaches to language teaching at that time—the functional and communicative potential of language. They saw the need to focus in language teaching on communicative proficiency rather than on mere mastery of structures" (Richards and Rodgers, 2001:153). Under the influence of these language learning and teaching perspectives, CLT has emerged, with a clear emphasis on "language in use" and a focus on "communication for a real purpose and comprehensible input", extending the dimension of language from its linguistic form to its communicative function.

### 2.3.1.2 Definitions of Communicative Language Teaching

CLT has a unified but broadly-based theoretical position about the nature of language and of language learning and teaching. It is nevertheless difficult to synthesize all of the various definitions that have been offered. From Widdowson's (1978) earlier work to Savignon's (1987) illustration of CLT, scholars have definitions enough to send people reeling.

For the sake of simplicity and directness, Brown (2007) in his *Principles of Language Learning and Teaching* (Fifth Edition) offers the following four interconnected characteristics as a definition of CLT:

- (a) Classroom goals are focused on all of the components of communicative competence and not restricted to grammatical or linguistic competence.
- (b) Language techniques are designed to engage learners in the pragmatic, authentic, functional use of language for meaningful purposes. Organizational language forms are not the central focus but rather aspects of language that enable the learner to accomplish those purposes.
- (c) Fluency and accuracy are seen as complementary principles underlying communicative techniques. At times fluency may have to take on more importance than accuracy in order to keep learners meaningfully engaged in language use.
- (d) In the communicative classroom, students ultimately have to use the language, productively and receptively, in unrehearsed contexts.

(Brown, 2007, p. 241)

By definition, CLT is a pedagogical approach, emphasizing role-playing, debating, and other learner-centred communicative activities in the classroom facilitated by creating the authentic contexts, placing more emphasis on teaching outcomes, in order to achieve the ultimate goal of improving the learners' pragmatic communicative competence and foreign language proficiency. (Brown, 2007; Hadley, 2009; Richard and Rodgers, 2008; Candlin and Mercer, 2001; Cook, 2011).

### 2.3.1.3 Applications of Communicative Language Teaching in China

In 1992, the State Education Development Commission of China introduced the CLT to China for the first time, with the main goal of improving students' communication skills by strengthening the four language skills of listening, speaking, reading, and writing.

When it is applied in China, many educators emphasize that CLT is better viewed as an approach rather than a method (Hu and Hu, 2019). On the one hand, at the level of language and learning theory, reasonable theoretical consistency of CLT can be established, but at the level of design and procedure, there is much more room for individual interpretation and variation than many methods allow. In the future, any of a variety of curricular models, exercises, and types of classroom activities may become more widely accepted, placing CLT on an equal footing with other pedagogical approaches. On the other hand, divergent interpretations might lead to homogeneous subgroups because there are two basic steps which should be achieved when applying the CLT approach to foreign language teaching. The first step is to carefully select teaching materials and content from a theoretical and methodological point of view; and the second step is to change outdated teaching methods and update teaching methods, such as through games, scenario-based simulations, and realistic conversational exchanges.

Therefore, many teachers believe CLT puts forward the challenges to students (Zhu, 2009). For instance, one of the basic assumptions of CLT is that by learning to communicate, students will be more motivated to study a foreign language since they will feel relaxed when they are learning to do something useful with the language. Also, teachers give students an opportunity to express their individuality by having them share their ideas and opinions on a regular basis. Finally, confidence as well as wellbeing of students are enhanced by the many opportunities for communicative interactions with their fellow students and the teacher. As far as the teaching goals are concerned, teachers who use the CLT approach enable students to communicate in the target language, such as English, which is popular in China. To do this, students need knowledge of the linguistic forms, meanings, and functions and need to choose from the most appropriate form among these, given the social context and the roles of the interlocutors.

CLT poses a challenge to the role of the teachers as well because the teacher should facilitate communication in the classroom (Liu, 2009; Chen, 2013). In this role, one of the teacher's major responsibilities is to establish situations likely to promote communication. During the activities the teacher acts as an adviser, answering students' questions and monitoring their performance. The teacher might make notes of their errors to be worked on at a later time during more accuracy-based activities. At other times he/she might be a "co-communicator" engaging in the communicative activity along with students (Brown,

2007). However, because Chinese students pay much attention to “the face problem”, which lead them to be shy and introvert and not talkative and cooperative during the communicative process. Teachers should manage to release or decrease the nervousness and reluctance of students in the classroom.

With the development of information technology, many researchers began to apply CLT to English teaching with multimedia or e-learning. Liu (2009) studied college students’ attitudes towards interactive learning modes in multimedia environments. She found that students preferred the English teacher to use communicative learning strategy to cultivate their oral English, and that the communicative learning mode was one of the most favourite interactive learning modes for them. Yang and Yu (2009) considered the English learning based on mobile devices and resources was the best practice of communicative approach to language teaching, and at the same time, was also an innovation and effective supplement to the traditional classroom teaching. Li (2021) compared and contrasted four teaching strategies—grammar-translation method, listening and speaking method, communicative learning method and task-based method. She believed that it was essential for English teachers to learn and master different English teaching methods and apply them flexibly in their teaching practices, and suggested the communicative learning method was one of the most commonly used methods in English teaching.

Furthermore, when the CLT approach is applied in China, there are still some problems to be solved (Chen, 2013). Just as what has been discussed above, CLT focuses on cultivating the learners’ communicative competence rather than the pure language knowledge, so it cannot satisfy the full need of grammar learning and writing skills. However, Chinese students pay much more attention to the rules and principles of sentences and they have a keen spirit to pursue accuracy. So, the students will feel puzzled and even frustrated if they cannot get the exact rules according to the activities designed by CLT approach.

Based on the literature review of CLT, the researcher understood the basic teaching practices of CLT. For instance, from the design of class interactive activities, when applying it to the academic English course, teachers needed to construct the topics for authentic communication and the need for learner-centred teaching. Furthermore, teachers needed to combine the CLT approach with other methods or pedagogies during their English teaching in BL. Because the teaching aim for the academic English course was to

learn all the aspects of the English language, such as vocabulary, grammar and culture as well as developing the abilities of listening, speaking, reading, writing and translation. However, by using the CLT approach, teachers could only realize the teaching goals partly, such as speaking. Moreover, because online learning could ease the nervousness of most postgraduates, teachers could assign some communicative activities, such as oral imitations or listening and speaking exercises online.

### **2.3.2 Cooperative Learning**

Cooperative learning (hereinafter referred to as CL) is one of the current focal points in educational psychology research, and it is regarded as one of the most influential and fruitful fields in contemporary educational theory research and practice.

#### **2.3.2.1 Development of Cooperative Learning**

CL as an ancient educational concept and practice has existed for a long time. In 1806, along with a Lancastrian school opened in New York, the concept of CL groups was introduced from England to the United States and was promoted and widely applied by American educators such as Colonel Francis Parker and John Dewey (Johnson, Johnson and Smith, 1998). In the mid-1960s, the Johnson brothers began training teachers at the University of Minnesota on how to use CL for teaching and learning, and created the Center for Collaborative Learning to summarize the research on CL and explore the nature and components of CL (Johnson and Johnson, 1974).

Thus, in order to highlight the collective, process-oriented nature of CL and to achieve meaningful rather than formalized CL, researchers and teachers have conducted long-term explorations and developed diverse implementation strategies. For instance, in the late 1970s, Slavin at John Hopkins University proposed the “Student Teams Achievement Divisions” (Slavin, 1978), “Student Team Learning”, “Teams Games Tournament” and “Team Accelerated Instruction” (Slavin, 1995); Aronson at the University of California also proposed the “Jigsaw” (Aronson, 1978); the Johnson brothers proposed “Academic Controversy” and “Learning Together” (Johnson and Johnson, 1979, 1994, 2007) and Sharan and Sharan proposed “Group Investigation” (Sharan and Sharan, 1992), to name but a few examples.

The challenge for teachers and students appears to be related to aligning the pedagogy to real life situations. Therefore, CL has received widespread attention around the world and became a mainstream teaching theory and strategy because of its effectiveness in improving the harmonious atmosphere in the classroom, improving students' academic performance, and promoting the development of good non-intellectual qualities. Since the 1990s, the influence of CL research has grown and is now widely used in education in the United States, Canada, Germany, the United Kingdom, Australia, Japan, China, and other countries. Although CL practices around the world are not consistent in their specific forms and designations, they share many common teaching philosophies, which are qualitatively different from thus form a sharp contrast with traditional views of teaching and learning.

#### **2.3.2.2 Definitions of Cooperative Learning**

Looking at the understanding of the concept of CL by experts from all over the world, on the one hand, the theoretical foundations of CL include some theories. The first is “*social interdependence theory*” (Johnson, et. al., 1994; Johnson and Johnson, 2009), which means that social interdependence exists when an individual's performance or outcome is influenced by his or her own behaviour and the behaviour of others. The second is “*choice theory*” (Glasser, 1997), which holds that an individual's behaviour is only under his or her control. The third and the fourth are “*motivation theory*” and “*social cohesion theory*” (Slavin, 1996). Here, the former argues that individuals help their group peers learn, at least in part, because it is in their own best interest. The latter emphasizes that individuals help their group members learn because they care about the group. The last is “*cognitive elaboration theory*” (Wittrock, 1986), which suggests individuals should perform some cognitive restructuring or elaboration of the material if they need to store the information of the material in memory and relate it to previously stored information.

According to the theoretical foundations of the CL, the connotation of CL involves at least the following levels: (1) CL is a teaching activity carried out mainly by group activities; (2) CL is a cooperative and mutual assistance activity among peers; (3) CL is a goal-oriented activity; (4) CL is rewarded based on the overall performance of each group in the process of achieving the goal; (5) CL is assigned to learn tasks and control the teaching process by the teacher (Johnson and Johnson, 1979, 1994, 2007; Sharan and Sharan, 1992; Johnson, et. al., 1994; Slavin, 1980, 1995; Panitz, 1996, 1997).

Furthermore, according to the Johnson brothers (Johnson and Johnson, 1994), there are five elements that are essential to any form of cooperative learning approach. (1) Positive interdependence. (2) Face-to-face promotive interaction. (3) Individual responsibility. (4) Social skills. (5) Group processing. These five elements not only point out the focus of the application of CL, but also expects the matters needing attention by both teachers and students.

Therefore, the researcher considers CL as a teaching activity that is based on modern social psychology, educational sociology, cognitive psychology, and so on, with the study and utilization of interpersonal relationships or heterogeneous learning groups in classroom teaching as the basic form; the design of teaching goals as the precursor; teacher-student, student-student, and teacher-teacher cooperation as the basic motivation; group activities as the basic teaching method; group performance as the evaluation standard; and criterion-referenced evaluation as the basic means.

Based on this understanding of the definition, in order to achieve the best result of CL, in this empirical research, the researcher needed to consider the ways in which teachers and postgraduates cooperate, the activities on which they cooperate and the approaches which they prefer to use.

### **2.3.2.3 Applications of Cooperative Learning in China**

Since the early 1990s, group activities have been introduced in classroom teaching in China, and this has led to the discussion of CL. From the experiments on CL group teaching at the Department of Education of Hangzhou University in Zhejiang Province, to the research and experiments on CL conducted by the Shandong Institute of Education and Science in the mid-1990s, and the discussions on group cooperation in the recent experiments on subjective education, these series of educational scientific research and teaching practice activities have promoted the development of CL in China (Zeng, 2000; Wang, 2002; Ma, 2003; Chong, 2020).

Cooperative language learning (CLL) is actually subordinate to cooperative learning, and there is no strict distinction between CLL and CL (Deng and Che, 2010). CLL is only the specific application of CL in language learning. As she would implement her empirical study in English language teaching, the researcher mainly focused on the application of CLL in China in this section.

Deng and Che consider that CLL introduces the concept of cooperation into the English language teaching and learning system (Deng and Che, 2010). It captures the key issue of improving the outcome of foreign language education (Naughton, 2006) as well as improving the quality of students. Deng and Che (2010) also believe that CLL focuses on improving the academic performance of foreign languages of all students, enabling students to cooperate with others, be good at putting themselves in other people's situation, look at problems from other people's perspective, respect different values, be able to solve problems from different perspectives, and so on.

Teachers favouring CLL (Wang, 2002; Deng and Che, 2010; Zheng and Jiang, 2015) have considered how to enable students to apply what they have learned in cooperative English language learning situations, not just at the level of mastering English language knowledge and skills, in addition to the positive effects of CLL in improving academic performance, forming positive attitudes toward English languages, and developing critical thinking skills.

Therefore, in the empirical research, the researcher needs to design appropriate cooperative activities for the blended academic English course, making full use of the advantages of CLL, to make students study English voluntarily and learn the ways to apply what they have learned.

Based on the theory and practice of CLL, Wang demonstrates that CLL advocates a multilateral and three-dimensional interactive view (Wang, 2002), which means English language teaching is not only a bilateral activity between teachers and students, but also a unity of multilateral interactions among various dynamic factors.

The idea indicates that, when implementing cooperative teaching practices, the researcher needs to think about the different cooperation, such as teacher-postgraduate cooperation, postgraduate-postgraduate cooperation, teacher-teacher cooperation.

Based on the research of Zheng and Jiang (2015), they hold that CLL innovates the form of group teaching in English language teaching and learning (Zheng and Jiang, 2015). The group activities of typical CLL classes are also significantly different from those in traditional teaching. This is because traditional groups (e.g., interest groups) tend to be homogeneous, whereas CLL groups are primarily heterogeneous (Johnson and Johnson, 1994), which can benefit students from different viewpoints.

When CLL is applied in BL, many researchers believe it is a good strategy to be used in BL. Xiao and Shi (2013) propose that CLL is beneficial in the teaching activities, both online and offline, in compulsory BL courses. Ying and Ning (2019) illustrate their findings based on their empirical study on English teaching for undergraduates, namely that the integrated mode of promoting independent learning through cooperative learning online and offline helps to improve the effectiveness of English teaching, and thus has reference significance for BL College English. Xu (2018) suggests that only by creating appropriate conditions that meet students' needs - in BL can they feel that English language learning is meaningful. For example, in small groups, everyone has the opportunity to express their own views and opinions in English online or offline, and they are willing to listen to the opinions of others, so that students can work well together and learn more enjoyably.

Therefore, the researcher would use CLL to foster good cooperation and beneficial competition of postgraduates in the academic English course of BL. Furthermore, she would think the ways to better deal with the relationship between teachers and students, between classroom and group learning, and between top and underperformed students in academic English teaching. At the same time, she would pay attention some difficulties during the application of CLL. For instance, the application of CLL needs that teachers carefully design cooperative activities and the implementation tools in advance, which could display and embody the course goals.

### **2.3.3 Multiple Intelligences**

Multiple Intelligences (also known as “Multiple intelligence theory”, hereinafter referred to as MI) is widely discussed and applied in eastern and western educational fields. From the perspective of foreign languages teaching, it has some advantages. For example, MI encourages and inspires the interests among the non-native speakers to express ideas in foreign languages in the class, and helps to organize some teamwork among the students who are shy or not confident enough to share their ideas in foreign languages (Gardner, 1983, 1993, 1999, 2006, 2011).

### 2.3.3.1 Development of Multiple Intelligences

The development of MI was based on the development of the possible meanings of intelligence. Even after a century of intense debate, there is little consensus on such important questions as whether intelligence is primarily hereditary or highly variable with experience, whether it is specific or multifaceted, and whether it exists as a pure, unchanging essence or as a variable form reflecting the emergence of various situations (Gardner, 1983, 1999, 2006, 2011). Most psychologists who study intelligence are part of the individual-difference tradition. Tracing their roots to the work a century ago by Galton (Jensen, 2002), Spearman (Spearman, 1904) and Binet (Binet and Simon, 1961), these experts seek to document the differences across individuals in intellectual potential and achievement as well as the reason for these differences.

Gardner concludes that people are best described as possessing a certain number of relatively autonomous abilities or intellectual potentials, which he calls “*Multiple Intelligences*” (Gardner, 1983), drawing on evidence from a range of different disciplines, including biology, anthropology as well as several branches of psychology. However, one can subscribe to the idea of MI and yet believe that the intelligences themselves are not subject to change.

Gardner considers that there is no reason to reach the pessimistic conclusion that a profile of intelligences is fixed (Gardner, 1983, 2006). That is, the development of individuals not only is related to the gifted or talented “brain or intelligences”, but also can be improved by continuous efforts, applying new strategies, seeking others’ help and so on.

Furthermore, from the perspective of Gardner, all humans possess a spectrum of intelligences (Gardner, Feldman and Krechevsky, 1998), and the actual distribution of people’s intelligence in various areas varies at certain historical periods for various reasons. He argues that all intelligences have potential, but this potential is influenced by every experience of the individual (Armstrong, 2000). If a person lives in a culture where individuals are rewarded for using their intelligence, where there are opportunities to learn and teach, and where individuals and their families are highly motivated to develop that intelligence, then that intelligence is likely to flourish.

In 1983, Gardner published his famous book *Frames of Mind: The Theory of Multiple Intelligence* (1983) based on his thoughts. Since then, MI began to be popular in the education field all over the world. As a result, MI has had a widespread positive impact on

the current theory and practice of educational reform in the United States and has been the guiding principle of educational reform in many countries since the 1990s (Perrin, 1990; Lazer, 1999; Snider, 2001; Anderson, 2007; Armstrong, 2000, 2009; Valiande, 2010).

Therefore, based on the opinions of Gardner (Gardner, 1983, 1999, 2006, 2011), the researcher considers that, in her empirical research, teachers can inspire the postgraduates' English language learning based on the innovative teaching practices, along with the understanding of MI of these postgraduates.

### **2.3.3.2 Definitions of Multiple Intelligences**

Gardner (1983) first defines "intelligence" as "the ability to solve problems or to create products that are valued within one or more cultural settings", and later offering a refined definition (Gardner, 1999): it is treated as "a biopsychological potential to process information that can be activated in a cultural setting to solve problems or create products that are of value in a culture".

Compared with the two definitions given by Gardner, there are three aspects which should be mentioned. Firstly, Gardner treats "intelligence" as "biopsychological potential" rather than "ability", which means intelligences are not the one that can be counted by numbers or be seen by others. At the same time, intelligences are something that can be activated or inspired under a given context or culture. Secondly, "intelligence" can achieve several tasks, such as solve problems or create products and make some innovations which are recognized as the valuable one in the given culture. Thirdly, culture, cultural settings as well as the social context play a key role in defining "intelligence". This indicates that teachers and parents should pay much attention to the target culture and context when they hope to inspire the "uninspired" intelligences as well as develop their "talented" intelligences of students and children, respectively.

Furthermore, what is the identical in the two definition is that Gardner believes that intelligence should be treated as individual difference. There are two connotations in this point. One is that everyone owns one or some kinds of intelligences which can be developed unevenly (Armstrong, 1999), the other is that individuals own various kinds of intelligences which are probably the same, partially or totally different. Also, the two connotations in the definitions of "intelligence" play an important role in his theory—Multiple Intelligences.

To determine the ability to be considered as one of the “multiple intelligences”, the structure considered must meet several criteria that are not based on the results of a narrow psychometric approach. As a result, compared with psychometricians who are clinical psychologists and skilled in the administration and interpretation of objective psychological tests, Gardner attempted to define “intelligence” more broadly than they do. With this goal in his mind, in order to characterize “intelligence”, Gardner examines it based on a variety of perspectives, consisting of eight criteria. For instance, Gardner provides evidence from studies of different groups of people, such as child prodigies, geniuses, people with brain disabilities, average children and adults, experts in different areas as well as people from different cultures. The criteria to consider “candidate intelligences” are as the following:

(a) the potential of isolation by brain damage, (b) an evolutionary history and evolutionary plausibility, (c) an identifiable core operation or set of operations, (d) susceptibility to encoding in a symbol system, (e) a distinct development history, along with a definable set of expert “end-state” performances, (f) the existence of idiot savants, prodigies and other exceptional people, (g) support from experimental psychological tasks, and (h) support from psychometric findings.

(Gardner, 1999, p. 36-41)

Based on the above criteria, there are eight intelligences of Multiple Intelligences theory, consisting of (1) Verbal-Linguistic Intelligence, (2) Logical-Mathematical Intelligence, (3) Musical Intelligence, (4) Visual-Spatial Intelligence, (5) Bodily-Kinesthetic Intelligence, (6) Interpersonal Intelligence, (7) Intrapersonal Intelligence and (8) Naturalist Intelligence (Gardner, 2011).

MI theory can more accurately map and evaluate the landscape of human capabilities. Gardner carefully points out that human intelligence should not be limited to the types he identifies, and each type of intelligence has sub-intelligences as well. For example, the sub-intelligences in the field of Musical Intelligence include playing, singing, composing, conducting, criticizing, and appreciating music. Similarly, the other seven intelligences have respectively multiple subcomponents as well. In his ongoing work on the theory of MI, Gardner suggests that there are three broader categories of MI (Gardner, 2006). Four of the eight intelligences, such as Logical-Mathematical Intelligence, Visual-Spatial Intelligence, Bodily-Kinesthetic Intelligence and Naturalist Intelligence, can be considered “object-related” intelligences, in which an individual’s capability is shaped by the objects

he or she is confronted with. “Object-independent” intelligence, including Verbal-Linguistic Intelligence and Musical Intelligence, which do not depend on the physical world, but on the linguistic and musical system; a third category includes “person-related” intelligence, such as Interpersonal Intelligence and Intrapersonal Intelligence.

Therefore, although she could not depict every intelligence the postgraduates had, the researcher could design the teaching practices roughly related to the three broader categories mentioned by Gardner in her empirical research. For example, in order to enlarge the vocabulary of the postgraduates, the teacher could replace the lyrics of some popular songs with some difficult new words and expressions in a unit. With inspiring their linguistic and musical intelligences belonging to “Object-independent” category, these postgraduates would easily remember them.

### **2.3.3.3 Application of Multiple Intelligences in China**

In 1990, Lan Jinren translated and published Gardner’s *Frames of Mind: The Theory of Multiple Intelligences* (1983), which opened the door of MI theory to scholars in China for the first time. Since then, Chinese scholars have mainly been digesting MI. Researchers, such as Zhou (1992) and Zhou (1997), introduced the structural features of MI theory, and mentioned such insights as intelligence equality, intelligence complementarity, and education according to students’ abilities.

Scholars in China have also carried out a lot of discussions and practices on the application of MI theory in Chinese education reform at various levels. For example, Zhi (2002) and Yu (2004) conducted research activities on MI practices at elementary education and kindergarten level, respectively, based on self-access questionnaires to determine the MI of each student. Mei (2011) prepared summaries of earlier practical experiences at elementary and secondary schools, and concluded that MI was effective in English language teaching. Wang and Liu (2007) illustrated the theory of MI, explored its application in college English teaching with some informative teaching practices, and gave some suggestions for English teachers in universities and colleges.

Furthermore, Chinese researchers begin to pay attention to the application of MI because there are similar focal points, such as ability and personality development, in MI theory and Chinese Quality education (an educational model that aims to improve the quality of all aspects of the educated person). Based on MI, researchers endeavoured to

construct a positive attitude toward students as well as a diverse, personalized, contextualized, and environmental view of curriculum, teaching, and assessment (Zeng, 2001; Ding, 2012). In English classes, Huang (2003) suggested that teachers should set up multi-sensory learning activities according to students' individual differences and the teaching content, such as alternating between reading or writing, listening to audio recordings and singing English songs, and combining speaking and role-playing activities in order to cultivate students' different intelligences as well as arouse their interests and improve their English language proficiency.

Moreover, MI has been widely applied to BL or online learning in higher education in recent years. For instance, Hu (2012) demonstrated the configuration of the learning environment to support teachers in cultivating the MI of students in BL. Xu and Wang (2017) depicted the deep integration of big data and MI in education, providing specific teaching aids and personalized recommendations for learning software to different students. Zhang (2019) did a study on the impact factors on the quality of online interaction in College English, indicating that "Verbal-Linguistic Intelligence" and "Logical-Mathematical Intelligence" of MI were included in the impact factors and had a crucial role in the quality of online learning and English language teaching.

Therefore, the above discussion inspired the researcher to consider the different intelligences of postgraduates and design teaching activities that would not only satisfy the needs of postgraduates but also facilitate the teachers' teaching and the postgraduates' learning. Namely, teachers needed to use different teaching practices and variation of the teaching norms to teach these postgraduates based on their intelligences. For example, the researcher recommended the use of dubbing games to encourage postgraduates to correct their pronunciations. For many postgraduates were puzzled by pronunciation and thus shy to speak out in class, based on previous teaching experiences. Also, teachers could provide self-directed English learning resources online based on the postgraduates' individual practical needs in English learning.

### **2.3.4 Flipped Classroom**

As a new teaching concept and method that overturns traditional teaching methods, the flipped classroom has been highly praised and widely accepted by many teachers and

students. Originally developed in American schools, flipped classroom techniques have been widely implemented and are now part and parcel of the teaching reform in the global education community (Hao, 2016; Lo and Hew, 2017). Furthermore, the flipped classroom has unique advantages in BL that are incomparable to traditional teaching methods. Introducing the flipped classroom and applying it in BL can essentially realise the deepening reform of modern teaching, and effectively improve the teaching quality as well as students' learning performance (Missildine, et. al., 2013; Du, Fu, and Wang, 2014).

#### **2.3.4.1 Development of Flipped Classroom**

The basic concept and idea of the flipped classroom was first proposed in the early 19th century by General Sylvanus Thayer at West Point (Cui and Wang, 2014). He created a new teaching model in which the teacher gave students the learning materials of the new course to study before class, and then answered questions that arose from the students' independent study of the material through teacher-student communication in the classroom. In addition, he also facilitated discussions among students by establishing study groups.

In 1991, Eric Mazur, a renowned physics professor at Harvard University and the founder of Peer Instruction, used "ConcepTests" designed to identify students' misconceptions of the "Introductory physics" course and guide them to deeper inquiry with the help of a Computerized Voting System (Mazur, 1997). Via this approach, teachers managed to organise large classroom teaching efficiently, changing the traditional single lecture to problem-based independent learning as well as supporting cooperative inquiry and interaction between teachers and students (Crouch and Mazur, 2001; Michinov, Morice, and Ferrières, 2015). Based on his empirical studies, Mazur also pointed out that the use of computers would become more and more widespread in the field of education in the future, and could even replace some of the teachers' work. This laid the theoretical and empirical foundation for the later formation of the concept of the flipped classroom (Zhang and Mazur, 2010).

In 2000, three faculty members at the University of Miami, Michael Treglia, Glenn Platt, and Maureen Lage, taught an "*Introductory economics*" course (Lage, Platt and Treglia, 2000). Students first pre-watched instructional videos in the lab or at home using multimedia and the internet, and then returned to class and worked in small groups to help

each other complete assignments. This led to the development of the flipped classroom model.

In 2004, Salman Khan, tried to explain mathematical concepts to his niece, Nadia, in the process of tutoring her in mathematics by using the Windows drawing tool and the Yahoo Doodle feature and he recorded his tutorials in an instructional video. Nadia fell in love with the video and achieved excellent academic results due to the fast playback, pause and replay features of the videos. On November 16, 2006, Khan uploaded his first YouTube video explaining the basic concept of “least common multiple” and immediately received a lot of interest from students. In 2007, he established the non-profit online Khan Academy to upload videos for students and teachers to learn from. This marked the beginning of the practical part of flipped classroom.

In 2007, Aaron Sams and Jonathan Bergmann, two chemistry teachers at Woodland Park High School in Colorado, uploaded recordings of PowerPoint presentations and their live lessons to the internet to help students who had missed a class catch up on their lessons (Bergman and Sams, 2012). Surprisingly, the students who did not miss class were also very interested in the videos and kept revisiting them, which greatly improved their learning. The two teachers were so inspired that they tried to reverse the teaching model, allowing students to watch the videos at home and interact with them in class to discuss the problems, which greatly contributed to the improvement of students’ academic performance. The application of this teaching model quickly attracted widespread attention in the United States, with Highland Village Elementary School, Stonebridge Elementary School and Clinton Dale High School in Stillwater, Minnesota, all practicing flipped classroom one after another.

Meanwhile, from the beginning of the open courseware movement at the Massachusetts Institute of Technology, the emergence of many high-quality educational video resources such as Khan Academy micro-videos, Yale Open Classes and the TED (Technology, Entertainment, Design) education channel had provided elements of support for flipped classroom and helped its development. It wasn’t until 2011 that Salman Khan delivered his keynote address at the TED conference, “*Let’s Remake Education with Video*”, triggering widespread attention and discussion across the global education community. In late 2011, *New York Times* (USA) and *Globe and Mail* (Canada) published articles on flipped classroom, with *Globe and Mail* selecting flipped classroom as the major

technological change affecting classroom teaching. Since then, education communities around the world have applied the practice of “flipped classroom”.

The origin and development of the flipped classroom shows that it is not easy to initiate a reform in the educational field. It took a long time for the flipped classroom idea to develop from germination to maturity, and it required repeated application in teaching practice by many scholars before the practice was truly recognised and broadly accepted in the teaching community and introduced into the teaching of specific disciplines. On the other hand, the rapid development of the internet and modern technologies allowed the flipped classroom to drive educational reform and make it possible.

#### **2.3.4.2 Definition of Flipped Classroom**

Although many experts consider flipped classroom a new and exciting topic in educational research, there is still no consensus as to what flipped classroom is. For example, Lage, Platt and Treglia (2000) propose a definition of flipped classroom, which mainly focuses on the explanation on “flipped” or “inverted”. They believe “Inverting the classroom means that events that have traditionally taken place inside the classroom now take place outside the classroom and vice versa” (Lage, Platt and Treglia, 2000, p.32). Bishop and Verleger (2013) treat flipped classroom as a pedagogical skill and define it from two parts, one is “interactive group learning activities inside the classroom”, the other is “direct computer-based individual instruction outside the classroom” (Bishop and Verleger, 2013, p.5).

After reading the definitions proposed by many scholars, the researcher prefers to define flipped classroom from the perspective of practical process and the essential process of learning. Flipped Classroom, also known as “Inverted Classroom”, refers to the process in which the teacher creates an instructional or teaching video based on the lecture content, integrating the key points, difficulties and some new knowledge of the course. Students use the time outside of class to learn the new lesson independently by watching the instructional videos in advance to realise a knowledge transfer process. Subsequently, students could complete online tests on their own based on the instructional videos, and then internalize the new knowledge by assimilating it. After that, they could bring their questions in the classroom to participate in the interactive communication, cooperation, sharing and discussion between teachers and students to achieve complete understanding

of and proficiency in the new knowledge, thus completing the learning process (Bergman and Sams, 2012; Tucker, 2012; Bishop and Verleger, 2013; Cui and Wang, 2014).

#### **2.3.4.3 Applications of Flipped Classroom in China**

Flipped classroom was first implemented in science classes (Bergman and Sams, 2012), then gradually applied by other disciplines.

In China, teachers from various disciplines apply flipped classroom to their discipline, such as foreign languages (Cao, 2020; Jia, 2020; Zhang, 2020), finance (Niu, 2020), physical chemistry (Song and Sun, 2020) and health education (Zeng, Zhou and Shi, 2021).

Furthermore, because flipped classroom is an essential teaching practice within BL, the researcher illustrates the following points mainly based on the application of flipped classroom in English language teaching and learning in colleges and universities.

As empirical studies have demonstrated, teachers in China have noticed many advantages when using flipped classroom to teach students how to study foreign languages, especially English language (Gong, 2016; Sun, 2016; Yan, Zhang and Yu, 2016; Hu, 2017). They have explored the construction of flipped classroom through a combination of the characteristics of different types of college English courses, such as audiovisual-speaking courses or reading and writing courses. They found that flipped classroom had a positive impact on improving students' English language proficiency.

Gong (2016) describes in detail the construction of a phonics teaching model under the perspective of flipped classroom. The teaching process of this model mainly included four parts: curriculum development, pre-class learning, in-class internalisation and after-class feedback. The teaching platform was a QQ group, onto which were uploaded audio teaching videos for students' self-learning and group discussions. The results showed a significant improvement of the students' pronunciation.

Sun (2016) used the Schoology learning management platform and ClassDojo classroom management software to establish a game-based flipped classroom teaching model for a college English reading and writing course. The experiment he subsequently conducted with this model showed that the English proficiency of the experimental class was significantly higher than that of the control class, indicating that the game-based flipped classroom teaching model had a sustained effect on the learning motivation of college students and was conducive to the transformation of underperforming students.

Yan, Zhang and Yu (2016) optimised and reconstructed the content structure, teaching process structure and teacher-student interaction structure through the implementation of the school-based teaching reform of flipped classroom of the college English audiovisual-speaking course for students at Beijing Institute of Petrochemical Technology. In particular, they proposed that in the pre-flipped classroom, it was necessary to use the theory of “Zone of Proximal Development” (Vygotsky, 1978) to carefully design the “Independent Learning Planner”, and to summarise, reflect on and communicate with each other in a timely manner on the basis of teaching practice, so as to continuously improve the materials and corresponding exercises. At the end of the research, they found that flipped classroom could help achieve students’ effective oral English learning, especially fluency, pronunciation and interactivity.

Hu (2017) made a comparative study of the differences in the effectiveness of flipped classrooms for promoting learning in English language. His findings suggest that effective learning using flipped classroom pedagogy requires students’ successful transition from online language input learning to language output and usage in classroom activities. Therefore, the instructional effectiveness of the flipped classroom relies on the interactive synergy of the two dimensions.

Although many researchers support flipped classroom, there are still problems in its application. For example, Chen (2019) found that flipped classroom in college English still faced the issue of localisation, namely the rejection of the new teaching concept by teachers and students alike. Another challenge was the lack of educational information literacy on the part of the teachers. As a solution, Chen proposed to integrate Chinese and foreign teaching concepts and to improve the information literacy of both English teachers and students.

Based on the literature review, the researcher applied flipped classroom to her empirical study carefully. On the one hand, in regard to the use of online micro-videos, she was able to integrate well-designed questions, carefully prepared PowerPoints, attractive animations or cartoons and interesting storytelling into the production of the micro-video online, so that postgraduates would not be limited to textbook explanations. Furthermore, the researcher was keen to ensure that the material was fun and entertaining, thus stimulating students’ interest in learning English. On the other hand, with regard to the application of flipped classroom in BL, the researcher considered the information literacy

and proficiency of both teachers and postgraduates an important factor. Therefore, she provided training to equip the teachers in the experimental classes with the necessary skills and knowledge, obtained from the questionnaire, about the specific requirements of the postgraduate cohorts, as these were the preconditions of implementing the empirical research well.

### **2.3.5 Sociocultural Theory**

There are various theories and approaches to learning that foreground the social and cultural contexts of learning (Thorne, 2005), and one of them is Vygotsky's Sociocultural Theory of Cognitive Development (hereinafter referred to as SCT). SCT, which falls in the area to psychological research, is widely used in areas such as education, especially in second language acquisition (Lantolf and Appel, 1994; Smidt, 2009).

In this section, the researcher reviews the development, definition and applications of SCT in China. Moreover, the researcher also discusses the Zone of Proximal Development (hereinafter referred to as ZPD), one of the key concepts of SCT and guideline for the teaching practices employed in this empirical research.

#### **2.3.5.1 Development of Sociocultural Theory**

Sociocultural theory can be traced back to German philosophy (especially Kant and Hegel) in the 18<sup>th</sup> and 19<sup>th</sup> centuries, and to the sociology and economic thought of Marx and Engels. However, its main source is the work of Russian psychologist Vygotsky and his colleagues (Lantolf and Thorne, 2006). Based on the cultural-historical activity theory proposed by Leont'ev (1903-1979), Vygotsky, as a general psychologist, introduced Marx's materialistic approach and the general method of scientific research into psychology (Smidt, 2009; Meng and Qin, 2019).

In the 1920s and 1930s, Vygotsky and his collaborators began to systematically apply sociocultural approaches to the study of learning and development in Russia and the former Soviet Union. These approaches were based on the idea that human activity takes place in a cultural context mediated by language and other symbolic systems, and that it can be better understood when it is studied from the perspective of its historical development.

However, his writings were suppressed for two decades, and it was not until the late 1950s and early 1960s that they became known again.

In 1985, Wertsch proposed to replace the original terminology with SCT, which suggested that the human mind developed by participating in and appropriating forms of cultural mediation that were integrated into social activities (Wertsch, 1985). SCT suggests that all knowledge is learnt socially and then individually, or that human cognitive development occurs first at the interpsychological level (i.e., human interaction) and then at the intrapsychological level (i.e., within the individual's brain). It is important to note, however, that although SCT focuses on the social dimension, it is still concerned with the study of mental processes, the interaction between the human psyche, the socio-cultural context, and the cultural artefacts that regulate human cognitive or thinking functions.

Nowadays, SCT has been gradually applied to different discipline areas with increasing influence in the world. Therefore, more and more scholars are realising that SCT has explanatory power for second language learning and second language acquisition (Meng and Qin, 2019).

#### **2.3.5.2 Definition of Sociocultural Theory**

SCT emphasises the central role of sociocultural factors in the development of human cognitive functions. According to Vygotsky (1978), human beings live in a social world from birth, and human activity takes place within this sociocultural world. At the same time, the latter can be changed by the activities of the former. Therefore, Vygotsky's SCT of human development resides in two lines of development: a lower level of natural development and a higher level of cultural development. The lower level of natural development refers to biological growth and physical maturation while the higher level of cultural development means the acculturation to the surrounding social environment and its ways of reasoning and behaving.

Explaining SCT, Lantolf stated that "despite the label 'sociocultural', the theory is not a theory of the social or of the cultural aspects of human existence. ... it is, rather, ... a theory of mind ... that recognizes the central role that social relationships and culturally constructed artifacts play in organizing uniquely human forms of thinking" (Lantolf, 2004:30-1).

As Vygotsky (1981: 164) claims, “all higher mental functions are internalized social relationships”. Therefore, SCT situates learning within complex systems such as society, culture and history, emphasising the central role of sociocultural factors in the development of higher human mental functions. Learning is thus seen as a socially constructed process of constant interaction (Zuengler and Miller, 2006).

Centred around the development of the individual’s higher mental functions, Vygotsky addressed a key concept of SCT—Zone of Proximal Development (ZPD)—to help explain the way that social and participatory learning occurs (Vygotsky, 1978). He defined ZPD as “... the distance between the actual developmental level as determined through independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers” (Vygotsky, 1978: 86).

Therefore, for Vygotsky (1978), learning emerges as a result of interaction within ZPD, which indicates the existing gap between the current level and the potential one a student can reach by learning. Furthermore, the instruction or scaffolding of a teacher is only useful when it moves ahead of actual development.

Based on the above, the researcher would provide teaching practices appropriate to the potential of these postgraduates’ level, rather than their actual achievement. In this research, teachers in experimental classes would challenge postgraduates just beyond their existing capabilities in English language learning online or offline to stretch their potential and so help them develop their English language proficiency.

### **2.3.5.3 Applications of Sociocultural Theory in China**

Since the late 1970s, there has been a large amount of research in the field of second language acquisition framed by SCT, and in the 21st century, SCT research has shifted to second language teaching and learning, which reflects the praxis viewpoint of the dialectical integration of theory and practice in educational reform emphasised by Vygotsky (1978).

Research on SCT in China can be roughly divided into two categories. The first category is theoretical research, aiming to make researchers comprehend SCT better by illustrating the implications of some terminologies or giving recommendations for future study.

Meng and Qin (2019) published an interview of James Lantolf who imported SCT into Second Language Development, aiming to provide reference for related studies in China. This interview started from professor Lantolf's response to questions about the origin and development of SCT, then moved to the clarification of key concepts. It finally ended with his messages to foreign language teachers in China.

Xu and Lei (2018) reviewed and commented on the related studies of SCT in China in order to sketch the landscape of foreign language classroom research and provide reference for further research. They explored the SCT research themes in terms of teachers, learners and classroom environment, and recommended some future research areas and methods based on the analysis of the review of each theme, giving a comparatively integrated picture of SCT research in China.

The second category is empirical research, applying SCT or one of its key concepts to different kinds of empirical studies to find out the implication for teaching practices or the development of teachers and students.

Wu and Gao (2008) described some of the implications of ZPD for the reform of English language teaching in China, discussed the benefits of scaffolding learning instruction and interactive teaching in the English classroom, respectively, and the need for English teachers to strengthen their own theoretical and practical learning.

Shao and Feng (2011) studied teachers' mediating role in college English vocabulary teaching from the perspective of SCT. They pointed out that the roles of the teachers should be that of vocabulary material choosers and explainers, vocabulary tasks organizers, vocabulary autonomous learning instructors and vocabulary assessment designers. Together with such observations, they also proposed some effective methods in vocabulary teaching.

Zhang and Xu (2019), within the theoretical lens of ZPD, mainly adopted a quantitative design to explore the effect of Automated Writing Evaluation on English writing of college students with different proficiency from three perspectives: holistic writing score, writing process and perceived usefulness. The results showed that (1) low level students witnessed an improvement in their holistic scores, while high level students' scores remained unchanged; (2) online automated feedback facilitated progress and multi revision; (3) low level group scored higher than high level group in perceived usefulness. The interview also showed that attitudes toward online automated feedback varied among

students with different language proficiency. The findings indicated that online automated feedback only contributes to the improvement of low proficiency learners' writing; while high proficiency learners show no progress in writing quality, thus suggesting that they might be less dependent on technology.

The two categories of literature review of SCT in China provided necessary references for the researcher. For example, the study of Meng and Qin (2019) clarified that it was Leont'ev, not Vygotsky, who proposed the cultural-historical activity theory, helping the researcher achieve the writing of the development of SCT. The study of Shao and Feng (2011) offered useful tips for the researcher in her research, such as the teachers' role and effective methods of scaffolding vocabulary learning. Based on these, the researcher was able design and implement her empirical research more effectively.

### **2.3.6 Production-oriented Approach**

After discussing Communicative Language Teaching, Cooperative Language Learning, Multiple Intelligences, Flipped Classroom, and Sociocultural Theory, the researcher introduces the Chinese production-oriented approach (hereinafter referred to as POA) in this part.

As a popular approach in the field of academic English in China, POA has made useful attempts to promote theoretical innovation of English language teaching in China. It is necessary to introduce POA to fully illustrate the major methods and approaches teachers use during their English language teaching in Chinese universities, besides the theories and approaches mentioned above.

#### **2.3.6.1 Development of Production-oriented Approach**

In the 1970s, there was a "methodological fever" in foreign language teaching, and there were too many different methods to count (Stern 1985: 249). In the 1990s, however, many prominent scholars suggested that foreign language teaching had entered the "post-method era" (Brown, 2002; Kumaravadivelu, 2006; Richards & Rodgers, 2008), and some scholars even proclaimed "the death of the Method" (Kumaravadivelu, 2006: 168), asserting that no new methods would emerge in the foreseeable future. For example, Kumaravadivelu stated that "In all probability, the invention of a truly novel method that

is fundamentally different from the ones discussed ... is slim, at least in the foreseeable future” (Kumaravadivelu, 2006: 161).

For many years, teachers and experts in the foreign language community in China have been discussing how to build a foreign language teaching theory with Chinese characteristics. In order to overcome the shortcomings of the “separation of learning and use” in foreign language teaching in Chinese universities, the “production-oriented approach” was born in the context of the “post-methods” era (Wen, 2015, 2016). The development and refinement of this theory has lasted for more than 10 years.

The prototype of POA was “output-driven hypothesis” (Wen, 2007, 2008, 2013; Tesar, 2014), which was aimed at the reform of English professional skills courses (Wen, 2008), expanded to college English teaching in 2013 (Wen, 2013), and revised to “output-driven, input-enabled hypothesis” (Wen, 2014) in early 2014. In October of the same year, it was officially named POA in the *7th International Symposium on English Language Teaching in China* (Wen 2014), which was the largest and highest level international academic conference on foreign language teaching in China. The conference strongly promoted the development of foreign language teaching and research in China and strengthened the academic exchanges between teachers and researchers in the field of applied linguistics.

Based on the scientific findings and practical wisdom of domestic and foreign researchers, as well as the results of many rounds of classroom action research by frontline teachers, in 2015, the POA theory-guided textbook *New Generation of College English* was published. The book was subsequently adopted by many universities and produced a number of teaching research results (Yang, 2015; Cao, 2017; Chang, 2017; Qiu, 2017; Sun, 2017). Its effectiveness in teaching was initially shown by the empirical data (Zhang, 2016, 2017; Zhang, 2017; Zhang, 2020).

At the same time, POA had also made a certain impact on the international academic scene. POA constructors were invited to give keynote speeches at several international conferences, and in 2016, they published the paper “The production-oriented approach to teaching university students English in China” (Wen, 2016) in the international journal *Language Teaching* and “The production-oriented approach: A pedagogical innovation in university English teaching in China” was edited as Chapter Seven in the book *Faces of English: Students, Teachers, and Pedagogy* (Wong and Hyland 2017), published by

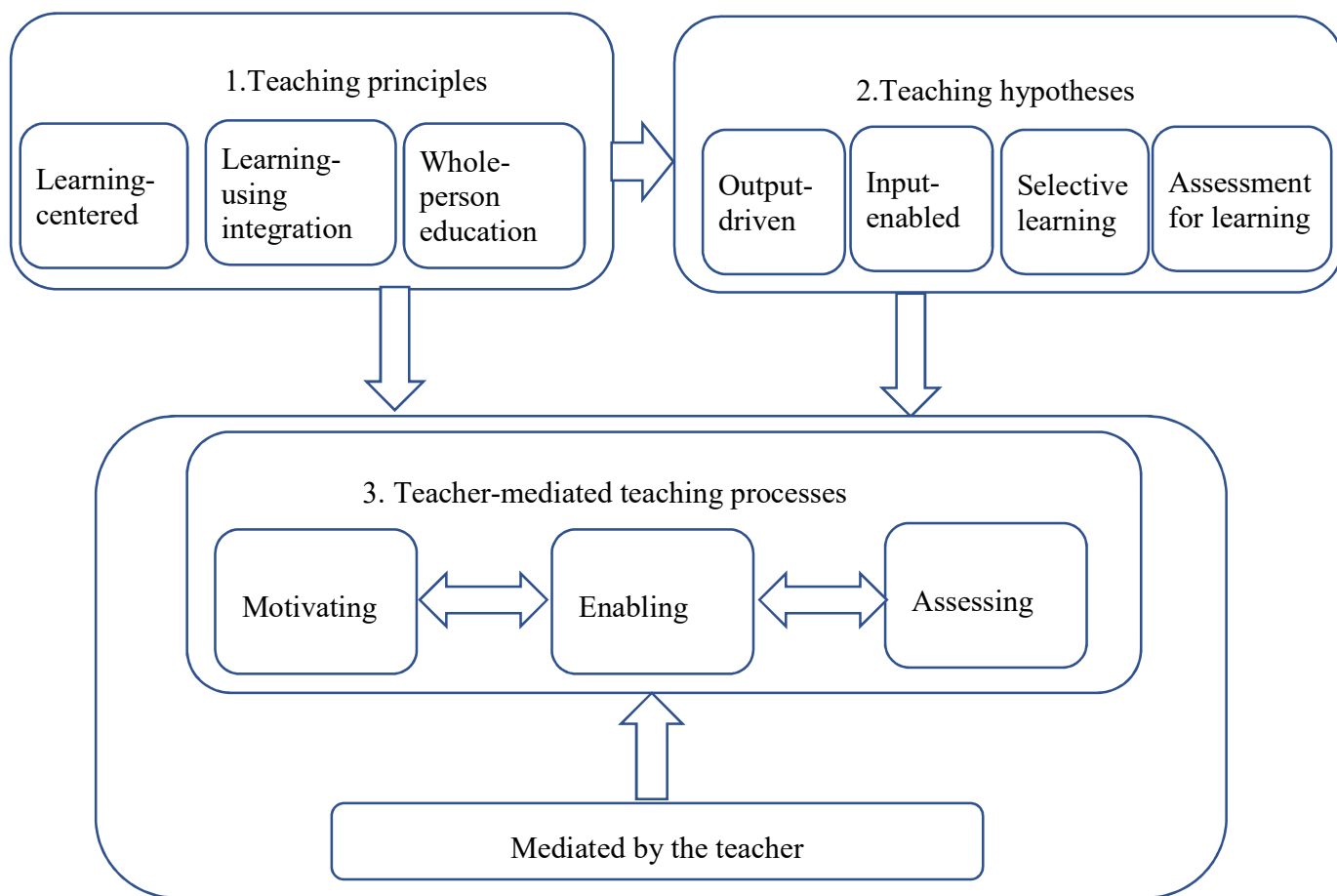
Routledge in 2017. Since then, POA has steadily developed and been adopted by many English teachers in the world.

#### **2.3.6.2 Definition of Production-oriented Approach**

There are two aspects that need to be clarified in the definition of POA. First, the approach is mainly aimed at intermediate and advanced English language learners who already have acquired a basic command of English grammar and who have learned about two thousand or more English words (Wen, 2016). If the *Common European Framework of Reference for Languages* is used, the teaching participants must be at least A2 or above. Second, the meaning of “production” is different from that of “output”. “Production” (*chanchu* in Chinese) includes not only speaking and writing, but also interpreting and translating; the English equivalent of “*chanchu*” is production, which emphasizes both the process of producing and the outcome of the product.

Therefore, by using POA, teachers not only focus on the performance of students’ oral English communication and expression, and writing abilities, but also pay more attention to the process of students’ learning English as well as their English language proficiency and performance. And this is in line with the goals and requirements of academic English courses for postgraduates, which is the main reason why the researcher would apply it in her empirical research.

Wen believes that “unlike other instructional approaches for language learning, the POA starts teaching with language production and ends with production while input serves as an enabler to help accomplish productive activities” (Wen, 2016). In her description, POA is composed of three parts. The following Figure 2.2 depicts the elements of POA and their relationships. The first part, *Teaching principles*, is the guiding idea of the second part, *Teaching hypotheses*, and the third part, *Teacher-mediated teaching processes*, which determine the direction and overall goal of classroom teaching. The second part, *Teaching hypothesis*, is the theoretical basis for all aspects of classroom teaching, which needs to be tested one by one; the third part, *Teacher-mediated teaching processes*, is the carrier for realizing the *Teaching principles* and testing the *Teaching hypothesis*, as well as the steps and means to achieve the goals of POA (Wen, 2007, 2008, 2013, 2014, 2015, 2016, 2017).



**Figure 2.2 Description of the POA (Wen, 2017)**

Based on the excellent achievements of foreign teaching theories (Krashen, 1982; Wette, 2011; Krashen & Mason, 2020), and the current learning situation of college English teaching in China, Wen advocates that “all activities in the classroom should take ‘learning happens’ as the ultimate goal” (Nunan, 1995; Wen, 2014). At the same time, it is believed that in order to make learning happen, teachers must change the status quo of “separation of learning and use” and “marginalization of the teacher’s role” in teaching practice. On the other hand, Wen advocates that teaching should take the “production” as the starting point and the final goal, and use the teacher as the mediator and the means to guide students to “learn to use, use to learn, and combine the learning and use” in order to optimize the teaching and learning process and improve their language proficiency (Wen, 2016, 2017).

### **2.3.6.3 Applications of the Production-oriented Approach in China**

Wen Qiufang, as the main founder of POA, has published many articles to interpret POA from many aspects (Wen, 2007, 2008, 2013, 2014, 2015, 2016, 2017). These articles can roughly be divided into three phases. Wen discussed the reform of curriculum and teaching methods for English majors based on the Output-driven hypothesis and problem-driven hypothesis in order to actively adapt to the changes in English language teaching and learning at the beginning of the 21<sup>st</sup> century in China (Wen, 2007, 2008). In addition to focusing on the teaching of English majors, she has also paid attention to the teaching practices in college English as POA has been refined and developed (Wen, 2013, 2014). Then she illustrates how POA was able to build a good foundation for its applications once it was formed and accepted by academia (Wen, 2015, 2016, 2017).

Although the content of these articles above, which are more descriptive and explanatory than research-based, is more concerned with explaining the characteristics of POA, the basis and process of its formation, they offer the researcher good help in better understanding POA theory so that she can implement the theory well in practice.

Moreover, many teachers and researchers conducted empirical studies based on POA, which mainly focused on the English language teaching and learning. Some of them paid more attention to the teaching practices based on different stages of POA.

Yang, Zhang, and Zhang (2017) apply POA to explore how to realise the “motivating” stage through micro-course design in the teaching of college English speaking. Their practice showed that micro-course design based on the “motivating” stage of POA had a positive impact on stimulating the students’ interest and motivation in learning English speaking.

Zhang (2020), guided by POA, used the multimodal oral report as “motivating” activity, applying the key concept of multiliteracies in the teaching process with emphasis on step-by-step design of teaching activities to “enable” students’ language production. Students’ PowerPoint presentations showed that the proportions of reproductive reading and critical reading have been increased, the expression of meaning has been improved in both depth and breadth, and the ability of using multimodal collocation has also been improved.

Furthermore, there are many researchers focusing on the effectiveness of POA on English teaching and learning. Zhang (2016) did a three-week classroom experiment on

POA aiming to increase the effectiveness of college English class. Feedback from both students and co-workers through questionnaires and interviews, as well as the author's reflection based on her classroom observation and reflective journals were included. The tentative results indicated that the feasibility of POA in English teaching had been achieved, all with more than satisfactory pedagogical feedback.

Zhang (2017) reported on a two-week experimental study that set out to examine the effect of POA on college students' English writing quality. Pre-test and post-test writing samples of both the experiment and control group revealed that: (1) while no significant differences were found in the global, the "content", and the "structure" scores of the writing, the "language" of the experiment group significantly outscored that of the control group; (2) the experiment group's writing production contained more newly taught target linguistic items than that of the control group; (3) the experiment group outscored the control group in the language achievement test.

In addition, Cao (2017) discussed the mediating role of teachers in POA. She proposed two dimensions of teacher scaffolding, one being vertical scaffolding and the other horizontal scaffolding. "Vertical scaffolding" referred to designing the unit task and then cutting it into sub-tasks; "horizontal scaffolding" referred to providing guidance and assistance in terms of content, language and discourse structure. Unit 4 of *iEnglish* is used as an example to illustrate how to build "vertical scaffolding" and "horizontal scaffolding" step by step and how to fine-tune scaffolding to students of different levels, with the focus on feasible teaching steps and activity design at each step.

Based on the discussions of these studies, the researcher got a more comprehensive understanding of POA. In the process of its application to the academic English course in BL, the researcher should not only use the advantages of BL to design teaching activities that could motivate postgraduates' learning, but also be a good facilitator and mediator, so that the postgraduates could get good language output in a more relaxed teaching atmosphere, and as a result improve their English proficiency.

## **2.4 Chapter Summary**

In this chapter, the researcher introduced the key definition of BL, its different types as well as previous studies of BL to outline the core research themes of this thesis. Furthermore, in order to explore and inform good teaching practices by evaluating the

impact of an intervention on blended learning in the academic English course for postgraduates, the researcher illustrated some theories and approaches of teaching and learning, such as CLT, CL, MI, flipped classroom, SCT and POA. Based on the discussion of these theories and approaches, the researcher identified useful teaching practices and strategies which could be applied in the following empirical study. The aim was to first improve the teaching skills of the teachers and to then move on to improving the English language proficiency of the postgraduates, which is the primary aim of this research.

## Chapter 3 Research Methodology

### 3.1 Introduction

Based on the critical literature review in Chapter 2, this chapter will describe in detail the research methodology which has been employed to achieve the aims and objectives of this research. These are to explore the development of blended learning (BL) in academic English teaching and learning at the postgraduate level in China; and to investigate combinations of the BL mode and innovative teaching English as a foreign language pedagogy in order to construct a better framework and strategies for improving the English language proficiency of postgraduate students.

The main structure of this chapter is outlined in what follows.

Firstly, after a detailed presentation of my research questions, the chapter clarifies both the overall research design and research process, including a discussion of the mixed methods approach (Creswell and Creswell, 2017). Secondly, the research participants are discussed. Then, the context of this research is explained, including teaching materials, main online learning platforms, main tools of communication between the teachers and the postgraduates, the teaching goals of an academic English course for postgraduates, and the instruction design. Thirdly, the chapter illustrates both the quantitative and qualitative methods (Creswell and Creswell, 2017) used in this research, namely the questionnaire, pre- and post-test, and, finally, interviews. Fourthly, by explaining the data collection process, it explores the research instruments, such as the statistical instruments, the thematic analysis (Braun and Clarke, 2013) and triangulation. Finally, the chapter concludes with a discussion of ethical considerations related to this research.

### 3.2 Research Questions

The primary aim of this thesis is *to explore and inform good teaching practices by evaluating the impact of an intervention on the blended learning of an academic English course for postgraduates*.

This overarching question can be broken down into three specific questions:

**Research Question 1.** What is the current study situation of postgraduate learners on the academic English course?

**Research Question 2.** What teaching practices can be applied by teachers to improve the language proficiency and attainment of postgraduates in a blended learning academic English course?

**Research Question 3.** What recommendations could potentially be made for future academic English courses for postgraduates taught in a blended mode?

Through the first research question, the researcher intends to achieve a clear picture of the research context and background information of the postgraduate participants of this research, including their demographic information and online experiences, their attitudes, influencing factors, and requirements for the academic English course. This will help the researcher design appropriate empirical pedagogies based on a thorough understanding of the practical situation.

Through the second research question, and based on the findings of the first research question, the researcher aims to explore and identify a set of suitable teaching strategies that can be utilized to scaffold the teaching and thus enhance the language proficiency of the participants.

The aim of the third research question is to provide useful suggestions and helpful advice that can be applied to future BL academic English courses for postgraduates.

In summary, by conducting an empirical study, analysis and review of pedagogical interventions in a blended academic English course for postgraduates in a Chinese provincial university, the researcher hopes to fill a gap in the existing academic literature on BL pedagogies for postgraduate academic English courses.

### **3.3 Research Design**

The design of the research is very important, for it affects the results and findings of the research as well as their validity and reliability. Because the main drivers of the research design and the selection of research methods depend on the primary and specific research questions (Creswell and Creswell, 2017), the researcher clarifies the research design explicitly in this section.

Firstly, the paradigm of the mixed methods approach and how it is applied in this research are explained. This includes a discussion of its advantages and disadvantages as well as an assessment of its validity and reliability. Secondly, the research framework will be illustrated.

### **3.3.1 Mixed Methods Approach Adopted in the Research**

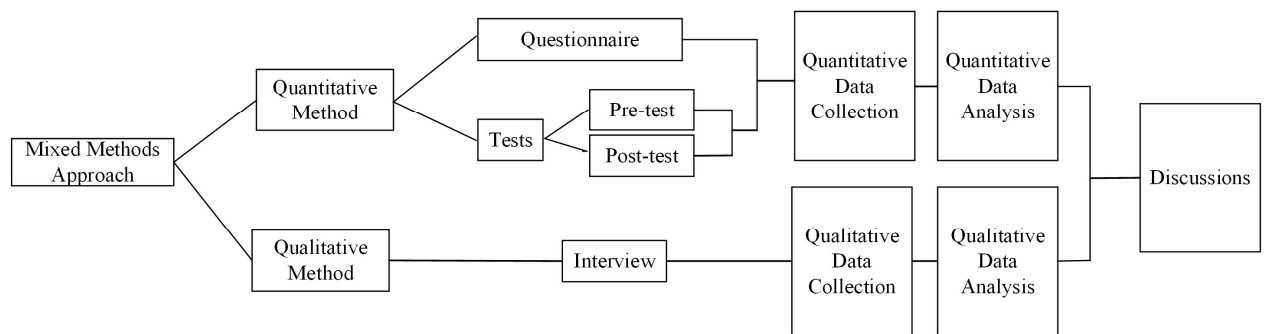
The choice of research methods mainly relies on the research questions and the goals and ultimate purpose of the researcher. Considering the proposed research questions, the researcher decided to adopt a mixed methods approach that included the use of both qualitative and quantitative methods in an integrated manner to maximise practical relevance and achieve set research objectives (Dörnyei, 2007; Creswell, 2014; Creswell and Creswell, 2017).

In view of the practical orientation of Research Question 1, a questionnaire in quantitative research—one of the most often-used data collection methods in the field of applied linguistics—was adopted (Xiao, 1995; Thomas, 2017). To answer Research Question 1 “What is the current study situation of postgraduate learners on the academic English course?”, the researcher needed to know about five distinct parts based on the literature review and the studies related to blended learning (Stracke, 2007; Diep, et.al, 2017; Thai, De Wever and Valcke, 2017): demographic information, online experiences, attitudes towards the academic English course, influencing factors, and requirements for the academic English course learning. By using the questionnaire, the researcher could learn about the current study situation of the participants, which not only provided some helpful suggestions for how to design, refine and implement the empirical study but also inspired the researcher to consider new pedagogical approaches in line with insights from the critical literature review.

In the light of the pragmatic operation in Research Question 2, tests, including the pre-test and the post-test, in quantitative research were used (Harris, 1969). To be able to answer Research Question 2 “What teaching practices can be applied by teachers to improve the language proficiency and attainment of postgraduates in a blended learning academic English course?”, the researcher needed to know the differences in English language proficiency between/within the experimental classes and the control classes, respectively, following the application of specifically designed teaching strategies in the experimental classes. Therefore, by using the comparison between the scores of a pre-test and those of a post-test, the researcher was able to evaluate the impact of targeted interventions on blended learning in the academic English course and further explore the effectiveness of particular teaching strategies accordingly.

Considering the practical nature of Research Question 3, the use of interviews in qualitative research was considered appropriate and hence adopted in this research (Dörnyei, 2007; Tavakoli, 2012). To answer Research Question 3 “What recommendations could potentially be made for future academic English courses for postgraduates taught in a blended mode?”, the researcher needed to collect information from both teachers and postgraduates in the experimental classes after the empirical research. Therefore, by interviewing teachers and postgraduates in the experimental classes, the researcher aimed to gain an in-depth understanding of the experiences of all participants. Analysis of the rich descriptions and reflections offered by these participants was the bases for the formulation of suggestions and their implications for future blended learning in the area of academic English course for postgraduates.

The paradigm of the mixed methods approach adopted in this research is shown in Figure 3.1.



**Figure 3.1 The paradigm of the mixed methods approach in this research**

The mixed methods approach used in this research has its advantages based on the pragmatism of the research. It not only helps the researcher achieve a good combination of quantitative and qualitative methods, but also to answer the research questions from two different yet complementary perspectives: a quantitative perspective based on closed data and a qualitative perspective based on open personal data.

However, the mixed methods approach used in this research may also have its disadvantages. Creswell (1998) explains that a research design defines a unique and different model to guide data collection and analysis for a particular piece of research. In mixed methods approach (Creswell and Creswell, 2017), as in this research, potential bias

might arise from the type and decisions made about the definitions used, the order of questions asked, and the method of coding the qualitative data and so on. Since the researcher herself employed the primary instrument of data collection and analysis for this research, the researcher managed to increase confirmability and minimize the potential bias by not only being open about the interview and follow-up questions, but also meeting with the teachers who participated in the research to discuss the findings (Mason, 2017).

Furthermore, because it combines quantitative and qualitative methods, it is difficult for the researcher to use the same strategy to ensure validity and reliability in the evaluation of aspects of the quantitative method, and trustworthiness and credibility in the qualitative method (Lincoln and Guba, 1985; Robson, 2002; Polit and Beck, 2012; Elo, et. al., 2014).

Therefore, the researcher adopted the following strategies to ensure and demonstrate rigour of the mixed methods approach in the research. On the one hand, in order to ensure the validity and reliability of the quantitative method, the researcher carried out a pilot test presented in **Section 3.6.1 Questionnaire in Phase 1**. Its aim was to refine the questionnaire firstly. On the other hand, the researcher used different instruments to ensure the accuracy of the statistical data. For instance, “Wenjuan Xing”, use of which is described in **Section 3.8.1 Wenjuan Xing Used in Questionnaire in Phase 1**, was used to calculate the results of the questionnaire, and SPSS 26.0, discussed in **Section 3.8.2 SPSS Used in the Pre-/post Test in Phase 2**, was chosen to calculate the pre-test and the post-test results.

Moreover, Pearson Chi-square ( $\chi^2$ ) “is usually viewed as a non-directional (two-tailed) test. But only one alternative hypothesis need be given because if the variables are related, it does not matter which direction is involved, mathematically or logically” (Brown, 1988: 184-185). Therefore, Pearson Chi-square was adopted to test some particular items in the questionnaire to find out whether there were significant differences between these choices.

In addition, because *t*-test is a particular type of statistical test that is used to compare the means of two groups (Welch, 1947; Kim, 2015) and to check whether the difference between the two means is significant, the researcher adopted a *t*-test in the data analysis. Furthermore, the researcher adopted two-way mixed ANOVA (Johnson and Christensen, 2014) of pre-test and the post-test to verify the statistical accuracy and significance.

On the other hand, interviews were carried out as presented in **Section 3.7.1 Interview in Phase 3**, maintaining credibility and reliability. Moreover, because reliability was achieved by the provision of detailed descriptions, during the research process, the

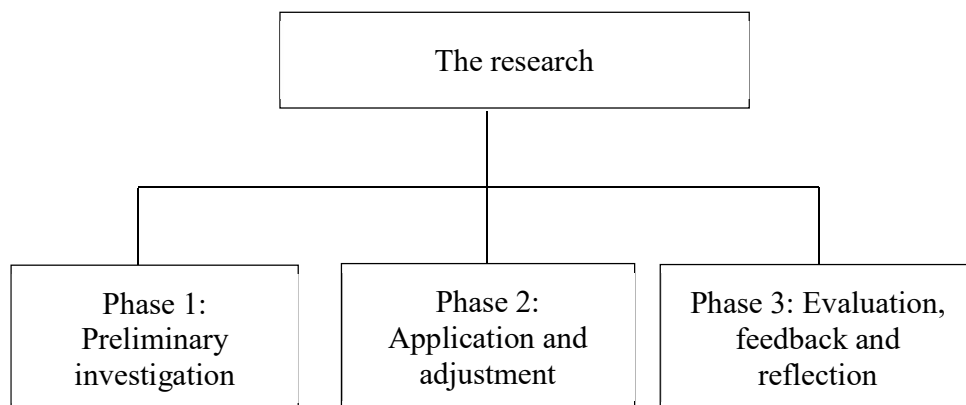
researcher invited another two teachers to do the peer review of all the data and transcriptions, not only to ensure the authenticity and reliability of the qualitative method, but also to check for anonymity and confidentiality as well as the data validation. Furthermore, as illustrated in *Section 3.8.3 Thematic Analysis in Interviews* and *Section 3.8.4 Triangulation*, the thematic analysis and the triangulation were adopted to doublecheck and achieve sound findings.

Moreover, as Guillemin and Gillam (2004:274) note, reflexivity is an active and ongoing process of critical reflection at all stages of inquiry. During the whole process of the research, as a researcher, she is consistent to remind herself that she should constantly and clearly perform the scrutiny of “*what I know*” and “*how I know it*” (Hertz, 1997:vi). As a result, reflexivity plays a central role in this research, not only in the supervision of the data collection and analysis, but also to enhance its reliability as well as to explore the researcher’s role more deeply and draw reasonable conclusions.

### 3.3.2 Framework of the Research

To conduct the research smoothly and successfully, based on the stages of Huang, et al. (2009) and Tomlinson and Whittake (2013) (See more details in *Section 2.2.3 Studies of Blended Learning*), the research was roughly divided into three consecutive phases—Phase 1, Phase 2 and Phase 3, corresponding to the three research questions respectively.

The structure of the procedure of the research was shown in Figure 3.2.



**Figure 3.2 The structure of the procedure of the research**

In order to address and tackle Research Question 1 accurately and precisely, Phase 1, as the preliminary investigation of the research, incorporated four steps: the formation of the preliminary questionnaire, a pilot test, a refinement of the preliminary questionnaire, and collecting and analysing the formal questionnaire data obtained from the postgraduate student participants. The data and results from Phase 1 contribute to answering Research Question 1. In addition, concerning the teaching practices used in Phase 2, the researcher decided “what is to be used” and “how it is to be used” based on the findings of Research Question 1 and the literature review, along with the discussions and communications with teachers in experimental classes, providing the foundations for Phase 2 of the study.

Phase 2, was a phase of the application and adjustment. At the beginning of Phase 2, a pre-test was taken to test the current English language level of the postgraduate participants. During the semester, the postgraduate participants in the experimental classes were taught with adjusted/multiple teaching strategies and class activities in blended learning, while the postgraduate participants in the control class were taught using traditional teaching methods. At the end of the Phase 2, the post-test was used to measure the English language proficiency of the postgraduates in the experimental and control classes after one semester practice. The results of Phase 2 were used to verify the effectiveness of some particular teaching practices in promoting the English language proficiency in blended learning of the academic English course for postgraduates to answer Research Question 2.

Phase 3 was a phase of evaluation, feedback and reflection. In Phase 3, teachers teaching the experimental classes and some postgraduates in the experimental classes participated in the interview at the end of the empirical study. The transcriptions of the interviews were analysed based on the thematic analysis to find out some useful suggestions and recommendations to answer Research Question 3.

To identify the three phases comprehensively and to investigate their interrelationships clearly, the researcher developed a framework of this research, as shown in Table 3.1.

**Table 3.1 A framework of the research**

<b>Phases of the research</b>	<b>Phase 1: Preliminary investigation</b>	<b>Phase 2: Application and adjustment</b>	<b>Phase 3: Evaluation, feedback and reflection</b>
<b>Specific research questions to be solved</b>	Research Question 1: What is the current study situation of postgraduate learners on the academic English course?	Research Question 2: What teaching practices can be applied by teachers to improve the language proficiency and attainment of postgraduates in a blended learning academic English course?	Research Question 3: What recommendations could potentially be made for future academic English courses for postgraduates taught in a blended mode?
<b>Research methods and instruments to be used</b>	<b>Quantitative</b> method: 1. Pilot test 2. Questionnaire	<b>Quantitative</b> method: 1. Pre-test 2. Post-test	<b>Qualitative</b> method: 1. Interviews
<b>Research activities to be recorded and analysed</b>	1. Pilot test 2. Questionnaire	1. English language proficiency pre-test 2. Experimental classes with adjusted/multiple teaching practices and class activities in blended learning and control classes taught in the traditional mode 3. English language proficiency post-test	1. Post-course interviews with some participants
<b>Research outcomes to be achieved</b>	The current studying situation of postgraduates and tips for the following teaching design and practices	Effective teaching practices based on the comparison and contrast of learning outcomes between the experimental classes and the control classes	Suggestions and recommendations made by the participants in the blended learning experiment

Based on this research framework, in the following sections, the researcher details the participants, teaching context, particular research instruments and their formation process in the different phases. Links of the research framework to subsequent questions will be explained as necessary and the different requirements of each research phase discussed as we move along.

### **3.4 Description and Selections of the Participants**

Factors such as the determination of the overall study population, selection of participants, sample size, and sampling strategy all affect the quality of the data, which in turn affects the quality of the interpretation of the overall study data (Zheng & Wang, 2014). Theoretically, all teachers and postgraduates on any academic English course in any Chinese college or university implementing BL are potential participants in this study. However, due to the limitation of human, material and financial resources, it is impractical to study the whole group of teachers and postgraduates. Therefore, according to the principle of Creswell and Creswell (2017), the researcher selected a much smaller group as her participants in this study. These will be introduced in the following sections.

#### **3.4.1 Teachers**

To invite voluntary teacher participants to participate in this empirical research, the researcher distributed 12 printed invitation letters and consent forms to the 12 teachers who taught the academic English course in the local technical university in northeast China. In the invitation letter, which was also an information sheet, the researcher explained the purposes, the research process and the anticipated outcomes of the research, not only issuing assurances of anonymity and confidentiality, but also informing the potential participants that their participation in this research would not affect the results of their teaching inspection by head staff of the School of Foreign Languages in the University. Moreover, only after signing the consent forms were they allowed to participate in the empirical research. Participants were informed that they might also withdraw their consent to participation at any time during the research, even after they had signed the consent forms. At the end, 10 of the 12 teachers signed the consent forms and showed their willingness to take part in the research.

The researcher then illustrated what activities they might be expected to perform or agree to in the course of this research. For example, to adopt new pedagogical methods based on the blended learning; to record the learning processes of the postgraduates; to be an interviewee at the end of the research and share their experiences. After the research had been explained in detail to them, all 10 of them still wanted to take part in the research and expressed their willingness to do some experimental trials in their teaching. Finally,

considering the needs of the empirical research, the researcher selected 4 out of the 10 teachers as participants of this research at the teaching level according to the following reasons.

Firstly, these four teachers were all full-time teachers at the School of Foreign Languages in the local technical university, which ensured the responsibility in their teaching and good communication during the research. Secondly, the four teachers had teaching English experiences of more than 15 years each. They had all majored in applied linguistics and were adept at teaching the academic English course to the postgraduates. Meng, Lian, and Guo (2004) referred to teachers with more than 15 years of teaching experience as expert teachers, teachers with 5-14 years of teaching experience as skilled teachers, and teachers with less than 4 years of teaching experience as novice teachers. According to this classification, all four teachers were expert teachers. Therefore, they were well aware of the differences between students of different majors and had grasped the key points and difficult points of the teaching materials.

Moreover, they had the capability to control the whole teaching process to a reasonable extent. When confronted with difficulties during their teaching, they had the motivation and the ability to take the initiative to seek solutions and adopt effective measures, which was very helpful and essential for their teaching and students' learning. Furthermore, they had a sharper perception of challenges arising during teaching, which they would readily communicate to and negotiate with colleagues as well as the postgraduates to assist the teaching process and thus enhance teaching effectiveness.

Teacher A, professor, 42 years old, has 20 years of teaching experience. Teacher A is an excellent and experienced teacher who has taught the postgraduate academic English course for nine years. During the teaching period, Teacher A tries to expand the multimedia resources for student learning and classroom teaching. For instance, she made micro-lectures herself and utilized them in English teaching. However, this was the first time she took a blended course, and she was keen to learn more and practice more during her teaching process.

Teacher B, associate professor, aged 47, with 16 years of teaching experience. Teacher B has taught the postgraduate academic English course for six years and has achieved excellent results in many English teaching contests during her tenure, indicating that she is an outstanding, innovative and passionate teacher. Teacher B has tried the

blended instructions for two semesters and already had a preliminary understanding of how to teach online. She believed that the attempt of BL would bring her a lot of thinking and influence in her teaching experience.

Teacher C, professor, aged 46, has 19 years of teaching experience. Teacher C is also an excellent and experienced teacher, who has taught the postgraduate academic English course for ten years. Teacher C has won the first award in a provincial teaching contest because of her excellent teaching design and standard oral English. Furthermore, Teacher C is good at teaching and having fun during the teaching process, using simple methods to solve complex problems, especially grammar learning.

Teacher D, associate professor, 43 years old, has 17 years of teaching experience. Teacher D has taught the postgraduate academic English course for six years. During the teaching period, Teacher D always uses multimodal resources for students to study English. For instance, she is proficient in the use of various forms of PowerPoint and multimedia to facilitate students' English learning.

In this study, all four teachers used the same textbooks *English Integrated Course for Postgraduates* (Xiong, 2020) and *English Listening and Speaking for Postgraduates* (Li and Zhou, 2020), published by Foreign Language Teaching and Research Press in China. However, Teacher A and Teacher B who designed the teaching strategies, class activities and syllabus, used BL in Class A and Class B which were the experimental classes, while Teacher C and Teacher D used the traditional teaching mode in Class C and Class D which were the control classes, respectively. The following Table 3.2 shows the details.

**Table 3.2 Teachers and their classes**

<b>Num.</b>	<b>Identity</b>	<b>Age</b>	<b>Total Teaching Years</b>	<b>Teaching Years for Postgraduates</b>	<b>Classes</b>	<b>Numbers of Students</b>
1	Teacher A	42	20	9	Class A Experimental	30
2	Teacher B	47	16	6	Class B Experimental	32
3	Teacher C	46	19	10	Class C Control	31
4	Teacher D	43	17	6	Class D Control	27

### 3.4.2 Postgraduates

The characteristics of the postgraduates are firstly illustrated in detail to make clear the background information of the postgraduate student participants. Secondly, the selection of the sample postgraduates is presented.

#### 1. The characteristics of the postgraduates

This empirical study was carried out among postgraduates who were in the stage of pursuing their master's degrees at a local technical university, located in the northeast of China. The postgraduates chosen to be the student participants in the study were all in their first year of postgraduate study. Just as most students in many other universities and colleges, they were mainly taught in teacher-centred English classes during their undergraduate studies.

However, in the context of big data and with the development of the internet, current English language teaching, following the trend of diversification, is moving away from traditional “*classroom-intensive*”, “*teacher-centered*”, “*single-sense*” and “*one-way*” teaching methods. Gradually, the trend is to combine “*face-to-face classroom teaching*” with “*independent learning*” and “*online-and-offline-intensive*”, “*student-centred*”, and “*knowledge and student-driven*” lectures (Wang, 2020). At the same time, information technology is constantly influencing and changing postgraduates' thinking and behavioural patterns.

A case in point is the way student responses have changed when they encounter new words they do not know. For instance, in the past, around twenty years ago, students in China would have tended to look up the meanings of the new words and phrases in a dictionary when reading an English novel. Nowadays, they would use their laptops and computers to search online as well as use some APPs in their smartphones. Or they can use such tools or devices as the “translation pen” to translate English words directly. The advantage of the current approaches is that it is convenient and saves students' time compared to looking up items in dictionaries, but at the same time it also reduces the time used to commit new words to memory, leading to an over-reliance on such devices or APPs on part of many students. This negatively affects their ability to memorize words, and may even entirely prevent students from reciting words, while ultimately leading to a decline in students' English learning ability and English proficiency level (Wang and Wei, 2020).

Furthermore, they may no longer rely entirely on the content delivered by teachers in class, but are accustomed to searching for answers with the help of online search tools. Due to the upgrading of the university's graduation requirements for postgraduates, they are required to publish at least two academic papers before they graduate. This applies especially to those majoring in science and technology. Furthermore, the expectation is that these published papers are included in Engineering Index, Science Citation Index and Social Sciences Citation Index. However, most of these indexes refer to English as their primary language in journals and publications, which leads to the phenomenon that postgraduate students often consider sufficient English language proficiency as a prerequisite for being able to publish their work. As a result, partially based on this requirement, learning English does not only play a part in helping postgraduates complete their studies, it can also be an important tool in advancing their learning process. The importance of learning English and English language proficiency becomes immediately evident once they want to publish their papers, especially in international journals published in English. Therefore, now more than ever, postgraduates are paying much more attention to acquiring a solid command of the English language during their graduate studies, which places higher demands on both the English teachers and the language teaching pedagogy.

Another challenge for the postgraduates in the local technical university is the drastic reduction of teaching hours in academic English courses. Originally, the total teaching hours of this course were between 128-256 hours, while the total teaching hours consist of only 64 hours now. The reduction of the teaching hours effectively reduces the time postgraduates have to spend on learning English learning and gives students more time to do their scientific research and study, while also reducing their English language input, English language training and learning time. However, this also creates a tension: Higher requirements in terms of English language output need to be met with far fewer teaching hour and less English language input. In this scenario, many of the postgraduates find it difficult to continuously improve their English language proficiency within the limited class time.

In this new current situation, postgraduates are able to face up to the need for and importance of learning English. As a consequence, postgraduate students' motivation for learning English can generally be described as fairly high.

## **2. Postgraduate student participants**

The researcher's university is a provincial technical university focused on science and engineering subjects. To make this empirical study more representative and allow for a wider comparison, postgraduates from one of the science schools and one of the engineering schools, respectively, were selected as participants in this study. Therefore, the researcher distributed 200 invitation letters and consent forms to postgraduates in their first year of postgraduate study in the School of Mechanical Engineering and School of Mathematics and Statistics. All of the students invited had registered for the postgraduate academic English course. Staff in the two schools helped to distribute the invitation letters to the students.

In the invitation letter and consent form, the researcher introduced the purposes of this empirical research, told the students about what would happen if they took part in the research, and also mentioned both the risks and benefits of taking part. Because this might be the first time for these students to read an invitation letter and consent form in English, the researcher explained many details mentioned in the two documents. For instance, the fact that any data collected during the research would be held in strict confidence and that no real names would be used in this study or in any subsequent publications; that they could change their minds and quit the research project at any time, even after having signed the consent form, without having to provide any reason and without having to fear any repercussions; the researcher made it very clear that it would not influence their academic scores or grades whether they agreed or disagreed to take part in the research.

After the consent forms returned, 186 postgraduates signed the consent forms and showed their positive and supporting attitude toward this research.

When doing the class allocation, the researcher needed to consider practical arrangements in the university. One was the rule regarding the arrangement of classes that stipulated that postgraduates could not choose courses on other campuses. Because postgraduates from the School of Mechanical Engineering and the School of Mathematics and Statistics studied on different campuses, they could not be allocated to the same classes of the same course. The other rule was that the number of students in a postgraduate academic English course should not exceed 35, for a larger number might negatively affect student learning outcomes and communication in class. Based on these considerations, the researcher selected 120 postgraduates with stratified randomisation out of the 186

postgraduates to be the participants in this research. The 120 selected postgraduates all came from the School of Mechanical Engineering and the School of Mathematics and Statistics and formed Class A, Class B, Class C and Class D with approximately 30 students in each class. Details of the classes are shown in Table 3.3.

**Table 3.3 Postgraduates involved in this study**

Classifications	Teachers	Classes	Numbers of Students	Gender		Schools
				Male	Female	
<b>Experimental Class</b>	Teacher A	Class A	30	17	13	Mechanical Engineering
	Teacher B	Class B	32	21	11	Mathematics and Statistics
<b>Control Class</b>	Teacher C	Class C	31	14	17	Mechanical Engineering
	Teacher D	Class D	27	21	6	Mathematics and Statistics
<b>Total</b>	4	4	120	73	47	

On the one hand, the similar number of students in the experimental and control classes ensured the validity and feasibility of the comparison of the empirical study. In this study, Class A and Class B with 62 postgraduates were treated as the experimental classes, and Class C and Class D with 58 postgraduates were treated as the control classes. Moreover, Class A and Class C were from the School of Mechanical Engineering, consisting of 61 students totally, while Class B and Class D were from the School of Mathematics and Statistics, including 59 students in total.

On the other hand, the student participants shared some common features with all mainstream postgraduates in China. This was helpful for establishing comparability and also to give the researcher a solid basis for the empirical study and comparison between the experimental classes and the control classes. Firstly, the English learning background of these postgraduates was similar because all were Chinese and had no experience of studying abroad. Secondly, the years they studied English in school or university were similar. All had received formal English teaching for at least 16 years, from the first year of primary school to the fourth year in university (all participants had obtained a bachelor

degree and all of them were in the first year of their postgraduate study). Thirdly, their English language proficiency was comparable in that all students met the standard requirements of the *National Postgraduates Entrance Examination* (having equivalence to B1 in Common European Framework of Reference for Languages), a prerequisite for being admitted to the university as a postgraduate student.

Therefore, in this study, the researcher compared and contrasted the experimental classes and the control classes as a whole in order to determine the effects of the empirical study, to identify innovative teaching strategies used in BL to promote the English language proficiency of postgraduate cohorts, and to contribute to the subsequent development and application of said teaching strategies in future academic English courses.

### **3.5 Description of the Teaching Context of the Empirical Research**

The postgraduate academic English course is one of the most important basic courses within Chinese postgraduate education. It is also a compulsory course for most non-English majors. Before proceeding to the empirical part of this research, it is necessary to describe the teaching context of the course in detail, including the teaching material, online learning platforms, main communicative tools for teachers and students, the teaching goals and requirement of the course. For this information will be used to inform the empirical research design.

#### **3.5.1 Introduction of the Teaching Materials**

In this study, all four teacher-participants used the same textbooks *English Integrated Course for Postgraduates* (Xiong, 2020) and *English Listening and Speaking for Postgraduates* (Li and Zhou, 2020), published by Foreign Language Teaching and Research Press in China (see Figure 3.3).



**Figure 3.3 Postgraduate English Language Textbooks**

Founded by Beijing Foreign Studies University in 1979, Foreign Language Teaching and Research Press is a leading and internationally renowned comprehensive cultural and educational publishing organisation in China. These two textbooks, part of the *English Improvement Series for Postgraduates in Higher Education*, aim to further improve English language skills and applications according to the needs of non-English postgraduates in their academic and professional studies. In particular, they focus on further consolidating English language knowledge and improving language skills on the basis of undergraduate English studies; furthermore on expanding the postgraduates' academic horizons and cultivating their academic research skills, especially their oral communication and writing skills in related professional fields. In other words, postgraduate academic English courses are part of generic skills training aiming to lay a good foundation for further studies and research.

*English Integrated Course for Postgraduates*, consisting of 10 units, is written by Zhejiang University with a teacher's book and a CD-ROM learning disk. Each unit follows four main lines, focusing on improving postgraduates' speaking, reading, translation and writing skills, respectively, and contains 6 sections: *Starting Out*, *Reading Focus*, *Reading More*, *Practical Translation*, *Focused Writing*, and *Final Project*. The content of each part is interrelated and independent, which is convenient for teaching and learning, and includes a rich selection of materials to stimulate thinking.

For instance, in *Starting out*, a wide range of topics are selected to inspire the students to participate in the oral practice of critical thinking skills. The content of *Reading Focus* and *Reading more* is innovative, thoughtful, and inspiring for the postgraduates' experience and knowledge structure. The *Practical Translation*, *Focused Writing* and *Final Project* sections highlight practicality in a step-by-step manner. The content is closely related to the postgraduates' graduation defense, job application, work and research. Based on this textbook, through the combined teaching practice of speaking, reading, writing, and translating (Ennis, 1989), teachers can help postgraduates improve their language skills, critical thinking skills, and intercultural communication skills.

*English Listening and Speaking for Postgraduates*, consisting of 12 units, is prepared by the Graduate School of the University of Science and Technology of China. The textbook comes with a teacher's book and a CD-ROM learning disk. Each unit contains four sections: *Warm-up*, *Listening for content*, *Speaking for communication*, and *Follow-up*. It focuses on skills training and practical application to consolidate and improve the postgraduates' English listening and oral expression skills in order to meet the needs of language communication activities in different situations. Furthermore, the main content is designed around the theme, focusing on listening comprehension and oral expression at the discourse level, and developing the postgraduates' ability to apply language in different contexts. For instance, in *Warm-up*, the book focuses on the introduction of cultural background knowledge and considerations in communication, to improve the postgraduates' humanistic literacy and ability to conduct cross-cultural communication. In the *Listening for content* and *Speaking for communication* sections, it follows the principle of "listening and speaking together", includes daily conversation, lectures, news reports, outline speech, and participation in discussion, combining input and output of English language as well as facilitating teachers to design classroom activities and the postgraduates' independent practice. In *Follow-up*, it includes test questions to help students test and improve their listening skills. Furthermore, the exercises are well conceived and interactive, and designed to encourage students to participate, think positively, and improve their oral expression skills as well as their listening ability.

In this empirical study, the experimental classes and the control classes were all taught by these two textbooks. The total teaching hours were 64, and the hours for these two books were the same, that was, 32 teaching hours for each of them. One of the major differences

was that the control classes only used these two textbooks, while the teachers of the experimental classes added appropriate learning content and exercises based on the textbooks according to the specific situation of BL. Because of a different allocation of the teaching content, teachers might use different teaching methods, approaches and pedagogies, such as CLL, MI, POA, in order to improve the English language proficiency and the comprehensive ability of their postgraduates.

### **3.5.2 Introduction of Main Online Learning Platforms**

Online learning platforms play an essential role in blended learning of the academic English course. Therefore, this section describes the main online learning platforms popularized in Chinese higher education and explains the reasons why the teachers chose them and how to use them in this empirical study.

Especially in 2020, because of COVID-19, there appeared many novel platforms which particularly served specific or targeted client groups. In North America and Europe, ZOOM, Microsoft Teams and, to a lesser extent, Skype were used predominantly. However, in China, it was difficult to tell which platform was the most appropriate, because different groups used different online platforms. Many online learning platforms were applied in the Chinese educational field, and the most popular ones were Ding Talk, Chaoxing, Tencent Classroom, Rain Classroom and so on.

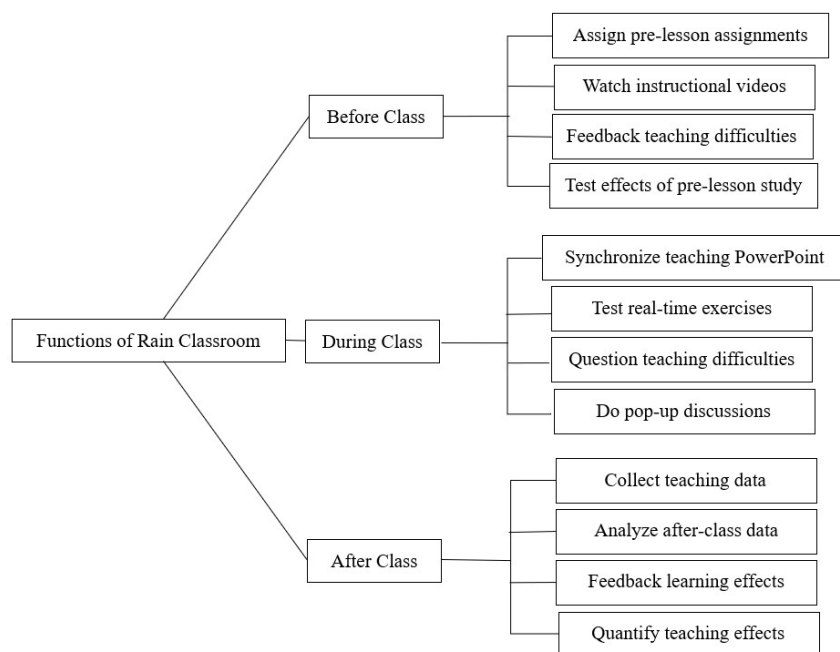
Ding Talk is widely used in elementary and junior middle/high schools in China. It is a free communication and collaboration multi-terminal platform built by Alibaba Group specifically for Chinese enterprises, the overseas version of Ding Talk Lite, supporting Traditional Chinese, English, Japanese and other languages, mainly including video conferencing, group live, chat, schedule and other functions, free for global users during the COVID-19 (DingTalk Lite, 2020).

Chaoxing is generally employed in many universities in southern China. As the cloud brain of an intelligent teaching system, the Chaoxing platform replaces to the storage form of traditional lecture resources and stores teachers' PowerPoint, homework, MOOC, videos, documents and other materials easily. Teachers can send information through the cloud brain, and students can receive them synchronically. At the same time, the cloud brain can cover multiple terminal devices, making the use of hardware easier.

Tencent Classroom and Rain Classroom are extensively applied in many universities in China. Although both of them have the word “classroom” in their names, they have totally different features and unique characteristics.

As Chinese largest online vocational education platform, Tencent Classroom creates a classroom where teachers teach in online classes and students learn through timely interaction. “*Teacher Speed Version*” of Tencent Classroom is unique for teachers who teach online because it can help teachers quickly build their own virtual classrooms online. Teachers can use their smartphone number to register and login, and then share the course link or Quick Response code (QR code) with students after the class starts, so they can quickly enter the virtual classroom and listen to the lesson. This version supports multiple teaching functions and teaching modes, such as camera, PowerPoint playback, audio and video playback, screen sharing, and comes equipped with more than 10 kinds of interactive teaching tools, such as a drawing board, sign-in, question and answer cards, hand-raising and microphone connection, and picture-in-picture. It effectively solves the problems of teachers who are not familiar with online teaching and the complicated process of starting classes. Furthermore, Tencent Classroom is combined with QQ, and the latter is often used to be an instant messenger which will be introduced in the next section to facilitate the teaching process of the former.

Rain Classroom is a smart teaching tool which is a plug-in of PowerPoint, researched and developed by the Online Education Research Center of the Ministry of Education and jointly launched by Tsinghua University Online Education Office and Xue Tang Online (Yu, 2018). It provides a new support platform for the traditional classroom teaching process, which is intelligent, personalized and data-supported. Based on the widely used PowerPoint and WeChat (an instant messenger which will be introduced in the next section), Rain Classroom integrates into PowerPoint and WeChat by inserting small plug-ins into PowerPoint and WeChat applets, respectively, and provides a teacher’s WeChat terminal for control and supervision. It combines the complex computer technology and teaching scenarios to create an efficient and intelligent learning environment, which is well suited to the needs of BL and independent learning in the education field. Figure 3.4 shows the functions of Rain Classroom in detail.



**Figure 3.4 The functions of Rain Classroom**

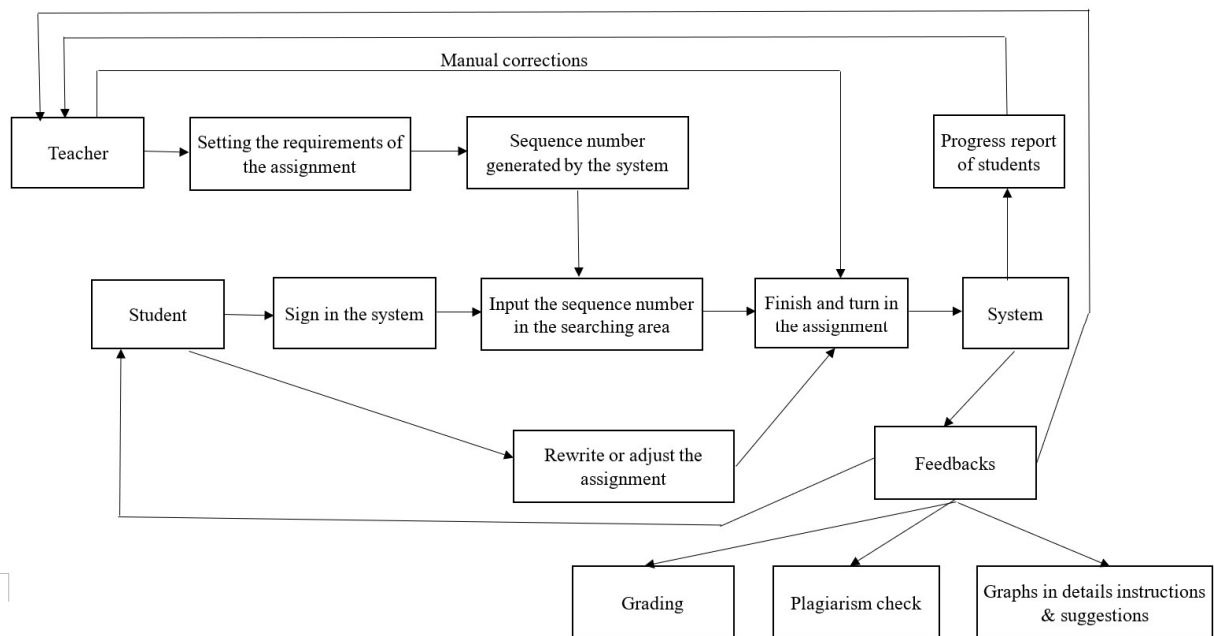
According to the discussion with Teacher A and Teacher B who would teach the experimental classes, they preferred to use Rain Classroom as the main online teaching platform and used it as the ancillary classroom teaching software. Furthermore, they expressed a preference for using the “*Teacher Speed Version*” of Tencent Classroom as a useful tool for “*Group question and answer sessions*” or “*assigning assignments*” which needed finishing in a brief period of time. Moreover, both of them chose Ding Talk and Chaoxing as alternate platforms just in case.

Besides these online learning platforms, there are still other useful ones which will be used in this empirical study. One of them is “Pigai Wang”, whose website is [www.pigai.org](http://www.pigai.org). Here, “Pigai” is Chinese Pinyin, which means “correction” and points towards its main function and features. The platform can effectively reduce teachers’ workload in correcting English compositions and improve students’ English writing skills.

Compared with traditional manual correction methods, Pigai Wang has the following features: First, it automatically identifies common mistakes in vocabulary, collocations, grammar, and so forth, and gives suggestions for corrections, so teachers don’t need to spend time correcting them for students. Second, it can grade the essay score immediately. It reviews user-submitted essays in real time and gives immediate essay scores and

analytical feedback, allowing students to correct errors in their essays quickly after their submission. Third, it also provides students with extended training on specific knowledge points, collocation recommendations, and example sentences for references as well as comprehensive writing guidance to help them learn independently. Fourth, it can do the plagiarism detection. Plagiarism detection helps teachers to check whether students' essays are plagiarized. After receiving the essays submitted by students, Pigai Wang checks whether the content of the essay is duplicated with other students' essays in the class, or with the content of internet web pages, and provides the duplication index for teachers' reference.

The specific process of using Pigai Wang is outlined in the workflow diagram shown in the Figure 3.5. At first, teachers assign essays with requirements and generate essay numbers through the system. Then, students receive the essay number, search the essay number on the student account page to find the essay topic assigned by the teacher, and write and submit the essay. Later, the system analyses the student's essay, awards a score, and generates a detailed graphic report. Last, teachers get the results of student essay analysis and correct some student essays.



**Figure 3.5 The workflow diagram of Pigai Wang**

Both of Teacher A and Teacher B were familiar with the use of Pigai Wang and they thought it was a suitable tool for postgraduates to develop their writing (including essay writing and translation) abilities. Therefore, Pigai Wang was applied in this empirical study. For example, teachers assigned essay writing tasks as online assignments so that students could consolidate the writing skills they had been taught in face-to-face classes.

Teachers also recommended well-known websites, such as *BBC News* (<https://www.bbc.com/news>), *English for everyday use* (<https://www.culips.com/>), *The Economist* (<https://www.economist.com/>), *The Daily Mail* (<http://www.dailymail.co.uk/>), *CNN* (<https://edition.cnn.com/>), *TED: Ideas Worth Spreading* (<https://www.ted.com/>), *Hujiang wangxiao* (Hujiang Online Classroom; <https://class.hujiang.com/>), *Keke yingyu* (Keke English; <http://www.kekenet.com/>), *Zaixian Yingyu tinglishi* (Online English Listening Room; <http://www.tingroom.com/>) to their students, which not only enriched the knowledge but also broadened their horizon and cultural competence.

### **3.5.3 Main Tools for Communications between Teachers and Postgraduates**

Online tools and APPs, such as email and Skype, provide convenient ways for teachers and postgraduates to communicate with each other, especially after class. This section mainly illustrates three tools used by the teachers and the student participants in this empirical study, as well as their functions and concrete applications.

With the development and innovation of science and technology, the information era brings the world more ways to communicate with each other. People have different preferences when communicating with others. For example, one person prefers to write an email to the shopping mall to make a complaint, while another might prefer to call the manager directly to lodge the complaint or, alternatively, solve the problem immediately. The same differences apply when it comes to the preferences of teachers and postgraduate students in China.

In this empirical research, three tools were mainly used by the teachers and the postgraduates, namely WeChat, QQ and email. Among the three tools, email is a comparatively traditional way for teachers and postgraduates to communicate, especially when postgraduates need some documents checked by their teachers or have some trivial matters that do not require immediate action. Some postgraduates prefer to use email

because they believe that email is a good way for them to store important documents and keep track of their studies. Teachers, on the other hand, often like to use email as a record of teaching process, which can be recorded and downloaded at the end of the semester.

QQ, short for Tencent QQ, is an internet-based instant messaging software created in 1999. QQ can be used on a variety of mainstream platforms such as Windows, macOS, iPad OS, Android and iOS. QQ supports real-time text or voice chatting and offline chatting, video calling, voice calling, peer-to-peer intermittent file transferring, offline files transferring, files sharing, network hard disk, QQ mailbox, and many other functions, and can be connected to many communication terminals. The QQ group is a long-term, stable public chat room that gathers a certain number of QQ users. QQ group members can chat via text and voice, and also communicate in the group space through group forums, group photo albums, and group shared files. The person who created the QQ group is called the group owner, and can appoint group members as administrators to transfer the group and disband it. Both the group owner and administrators can add and delete group members.

Because of its application over a period of 20 years and its powerful features and functions, QQ has a huge client group and is widely used in almost every field in China. Therefore, the teachers and the postgraduates inclined to use QQ to communicate with each other separately or in a QQ group of the class. However, on the other hand, it is precisely because QQ is so widely used that people are starting to think of it not as a personal communication software, but as a more instrumental and work-based software. Therefore, Tencent begins to search for a software which is particular for personal chatting and communication, so comes WeChat.

WeChat is a free application launched by Tencent in 2011 to provide instant messaging services for smart terminals. WeChat supports the rapid sending of free (with a small amount of network traffic) voice messages, videos, pictures and texts across communication carriers and operating system platforms via the internet. Based on QQ's features, WeChat owns almost all the good features of QQ. On the one hand, due to the promotion and application of smart phones, WeChat has lowered the threshold of the internet by using smartphone numbers as registered usernames. As long as one has a smartphone number, he or she can have a WeChat account instantly, without special application process as in the case of QQ. Therefore, young people prefer to use WeChat. In this empirical study, Teacher A and Teacher B would like to use QQ, WeChat and email

based on their respective features according to the needs of different situations. For example, teachers used emails to remind students of the schedule and overall design of the semester at the very beginning of the semester so that they could review and follow up at any time. Also, teachers chose QQ to facilitate the teaching when using Tencent classroom, while choosing WeChat to aid the teaching via a Rain classroom because of the requirements of this software. Moreover, because different people had different preferences when using instant messenger, both teachers chose a service only after they had discussed it with their postgraduates. No matter whether they used QQ or WeChat, or both of them, both teachers and postgraduates used them in ways that were suitable for facilitating and promoting blended learning in the academic English course.

### **3.5.4 Teaching Goals and Requirements of the Academic English Course**

The teaching goals and requirements of the postgraduate academic English course provided essential and indispensable parameters that guided the researcher in designing particular pedagogies that supported her research goals. In China, it is common that educational programmes are required to follow an officially approved syllabus issued by a government educational department or a comparable entity, for instance an acknowledged professional association. Academic English courses for postgraduates are no different. This section presents the teaching goals of an academic English course for postgraduates, which include the basic direction of the course and a primary outline of the pedagogies teachers are expected to follow in their classes.

#### **1. The origin of the teaching goals and requirements**

The Postgraduate English Teaching Research Branch of Beijing Higher Education Society has formulated the *Syllabus of English for Non-English Major Degree Graduate Students (The Syllabus)* (2020), shown in Figure 3.6, after extensive consultation and in-depth research into teacher allocation, curriculum setting, class time regulations, assessment and evaluation in various universities. *The Syllabus* comprehensively explains the nature, characteristics and basic requirements of English for postgraduates of non-English majors, from the aspects of course orientation, teaching objectives and teaching requirements, curriculum and class time setting, evaluation and testing, teaching methods and teaching tools, teaching resources, teaching management and teacher development.

*The syllabus* provides reference points for teaching English to non-English major postgraduates in all Chinese universities. Each university can formulate institutional-level implementation plans for their own students and conduct scientific assessments as to their effectiveness, taking into account the actual situation of the university. *The Syllabus* further promotes current language learning theories and best-practice, thus raising the quality of teaching English to postgraduates to a new level.



**Figure 3.6** *Syllabus of English for Non-English Major Degree Graduate Students (2020)*

The specific teaching goals and requirements of the postgraduate academic English course in this research were designed through combining the details of *The Syllabus* and the current situation of the university where this empirical study was carried out. The details are set out in the following part.

## **2. The teaching goals and teaching content of English for postgraduates**

The teaching goals of English for postgraduates are to consolidate and improve students' general and academic English language proficiency; furthermore, strengthen students' ability to learn independently as well as develop their ability to conduct research, thus enabling them to apply English effectively in their study, life and work in the very near future. In short, the purpose of teaching English language to postgraduate students is to enable them to master the English language as a useful tool for their study, research and international exchange, and in this way be able to serve the construction of China.

The basic academic English teaching for postgraduates is centred on the integrated course, and the listening and speaking course, which integrate the development of the postgraduates' comprehensive abilities in reading, writing, listening, speaking and translation based on continuous improvement of their knowledge of the English language. The teaching content emphasises cultural and quality education and the cultivation of English language application skills; the exercises in each unit closely follow the text and teaching focus, combining comprehensive exercises with individual exercises to improve the students' language skills in a new and diversified form. Postgraduates are trained to have proficient reading ability, certain writing and translation ability, and basic listening and speaking ability, and to be able to use English language as a tool for study and research in their own majors or specialties. For majors that require higher listening and speaking skills, the training of listening and speaking skills can be strengthened according to the needs.

### **3. The teaching requirements of English for postgraduates**

Based on the teaching goals and teaching content, the specific teaching requirements are listed in the following.

#### **(1) Vocabulary**

Have a good comprehension of about 5,000 common words and 500 common phrases, and reuse of about 2,000 basic words. Recognise about 120 common roots and affixes, and be able to identify derivatives according to the word formation method.

#### **(2) Grammar**

Be able to use grammar knowledge proficiently and understand long and difficult sentences with complex grammatical structures.

#### **(3) Reading**

Be able to read and correctly comprehend English books and academic papers in specialized fields, as well as articles on general topics of considerable difficulty. Be able to use and have a good command of various reading skills, such as summarizing central ideas, guessing words to understand meaning, anticipating, reasoning and inferring; have the ability to analyse at the discourse level.

#### **(4) Writing**

Grasp basic writing skills, such as essay structure, paragraph development, and sequence. Be able to write various types of essays in English, including academic papers,

with correct formatting and coherent expression. Besides, be able to write short essays of about 250 words, for instance, article summaries and common applications, within one hour according to specific requirements, with correct expression of ideas, coherence and no major language errors.

#### **(5) Translation**

Master the skills of translation from English to Chinese as well as from Chinese to English, and to be able to translate a general English-Chinese short text or essay into a Chinese-English short text or essay, and vice versa; and to do so with correct understanding of the original text, smooth translation, and without major language errors.

#### **(6) Listening**

Be able to listen to and understand daily conversational English, and English seminars or academic reports related to their specialties or majors. Be able to listen to and understand the central idea and main content of listening materials that are familiar in subject matter, not too difficult, basically free of vocabulary.

#### **(7) Speaking**

Be able to conduct simple daily conversations fluently; express the thoughts basically clearly; be able to talk in English with substantive content; be able to speak continuously for 1-2 minutes on the issue under discussion with a little preparation, as well as participate in discussions on hot issues in society, ask questions or express opinions in academic seminars.

However, even though the teaching requirements of English for postgraduates are clearly illustrated and some of them are quantified, such as vocabulary and writing, it still needs the teachers' efforts to design a curriculum system with unique characteristics, strive to innovate teaching content and teaching methods, and meet the development needs of individual schools, faculties and postgraduates. Besides these, in the teaching, teachers need to adhere to the principle of practicality and application of learning, and cultivate and improve the ability of the postgraduates to use English language.

### **3.5.5 Instructional Design**

Based on the literature review and the discussions in the above sections, and in order to answer the Research Question 2, in Phase 2 “a phase of the application and adjustment”, the blended learning was designed and applied to the experimental classes—Class A and

Class B—with asynchronous or synchronous online instruction and classroom instruction, while the traditional teaching mode was applied to the control classes—Class C and Class D.

### 1. The syllabus design

There were different syllabi for the experimental classes and the control classes. On the one hand, the syllabus of the control classes was developed according to the overall educational directives of *The Syllabus* which was mentioned above, meeting the needs of its teaching goals and requirements. On the other hand, the syllabus of the experimental classes was further developed and refined based on the following criteria. First, the syllabus relied on and employed the literature review on pedagogies and instructional design, current theories of foreign languages teaching as well as instructional approaches to blended learning. Second, it was developed by using the data collected from the results and feedbacks of the final questionnaire in Phase 1, combined with the results of the pre-test at the beginning of Phase 2. Third, all syllabus designs should meet the needs of *The Syllabus*, which was the same as the syllabus of the control classes. At the same time, the syllabi for the experimental classes and the control classes should conform to the integrated educational directives of the Chinese Education Department and take the English language proficiency of the postgraduate student participants into consideration. The process of designing the syllabi is shown in Figure 3.7.

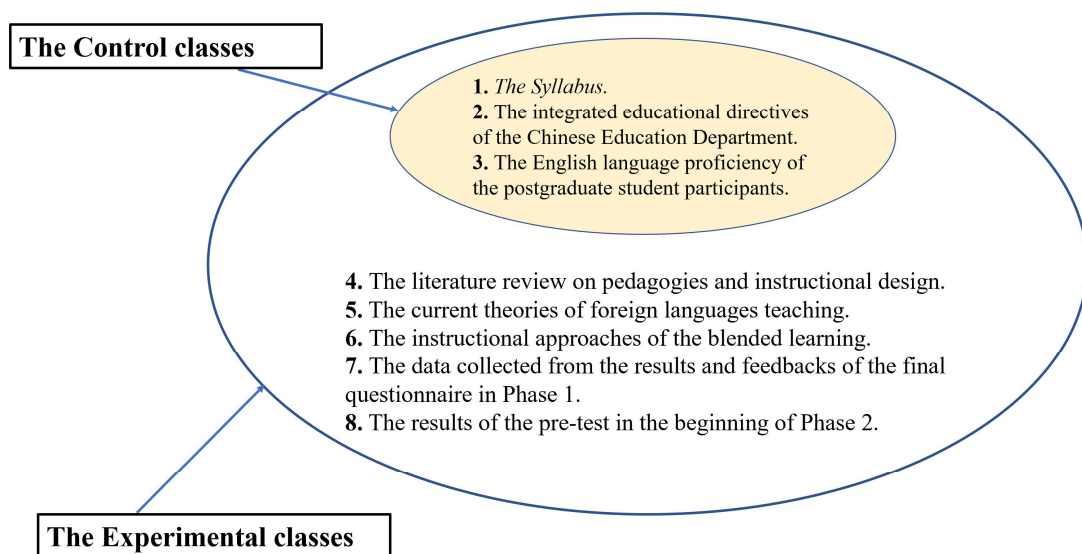


Figure 3.7 The formation of syllabi design in this research

## **2. Teaching mode and medium**

Considering the blended learning mode, the researcher employed medium-intensity blended learning (Alammary, Sheard, and Carbone, 2014), as mentioned in the literature review, where online activities replace some of the existing face-to-face classroom activities. For instance, the teachers would move the writing session to the online assignment, asking the postgraduates to complete their writing using “Pigai Wang”, which could not only free up class-time to convey more information, practice more or do more exercises, but also foster student autonomous learning through the use of online instructions. Furthermore, blended learning was mainly used to support learning in and outside the classroom, which not only added learning time and content to the academic English course, but also had other positive aspects for the postgraduates, such as synchronous or asynchronous online communication with the teachers and other students, or the opportunity to study and practice English anytime and anywhere with the aid of the online learning platforms.

With regard to the selection of the medium used in the blended learning, the researcher expressed a preference for teachers to use those media which they considered appropriate inside and outside the classroom, according to the circumstances. The experimental classes took place in Smart classrooms, which were equipped with a multimedia operational platform, internet access, Smart blackboards, videos, PowerPoint presentation slides and files and so on. Facilitated by the multimedia operation platform, the internet and the Smart blackboard, the teaching equipment and medium could support wireless connection with smartphones, iPads and other terminal devices; through these mobile devices, it was possible to directly remote control the classroom demonstration, directly complete file transfers, or upload the postgraduates’ excellent notes instantly to the large screen and share them with the whole class.

Besides these media, as mentioned above, the teachers who taught the experimental classes used Rain Classroom as the main online teaching platform in their classroom teaching and “*Teacher Speed Version*” of Tencent Classroom when they did “*Group question and answer sessions*” or “*assigning assignments*”. Moreover, both of them chose Ding Talk and Chaoxing as alternate platforms in case the other platforms were not

available. Apart from these, Pigai Wang, WeChat, QQ, email and other useful websites were also used in the experimental classes.

Compared with the experimental classes, the control classes were mainly paper-based. Even though they were able to use blackboards and chalk, a multimedia operational platform and the PowerPoint presentation slides and files, the control classes did not have access to the internet and other online learning platforms, websites and useful facilities to assist the teaching and learning process of the academic English course. Because the students in the control classes were taught in the same way as other classes which did not participate in the empirical study, they did not consider it strange or unusual to be taught using the same strategies like other postgraduate English classes.

However, as for the postgraduates in the Experimental classes, their classes included additional blended learning teaching materials, which made them feel excited and interested in the novel teaching mode.

### **3.6 Descriptions of the Quantitative Method**

Selltiz, Jahoda and Deutsch in their *Research Methods in Social Relations* (1965) define the quantitative method, pinpointing the key ethos of it: scientifically offering its findings with a certain “definiteness”.

The purpose of research is to discover answers to questions through the application of scientific procedures. These procedures have been developed in order to increase the likelihood that the information gathered will be relevant to the question asked and will be reliable and unbiased...But scientific research procedures are more likely to do so than any other method.

(Selltiz et al, 1965, p. 2)

Aliaga and Gunderson (1999) give their definition of the quantitative method, typically emphasising another feature—statistical: quantitative research is that data are presented in numerical form that is suitable for mathematical analyses. So says Creswell (2014):

Quantitative research is a means for testing objective theories by examining the relationship among variables. These variables can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures.

(Creswell, 2014, p. 247)

Besides the features mentioned above, Dörnyei lists the following main characteristics of quantitative research:

...a priori categorization, variables rather than cases, standardized procedures to assess objective reality, quest for generalizability and universal laws.

(Dörnyei, 2007, p. 32-34)

More specifically, in quantitative research, the researcher considers it necessary to design a research proposal, formulate relative questions, collect numerical data, analyse data primarily by statistical methods, test (Greenhalgh, 1997) and verify (or not) predetermined theories or hypotheses, and generalize the research findings in other settings. In this empirical research, the quantitative research, originating from tests, involves group comparisons which means comparisons between different groups but at various time nodes. It involves the following steps: careful research design, sampling with a good understanding of samples and robust techniques, accurate data gathering, critical data interpretation and continuous probability testing. Furthermore, it is worth noticing that in quantitative research an important aim is to minimise, or even eliminate completely, individual variability with regard to data collection and the process of analysis.

Along with understanding the definitions and features of the quantitative method, the researcher designed part of the empirical research according to these features, trying to ensure methodological rigour and effectiveness. Therefore, in the following section, the researcher describes the different instruments applied in this research as part of the quantitative approach.

### **3.6.1 Questionnaire in Phase 1**

As Thomas writes,

“The defining characteristic of a questionnaire is that it is a written form of questioning. Beyond this, ..., beyond being in written form, the questions may be open or closed. ..., the questionnaire is a versatile tool and is used in a number of different kinds of research design.”

(Thomas, 2017, p. 217)

Questionnaires are a common instrument used to collect information in social research. Researchers use this instrument to make accurate and specific measurements of social activities and processes, and to apply sociological statistical methods to describe and analyse the quantities and obtain relevant survey information (Xiao, 1995).

## **1. The formation of the preliminary questionnaire**

As discussed in “*Section 3.3.1 Mixed methods approach adopted in the research*”, the researcher designed the content of the preliminary questionnaire, adapting existing questionnaire designs that had been used by other scholars in comparable research projects (Jia, 2015; Du, 2017; Ma, 2018; Wang, 2018; Zhao, 2018; Jiang, 2019). The questionnaire was designed to collect information on the following five aspects linked to Research Question 1:

- (1) the postgraduates’ demographic information,
- (2) their online learning experiences,
- (3) their attitudes towards the academic English course,
- (4) factors influencing the academic English course learning and language proficiency,
- and (5) their requirements for the academic English course, including requirements regarding their teachers, the teaching materials or the teaching pedagogies.

As suggested by Thomas (Thomas, 2017), the researcher designed the specific kinds of questions in this preliminary questionnaire with 40 items mainly focused on the closed questions, such as dichotomous questions and multiple-choice questions, based on the above perspectives.

After the formation of the preliminary questionnaire, the researcher prepared a pilot test to refine and adjust the questionnaire prior to sending it to the 120 postgraduate student participants. The revision was done to ensure the validity and reliability of this empirical research.

## **2. Pilot test**

On the one hand, a pilot test is a feasibility test which researchers conduct to evaluate the logistics of the research and gather enough information to design a baseline test with improved quality and efficiency (Yin, 2009; Thabane, et al., 2010). On the other hand, in quantitative research a pilot test is a pre-study conducted by a researcher to confirm the clarity, relevance and format of the proposed questions, as well as of any accompanying instructions (Creswell and Creswell, 2017). As a tool providing theoretical and methodological support for the main stage of the study, the pilot test may provide initial insights into the real situation of the participants, generate useful feedback and also throw up any practical or methodological issues that might affect the data collection itself and/or the later analysis.

From the literature review emerged a preliminary framework for the description of the current study situation of postgraduates on the academic English course. However, its applicability needed to be further tested, as was the case for the questionnaire. The researcher therefore conducted a pilot test to generate a small sample of entries, aiming to gather the useful feedback that could be used to refine the questionnaire and iron out any remaining problems prior to its roll-out to the large group of participants.

The researcher asked a member of staff in the Graduate School to help her randomly select postgraduates registered on the academic English course for the pilot study. These postgraduates were then contacted and eight of the postgraduates among those who agreed to take part in the research were invited to complete the pilot test.

To clarify the selection process further, the eight participants who attended the pilot test were randomly chosen from other Schools within the university. Three of them were from the School of Engineering, four were from the School of Computer Science, and one student was from the School of Chemical Engineering. All these participants were in the first year of their postgraduate studies; they were similar in age, educational experience, and English language proficiency. Furthermore, they shared characteristics very similar to those exhibited by the postgraduates who would be invited to participate in the research later.

Two considerations guided the selection of the eight participants for the pilot test. First, these students, having the similar traits with the large group of participants, were deliberately selected from different schools than the main group. The additional spread would increase the reliability of the results from the preliminary questionnaire. If they were from the same school as the large group, participants might communicate with each other before or after completing the preliminary questionnaire, which could influence the feedback of the pilot test and impact on the results of the final questionnaire. Second, the results of the pilot test would only be used to confirm, adjust, or extend the items which had already been identified rather than introduce new questions, methods or concepts.

As with all postgraduate student participants and teachers in this research, the researcher showed her respect for every participant by adhering to the ethical standards of social, educational research. The researcher provided participants with an invitation letter and a consent form, respectively. On the one hand, the content of the invitation letter introduced the purposes, the whole research process and the outcomes of the research,

along with issuing assurances of anonymity and confidentiality. Also, it informed participants about their right to withdraw at any time from the research, and that their feedback might subsequently be used to refine the questionnaire and/or inform or change the future teaching practices and pedagogies in the university. The research itself, students were assured, would have no influence on their assessments in the academic English course. On the other hand, the participants who voluntarily signed their names on the consent forms would take part in the preliminary questionnaire phase.

The valuable feedback that was obtained during the pilot test confirmed the importance of conducting such a pilot test in the first place. During and after the process of the eight participants completing the preliminary questionnaire, they proposed many practical and useful suggestions. For instance, they believed that there should be a Chinese version along with the English version of the questionnaire; or at least some explanation, perhaps even replacement, of difficult words, so as to support comprehensive understanding of all questions. Also, they found that some answers to the questions were outdated or not relevant to their age group and learning context. Furthermore, five students thought it would be better for them to write their own answers and responses, suggesting the option of individual answers or, alternatively, to replace some of the closed questions by open questions. In addition, participants commented that 40 items/questions were too many, potentially causing survey fatigue in the later parts of the questionnaire.

### **3. Refinement of the questionnaire**

Based on the feedback and useful information given during the pilot test, the researcher refined and adjusted the questionnaire in the following four aspects.

(1) Both a Chinese version and an English version was provided to the participants. Even though the researcher preferred to use the English version, it could not be ignored that the differences between Chinese and English would affect the responses given by the participants. Also, it was important to respect participants' preferred choice of language. As a result, the Chinese version was an effective supplement to the English version.

(2) Some ambiguous words and expressions were removed to make the questionnaire more academic and scientific as well as easier to understand for all participants. For instance, the researcher added “(*Multiple choice*)” after some items in the questionnaire. However, from the perspective of the postgraduates completing the pilot test, some of them thought “multiple choices” had the same meaning as “*Duo Xiang Xuan Ze*” in Chinese,

which meant they should make at least two options; the others thought it meant they were offered to read many options, but could only choose one option. As a result, the researcher deleted all the “*(Multiple choice)*”, and used “*(You can choose more than one item.)*” to show that they could choose more than one option if they wanted to.

(3) The number of items was reduced to 30 items. Too many items meant that participants had to spend more time to complete the questionnaire and could therefore lose patience or the enthusiasm to complete the questionnaire diligently, which might influence the validity of the results. The researcher removed 10 items from the original preliminary questionnaire by rearranging the sequence of the items, removing some outdated answers or combining similar ones.

(4) The final questionnaire comprised 19 closed questions and 11 mixed questions with closed and open questions, the latter giving participants a chance to express their opinions and provide supplementary answers. Item 9 of the final questionnaire is an example of the mixed item format.

9. *Your main purpose of surfing online is \_\_\_\_\_.*

- A. *to search for learning materials*
- B. *to learn something new or related to studies*
- C. *to send emails*
- D. *to go shopping, entertain and play games*
- E. *to chat with friends*
- F. *Others, such as \_\_\_\_\_.*

#### **4. The final questionnaire**

The final questionnaire (Appendix 4) was distributed to the selected 120 postgraduate student participants across 4 classes by other staff members in the local technical university in the early March, 2021. Moreover, there was no presence of teachers or researchers. Both measures were taken to minimize the influence of teachers on the postgraduates, ensuring the accuracy and reliability of the participants’ answers to the questionnaire.

Moreover, distribution of the final questionnaire to the postgraduates was done in two ways. The printed Chinese version of the final questionnaire was handed out to the postgraduate student participants in the classroom to facilitate accurate understanding of the final questionnaire. An electronic English version of the questionnaire was delivered to students’ smartphones. After completing the electronic English version of the

questionnaire, they were required to return the printed Chinese version to the teachers present.

In total, 120 questionnaires were returned, which meant a 100% response rate and underscored the postgraduates' willingness to participate in the empirical research.

### **3.6.2 Pre-test and Post-test in Phase 2**

Testing, including all forms of language testing, is one form of measurement (Henning, 1987), which has many purposes. Harris (1969) concludes there are six different emphases in tests measuring student ability and potential. They are:

(1) To determine readiness for instructional programs; (2) To classify or place individuals in appropriate language classes; (3) To diagnose the individual's specific strengths and weaknesses; (4) To measure aptitude for learning; (5) To measure the extent of student achievement of the instructional goals; (6) To evaluate the effectiveness of instruction.

(Harris, 1969, p. 2-3)

Based on the application of this empirical study, the researcher preferred to regard the pre-test and post-test performed by both experimental classes and control classes as achieving all six emphases mentioned above.

#### **1. The formation of the pre-test and the post-test**

In most Chinese universities, postgraduates' English proficiency is assessed based on their responses to multiple choice questions, translation (Chinese to English or English to Chinese) and essay writing, rather than on tests that encourage them to use English in real situations and environments, such as communicating with foreigners or accomplishing some virtual tasks based on a given context. In other words, postgraduates in Chinese universities are accustomed to structured achievement tests that focus primarily on vocabulary, grammar and accuracy.

Such achievement tests, like the pre-test and the post-test in this empirical study, were used to "assess the degree of success not of individuals but of the instructional program itself" (Harris, 1969, p. 3). As a result, the purpose of the pre-test and post-test was to measure the participants' English proficiency before the empirical study and their English learning outcomes after the study (Simons, 2009), and to compare whether there were any

differences in outcomes between participants who attended the blended academic English course in the experimental classes and those who were taught using traditional classroom teaching instruction in the control classes.

### **(1) The origin of test items and materials**

The materials selected to make up the pre-test and the post-test were from the College English Test (CET). There are three reasons for selecting the CET as the tool to measure the English proficiency of the postgraduate student participants.

Firstly, CET is a national, large-scale standardized test, administered on behalf of the Chinese Ministry of Education, which is an important supporting measure for the implementation of the academic English course in universities since the start of the reform and opening-up policy. CET can provide a comprehensive assessment of English listening, speaking, reading and writing skills of students in China's universities and colleges.

Secondly, CET provides an objective, fair and correct evaluation of the English proficiency of the students studying in universities and colleges as required by the syllabus. Furthermore, it reflects the requirements of the students' English proficiency in the expanding international exchanges and communications, and serves to promote the teaching of English in universities. In addition, CET follows a strict quality control protocol in the design of test papers and so ensures the educational measurement of the examination, from proposing questions, forecasting, analysis of test items to the construction of test banks.

Thirdly, the test items and question banks of CET have been accepted by the Chinese Educational Department, and the test items, materials and key points of CET are subject to public scrutiny. For CET is regarded as an available and public instrument to be used to test Chinese students' English proficiency. All the test items and questions of CET are repeatedly validated by experts and scholars before they enter the test banks, which ensures the reliability and validity of the test content.

Although there were three reasons mentioned above to show that CET was a good source from which to select the items of the pre-test and the post-test, the researcher needed to accept that it was possible for the postgraduates to see some of the CET items and questions in both tests, because these items were open to the public for free after the exam. So, to avoid the risk that students might have seen these tests before the experiment, the researcher took two measures. The first was to maintain confidentiality. These

postgraduates would not know the source of the items and questions in both tests and were not required to make any preparation before the tests. The second was the items and questions in the two tests were not from two original CET papers respectively, but selected from 1500 test items and questions in a 5-year CET test bank. Therefore, the researcher ensured the objectivity and fairness of the pre-test and the post-test.

## **(2) The components of the pre-test and the post-test**

All these components of the pre-test and the post-test were selected from the test bank of CET, which was free for the public to assess the previous versions of the test for relevant studies and research purposes.

Firstly, the researcher chose these test items and questions in the test bank between 2016 to 2020 based on the following two reasons. On the one hand, it is necessary to select test content from the last five years (2016-2020) as the test items and questions for this test. As an authoritative English language test, CET represents state-of-the-art language testing, its content is regularly updated and curated. Therefore, the more recent the test items and questions are, the closer they are to the students' knowledge base and learning context, and the easier it is to examine the students' real English language level and proficiency. On the other hand, the test format and pattern of CET is improved according to the actual needs and development of English language teaching. The recent reform of the test format and patterns of CET was held in 2016. After the reform, the comprehensive application ability of students' English proficiency has been strengthened and the difficulty of the test has been increased substantially. The postgraduates who participated in this empirical study were mainly students who enrolled in this university in 2016, and, consequently, they were studying and trained in the context of this CET reform. They were not only more familiar with the question types and ideas as well as the important and difficult points of the test, but also more able to reflect on their real English comprehensive proficiency.

Secondly, the test items and questions were selected with the aim to test the English language proficiency of the postgraduates, such as listening, speaking, reading, translation and writing. The test format and patterns of each section of both the pre-test and the post-test are illustrated in detail below.

In the listening comprehension section, materials such as news, long conversations, passages and lectures were adopted to test the postgraduates' English listening ability and further improve the validity of the listening test. After listening to one of the recordings of

these materials, the participants were required to complete some multiple choice questions based on questions in the recording and their understanding of the recording.

In the reading comprehension section, which consisted of one long-text reading and three close readings that tested the postgraduates' reading comprehension skills at different levels, including the ability to understand the main idea and important details of a passage, the task was to synthesize and analyse, make speculative judgments, and infer the meaning of words from the context of the passage. The long-passage reading section used one longer text (1000-1200 words) followed by 10 sentences, each of which contained information from the text, and participants were asked to identify the paragraph that matched the information contained in each sentence.

The close reading section required the participants to read three short texts: two short-text comprehension tests and one word-choice test. The short-text comprehension test had several questions after each text (300-450 words), and the participants were required to choose the best answer from four options for each question according to their understanding of the text. The word-choice test required the participants to read a short text (200-300 words) with 10 words deleted and then chose the corresponding word from the 15 options given to fill in the blanks and made the short text recover and smooth.

The translation section aimed to test students' ability to express "*the information carried in Chinese*" in English, and the translation questions were in the form of passages from Chinese to English. The main content of the translation covered Chinese history, culture, economy or social development. The length was 140-200 Chinese characters.

The writing section assessed postgraduates' ability to express themselves in writing in English. The writing test used topics familiar to the participants and required them to write a short essay of 150-200 words based on the information and prompts provided, such as outline, scenario, picture or diagram.

The speaking test was designed to assess the postgraduates' ability to express themselves orally in English, specifically their ability to converse fluently on familiar topics, the ability to express personal opinions and the ability to state facts, reasons, and describe events. It also could be divided into five parts, such as self-introduction, reading the given text, short answers, personal statement, communication and discussion with a partner.

Based on the considerations and designed concepts mentioned above, the researcher finally selected all the components from the CET test bank and formed the pre-test and the post-test. After that, the researcher invited five English teachers with extensive experience in testing and assessment to retest both the pre-test and the post-test to ensure that the test items and questions selected for the two tests were relevant and equivalent to the empirical study of the academic English course. The main objective to do so was to avoid influences and effects caused by the tests and ensure that the tests were more specific. The test items and questions were selected similarly for both tests, which are shown in Table 3.4.

**Table 3.4 The test format and patterns of the pre-test and the post-test**

Skills measured	Test types	Numbers of questions	Question types	Scores	
				Each item	Total
<b>Listening</b>	2 Pieces of News	4 (2 Q*s for each)	Multiple choice	4	30
	2 Long Conversations	6 (3 Qs for each)	Multiple choice	6	
	2 Passages	6 (3 Qs for each)	Multiple choice	12	
	A Lecture	4	Multiple choice	8	
<b>Reading</b>	A Word-choice	10	Selection of words	5	30
	A Long-text Passage	10	Matching	10	
	2 Short-text Passages	10 (5 Qs for each)	Multiple choice	15	
<b>Translating</b>	Chinese-English	1	Translation	15	15
<b>Writing</b>	Argumentation	1	Essay writing	15	15
<b>Speaking</b>	Warm-up	1	Self-introduction	1	10
	Task 1	1	Reading the given text	2	
	Task 2	1	Short answers	2	
	Task 3	1	Personal statement	2	
	Task 4	1	Communication and discussion with a partner	3	

(\*Q: refers to “question”.)

To ensure the equivalence between the pre-test and the post-test, the researcher invited another 20 postgraduates who were enrolled in the same year as the pilot participants of

the pre-test and the post-test. Then, two teachers who did not teach these postgraduates scored the test papers. The researcher calculated all these scores statistically to ensure the difficulty levels and the discrimination levels (Madsen, 1983; Henning, 1987) and measured the internal reliability and consistency of the pre-test and post-test taken by the 20 postgraduates. Moreover, the correlation coefficients of the two tests were calculated using the Statistical Package for the Social Sciences (SPSS) 26.0 software to verify whether the pre-test and the post-test were correlated and whether they could substitute for each other (Bachman, 1990; Bachman & Palmer, 1996; Fraenkel, Wallen & Hyun, 2012).

Madsen (1983) claimed that a test item was considered too easy if more than 90% got it right and it was considered too difficult if fewer than 30% got it right. According to the statistical calculation for the two tests, the difficulty levels of the pre-test and the post-test were 56% (0.56) and 59% (0.59) respectively, which were near 50% (0.50) and between the 30% and 90 %, thus, showing the two tests were at the similar level and achieved the “about right” difficulty level (Madsen, 1983; Henning, 1987).

Furthermore, Madsen (1983) considered that the discrimination level was not acceptable if the discrimination was 10% or less, while 15% or higher was acceptable, and between 10% and 15% was marginal or questionable. The scores of the pre-test and post-test discrimination levels were 43% (0.43) and 49% (0.49), well above the minimum acceptable discrimination score of 15%, which showed that the two tests were suitable for the top and the underperformed postgraduates.

Moreover, Fraenkel, Wallen and Hyun (2012) depicted the correlation coefficient of 0.65 or higher would be good for most research purposes, and the higher the correlation coefficient between the tests was, the more reliable and suitable the two tests were in terms of comparison and contrast. If the correlation coefficient was over 0.85, it indicated that the close relationship between the tests correlated. The correlation coefficient of the pre-test and the post-test was 0.87, indicating that the two tests were reliable and suitable for comparing and contrasting the participants’ English comprehensive abilities as well as their English language proficiency before and after the empirical study.

In addition, Fraenkel, Wallen and Hyun (2012) illustrated that it was at least 0.70, preferably higher, that the reliability coefficient, frequently called Cronbach alpha (Cronbach, 1951) of a test should reach when it was used for scientific research. As shown in Table 3.5, the overall alpha coefficients of the pre-test and the post-test was 0.89 and

0.92 respectively, which were at the similar level and higher than 0.70, showing the good internal reliability and consistency within and between the two tests (Cronbach,1951; Cortina, 1993; Fraenkel, Wallen and Hyun, 2012). Moreover, the values of alpha coefficients for each skill in both tests ranged from 0.71 to 0.87 and from 0.73 to 0.88 respectively. Although each skill's alpha coefficients in both tests were lower than the overall alpha coefficient, they were still higher than 0.7, which indicated a good internal reliability (Cortina, 1993).

**Table 3.5 Alpha coefficients of the pre-test and the post-test**

<b>Skills measured</b>	<b>Alpha of Pre-test</b>	<b>Alpha of Post-test</b>
<b>Listening</b>	0.71	0.75
<b>Reading</b>	0.87	0.85
<b>Translating</b>	0.79	0.73
<b>Writing</b>	0.84	0.87
<b>Speaking</b>	0.72	0.88
<b>Total Alpha</b>	<b>0.89</b>	<b>0.92</b>

## **2. The implementation of the pre-test and post-test**

To achieve a reliable and valid research result, before the first day of the instruction, all 120 postgraduates of the experimental classes and the control classes took part in the pre-test to measure, compare and contrast their achieved level of their English language proficiency. As mentioned in *Section 3.4.2 Postgraduates*, these postgraduates were informed of the purposes of the study both in writing and orally on the spot again and were told the tests had nothing to do with their achievements of this semester. Furthermore, they could check their achievements of the two tests to know more about their improvement in English language proficiency after participating in this empirical study.

After the implementation of blended learning in the experimental classes as well as the traditional classroom teaching in the control classes, at the end of the academic English

course, all these 120 postgraduates took part in the post-test to test their English language proficiency.

Based on the comparison of the results of the pre-test and the post-test, the researcher would attempt to formulate an answer to Research Question 2.

### **3.7 Descriptions of the Qualitative Method**

Interestingly, there is no “fixed” definition of the qualitative method and many experts have defined it from different viewpoints, though with a special focus on the traditional characteristics of the qualitative method, such as “material”, “interpretative”, and “natural”, as well as concentrating on the power to “explore and transform”, i.e., to help people understand the world clearly and scientifically (Weis and Fine, 2000; Morse and Richards, 2002; Denzin and Lincoln, 2011; Mason, 2017).

Based on the key ideas of Denzin and Lincoln (2011), Creswell developed the following definition, focusing more on the research design and the use of different research methods.

Qualitative research begins with assumptions and the use of interpretive/theoretical frameworks that inform the study of research problems addressing the meaning individuals or groups ascribe to a social or human problem. To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is both inductive and deductive and establishes patterns or themes.

(Creswell, 2013, p. 44)

Furthermore, the qualitative method is used to explore and understand the meanings that individuals and groups attribute to social phenomena, human beings as well as social problems. The research process involves the development of questions and procedures, the collection and analysis of data relevant to the questions, the development of general themes, and the interpretation of embedded meanings based on inductive data analysis (Mason, 2017).

Moreover, compared with the quantitative method, the qualitative method has some unique characteristics and features, such as smaller sample size, natural environment, multiple data sources, inductive data analysis, researcher as the key instrument, insider perspective, emergent design, reflexivity, time-consuming, and holistic account (Hatch, 2002; Dörnyei, 2007; Marshall and Rossman, 2011; Mason, 2017). Therefore, the

qualitative method needs the researcher pay more energy to perform and to consider a wider range of factors to control the whole process to ensure its accuracy and trustworthiness (Shenton, 2004; Elo, et. al., 2014).

Based on the understanding of the definitions and features of the qualitative method, the researcher designed the empirical research according to these characteristics.

### **3.7.1 Formation of Interview in Phase 3**

The interview method is one of the data collection methods in which the researcher collects information about the perspectives, thoughts, opinions, or descriptions of the given topics, the specific experiences or the behavioural data of the participant(s) by talking to them verbally or engaging them in a conversation (Dörnyei, 2007; Tavakoli, 2012). Interviews provide insight into what the interviewee is thinking and how they are reacting emotionally based on the verbal interchange, with more flexibility and more room for interpretation of meaning.

Moreover, interviews, through in-depth analysis, can describe the individual level that quantitative data cannot reach, or explain the causes and results of the given problem. In contrast, quantitative data, usually obtained through tests and questionnaires, can only answer research questions in terms of trends and do not go far enough (Chen, 2004). As a result, the interview is an important form of collecting qualitative data and a commonly used method in qualitative research, especially in foreign language teaching research, and is most widely used in almost all in-depth research studies (Chen, 2004).

Depending on the degree of control over the structure of the interview, there are usually three forms of interviews, structured, semi-structured, and unstructured interviews. Structured interviews follow an interview outline for questions and answers, are implemented in a structured way, and the data obtained are easier to handle; unstructured interviews are more flexible in implementation and obtain more information, so people tend to combine the two and take the best of both, with both pre-prepared fixed questions and additional questions based on the interviewees' answers, inspiring the interviewees to give more information in the interview. This is the semi-structured interview (Tavakoli, 2012). In addition, interviews can be divided into informal and formal interviews according to the degree of formality; direct and indirect interviews according to the mode of contact;

individual and group interviews according to the number of interviewees; and one-time and multiple interviews according to the number of interviews (Chen, 2004).

Therefore, based on the needs of answering Research Question 3, the interviews in this study mainly belonged to the formal, semi-structured, one-time and direct interview type. Based on interviews of the teachers and some of the students in the experimental classes, along with the findings of the first two questions of this research, the researcher would examine the questions in the interview lists, gain insight into the deeper understandings and finally reach an answer to Research Question 3.

In terms of the literature review and the documents related to the online learning, combined with the needs and requirements of Research Question 3, the researcher designed the content of the preliminary interview questions of the teachers from the following four aspects, respectively:

- (1) the difficulties and obstacles they are faced with when applying blended learning;
- (2) the conditions or situations of the use of the blended learning platform as well as the frequency of communication between teachers and students;
- (3) the degree of satisfaction regarding the effectiveness of their students;
- (4) suggestions and recommendations of teaching strategies, learning materials and teaching self-reflections.

Furthermore, along with the same principles and the research context, the researcher designed the content of the preliminary interview questions of the postgraduates from the following four aspects, respectively:

- (1) preference(s) in terms of blended learning;
- (2) obstacles and difficulties when taught by the blended learning;
- (3) their opinions about the online learning platform, teachers' teaching strategies, and course resources as well as interactions and class organization;
- (4) their satisfaction and advice to teachers about the blended learning of the academic English course.

Originally, the researcher designed more than 10 questions for each interview. Considering the element of time, the researcher reduced the number of the interview questions from 10 to 6, combining some similar questions and deleting two irrelevant ones.

### 3.7.2 Implementation of Interview in Phase 3

At the end of this empirical research, the researcher implemented the interviews. The purpose of the interviews was to dig out as much information as possible that could not be garnered in Phase 1 and Phase 2. Furthermore, suggestions made by the teachers or the postgraduates for further improvement of the blended learning were also collected. Therefore, each participant, including teachers and postgraduates, was interviewed for about 10-15 minutes. In addition, to make the interviewee relaxed and free to talk, the researcher conducted each interview individually with only one interviewee at a time.

Moreover, based on the experiences of the implementation of the questionnaire in Phase 1, the researcher offered two versions of the interview lists: a Chinese version and an English version. All interviews were conducted in Chinese in strict accordance with the research questions in the interview lists to ensure the participants clarified their opinions clearly, freely and fluently, and to avoid any form of the English language barrier caused by their English proficiency.

The researcher, before the implementation of the empirical research, had handed out invitation letters to the participants, in which the researcher informed them that they would probably attend the interview. The main content of the interview was given in detail, and that each participant had signed the consent form expressing their consent to participate in the process. In order to show her respects to these participants, before the interview, the researcher did a double-check with the teachers and the postgraduates to ensure their willingness to continue. Fortunately, they all agreed again. Therefore, the researcher invited two teachers, Teacher A and Teacher B, who taught the experimental classes, and six postgraduates, who were selected randomly in the experimental classes, Class A and Class B, to participate in the interviews, respectively, as shown in Table 3.6.

**Table 3.6 Participants of the interviews**

Classifications	Teachers	Classes	Numbers of Students	Gender		Schools
				Male	Female	
Experimental Class	Teacher A	Class A	3	2	1	Mechanical Engineering
	Teacher B	Class B	3	1	2	Mathematics and Statistics

Bearing in mind all ethical considerations, the researcher conducted the interview with the other member of staff nearby to ensure the safeguarding and participant welfare in a café in the library of the university. The atmosphere of the café was harmonious and relaxing, so that both the researcher and the interviewee felt comfortable and light-hearted. Before the beginning of the interview, the researcher introduced herself again to the interviewees to further build an atmosphere of trust and make them relaxed. With the reminder that the interviewee could withdraw at any time from the process of the interview, the researcher asked the permission of each interviewee to audio-record the whole process of the interview. All participants who joined in the interview process granted the permission to do so. Therefore, the researcher made an audio-recording of each interview using a smart phone with the consent of participants in the interview.

After the interview, the researcher prepared the transcripts of the interview. In order to ensure the authenticity and trustworthiness of the transcriptions, the researcher invited the interviewees to doublecheck the transcripts of the interviews one by one. Deleting vagueness and useless information, the researcher managed to produce an agreed version that was in agreement with the interviewees' opinions, perspectives and views.

### **3.8 Data Collection**

In this part, the researcher illustrates the instruments used in data collection in each phase, respectively.

#### **3.8.1 Wenjuan Xing Used in Questionnaire in Phase 1**

“Wenjuan Xing” is the pinyin transliteration of a Chinese online crowdsourcing platform. The name means “Questionnaire Star” in English. The service is powered by “www.wjx.cn” in China and offers functions equivalent to “*Amazon Mechanical Turk*”, such as online questionnaires or surveys, online tests or assessments, and online votes. It focuses on providing users with powerful, user-friendly online questionnaire design, data collection, reports, survey result analysis and a series of other services. Compared with traditional survey methods and other survey sites or survey systems, “Wenjuan Xing” has the obvious advantages of speed, ease of use and low cost, and has been widely used by a large number of enterprises, universities and individuals. As a popular survey tool in China,

it ensures both data security and user/participant privacy. For the above reasons, the researcher used it in this empirical research.

By using “Wenjuan Xing”, one can collect a large number of responses in a short period of time, which saves a lot of time for the researcher, ensures the accuracy of the collected data as well as its anonymity and confidentiality. Furthermore, it has a unique function to facilitate the completion of every item of a questionnaire, which helps to ensure a high quality of feedback and results. If some items were left vacant or unanswered because of the carelessness of the participants, the system would not allow them to move on to the next item.

As soon as the postgraduates submitted their English version questionnaire online on their smartphones, their answers to the questionnaire were uploaded to “Wenjuan Xing” which carried out the quantitative analyses of the questionnaire using the data collection function of this platform.

### **3.8.2 SPSS Used in the Pre-/post Test in Phase 2**

Statistical Product and Service Solutions (SPSS) is the general term for a series of software products and related services from IBM for statistical analysis computing, data mining, predictive analysis and decision support tasks. Its latest version is SPSS 26.0.

In Phase 2, both the pre-test and the post-test contained the objective items, such as multiple choice items to test vocabulary, grammar, listening and reading comprehension, and the subjective work to test students’ speaking, writing and translation skills.

For the objective part, such as the listening and reading questions, the test papers were scored by using the scoring machine, which was able to produce the marks of each paper within 10 seconds. For the subjective part, the scoring was divided into two parts. In translation and writing, two teachers who did not teach these postgraduates scored these parts in the test papers respectively according to the following grading criteria, such as the accuracy of words, sentence lengths and complexity, the coherence and logic of the main meaning. In speaking, the two teachers gave the marks of each postgraduate just after they finished their speaking test according to the following criteria, such as fluency, accuracy, logic, intonation and completeness. These grading criteria for translation, writing and speaking could help mitigate the effect of the subjective decision from the two teachers.

To better ensure the reliability of teachers' scoring and to reduce the impact of teacher bias, the researcher used Cohen's kappa (Cohen, 1960; Gwet, 2001; Louis and Ronald, 2003) to measure the inter-rater reliability. The results of Cohen's kappa for two teachers in translation, writing and speaking were 0.62, 0.66 and 0.71 for the pre-test, and 0.61, 0.70 and 0.68 for the post-test, respectively. Since kappa indicates "substantial agreement" for values between 0.61 to 0.80, the two teachers' scoring can be considered very consistent, showing a high-level of inter-rater reliability.

Therefore, for the subject part (translation, writing and speaking) in pre-test and post-test, the final score was the mean score of the two teachers. And the total score for each test paper was the score of the objective part (listening and reading) and the final score of the subjective part.

After scoring all the parts of the pre-test and the post-test, the scores were input into SPSS 26.0, and by using it, the researcher could complete the data analysis of both tests scientifically.

### **3.8.3 Thematic Analysis of Interviews in Phase 3**

Thematic analysis (Braun & Clarke, 2006; Alhojailan, 2012; Guest, MacQueen & Namey, 2012; Byrne, 2021), as a type of qualitative analysis, is the most appropriate approach to the qualitative analysis of data in this study, especially as the aim of my study is to find out how the participants interpret a particular phenomenon and how participants' interpretations relate to the quantitative data collected as part of this study. In other words, the assumption is that qualitative and quantitative data supplement each other and thus allow a more comprehensive and deep understanding of the topic.

Therefore, thematic analysis was adopted to analyse the transcripts of the qualitative interview data. Concretely, thematic analysis was used to identify and analyse patterns of meanings in the data of the interviews to illustrate the main themes in the description of the two datasets, as well as to highlight the most significant representative meaning in these two parts.

The themes that emerged from the analysis can be divided into an implicit content pattern and an explicit content pattern. The former was more difficult to draw out from the data than the latter. In the data analysis, the researcher nevertheless managed to identify

explicit content as a full set of manifested themes, and also to reveal the implicit content through repeated deduction, induction, coding and categorisation of the data.

### **3.8.4 Triangulation**

In a qualitative study triangulation means the use of multiple methods and approaches, or different data sources and origins to develop and illustrate a comprehensive understanding of a phenomenon (Hartley & Sturm, 1997; Patton, 1999; Thurmond, 2001). Dezin (1978) and Patton (1999) classified triangulation into four types: theory, method, data source and investigator triangulation.

Based on the specific needs of the empirical research, three types of triangulation were deployed. First, theoretical triangulation contained blended learning, communicative language teaching, cooperative language learning, Multiple intelligences, Product-oriented approach, and flipped classroom teaching. In terms of these multiple theories or approaches, triangulation led to a clearer understanding of the research as well as the pedagogical designs that underpinned it. Second, data source triangulation involved interview transcripts, interpretation of questionnaires and data of pre-test and post-test. Furthermore, it also involved the data collection from different participants, such as the teachers and the postgraduates in this research. These multiple data sources provided a better perspective for the researcher to explore the understandings and findings of the application of the blended learning in the academic English course. Thirdly, methodological triangulation involved the use of qualitative and quantitative methods, including interviews, questionnaires and tests. All these methods helped the researcher gain multiple perspectives and validation of these data mentioned above.

### **3.9 Ethical Considerations**

During the whole process of the research, the researcher adhered to *Ethical Guidelines for Education Research*, fourth edition (2018) set out by the British Educational Research Association (BERA) and the ethical guidelines of the university in the UK.

Firstly, in terms of informed consent, the researcher submitted the information sheet to the president of the technical university in China. With consent obtained at the beginning of the research, the researcher was given access to the university and ensured that the research was considered to be in the best interests of the university and the participants

(Appendix 1). Furthermore, at the beginning of the research as well as the pilot study, the researcher prepared and distributed the invitation letter, which introduced the purpose, the research process and the outcomes of the research, issuing assurances of anonymity and confidentiality. Participants were also given a consent letter (Appendix 2 and 3). Only participants who had signed the consent letter were allowed to participate in the research.

Secondly, concerning the permission, privacy and confidentiality, the researcher made the research questions completely transparent for the participants at the beginning of the study and the information provided to the participants was reiterated in the information sheet. Participants who voluntarily signed the consent letter could take part in the research and they were free to withdraw from the study at any time. Moreover, participants had the right to ask to see what data was held about them, and this data would be deleted immediately if the participant requested this, in which case the data would not be used in the study. Furthermore, any data collected was held in strict confidence and no real names was used in this study. All details of participants were anonymised by numbers or English letters, and no information related to the research could be traced back to any participant to protect the privacy of participants. In addition, the records of this study were kept private and were only shared with supervisors at the University of Wales, Trinity Saint David, and for academic purposes only.

Thirdly, with regard to data security, all research records were stored securely in a password-protected computer, any portable disk-drive used to store or transfer data was also password-protected, and access to data was granted in accordance with the provisions of *General Data Protection Regulation* (GDPR, 2018). The data were stored until the completion of the study and then deleted.

### **3.10 Chapter Summary**

In this chapter, the researcher firstly explained the research questions this study aims to answer. This was followed by a discussion of the research design, including the mixed methods approach adopted in the research and the framework of the research. In line with the descriptions of the mixed methods, the researcher interpreted the three phases carried out in the research. Then, the researcher discussed the selection of the participants and the teaching context in detail. Based on the above illustration, the researcher described in detail the quantitative and qualitative methods used in this study. Moreover, the researcher

described the data collection process, which provided the foundation of the results and discussions in the next chapter. Finally, ethical considerations were discussed, showing the scientific and objective attitude of the researcher when doing the study.

## Chapter 4 Data Analysis and Results

### 4.1 Introduction

The previous chapter outlined in detail the research design of this study, including the research questions, research participants, research context, research design and methods, and the process of developing the research instruments used. Finally, it introduced the data collection process and ethical considerations as well as the mechanisms that were applied to ensure validity and reliability.

This study aims to address the primary aim of the research: “*to explore and inform good teaching practices by evaluating the impact of an intervention on the blended learning of academic English course for postgraduates*” through 3 specific research questions.

**Research Question 1.** What is the current study situation of postgraduate learners on the academic English course?

**Research Question 2.** What teaching practices can be applied by teachers to improve the language proficiency and attainment of postgraduates in a blended learning academic English course?

**Research Question 3.** What recommendations could potentially be made for future academic English courses for postgraduates taught in a blended mode?

In the following section, the responses to the questionnaire will be analysed through Wenjuan Xing (an online crowdsourcing platform, mentioned in *Section 3.8.1 Wenjuan Xing Used in Questionnaire in Phase I*) to calculate the frequency and correlation between responses and different variables to provide statistical reference for addressing Research Question 1. Then, the data of the pre-test and the post-test is analysed by SPSS 26.0 and discussed in order to answer Research Question 2. The data of the interviews will be discussed using thematic analysis to address Research Question 3 as well as to support the major findings in the next chapter. Furthermore, all these analyses will be linked to the implementation of the blended learning approach in the English academic course for postgraduates.

## 4.2 Questionnaire in Phase 1

A quantitative method was implemented in Phase 1. Based on the analysis of the questionnaire, along with the literature review, the current study situation of these postgraduates can be elucidated, aiding a better understanding and a solid foundation in designing the blended learning in the following phase.

The questionnaire comprised 30 items, including 19 closed questions and 11 mixed questions with closed and open questions, related to Research Question 1.

**Table 4.1 Content description of the questionnaire**

<b>Part</b>	<b>Content</b>	<b>No. of items</b>
Part I	Demographic information	Questions 1-4
Part II	Online experiences	Questions 5-11
Part III	Attitudes towards the academic English course	Questions 12-18
Part IV	Factors influencing the academic English course learning and language proficiency	Questions 19-25
Part V	Requirements for the academic English course learning	Questions 26-30

As shown in the Table 4.1, in addressing Research Question 1, the 30 questions had been grouped into 5 parts: postgraduates' demographic information and online experiences, their attitudes towards their academic English course as well as the factors affecting their academic English course learning and the improvement of their English language proficiency, and their requirements for the course.

In total, 120 questionnaires were returned, 100% response rate. By using Wenjuan Xing, the researcher finalized the data collection and achieved many meaningful analyses.

### 4.2.1 Questionnaire Part I: Demographic Information

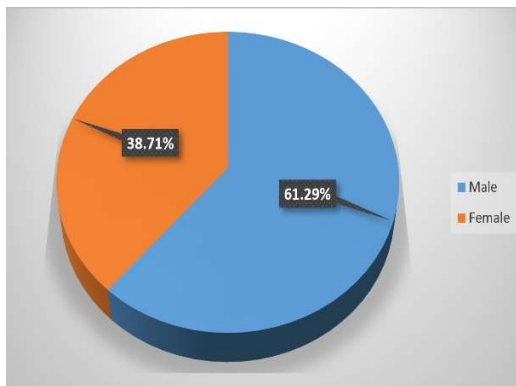
Questions 1-4 formed the first part of the questionnaire, focusing on the general information of these postgraduates and aimed at achieving a demographic and background comparisons of these postgraduates in relation to gender, class, age, origin of the bachelor degree awarded and the location of the degree awarding university or college. Based on the demographic information, the researcher obtained descriptive characteristics for these students.

**Table 4.2 Demographic information (Gender)**

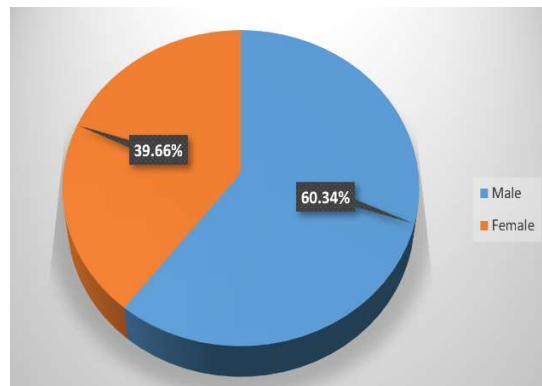
Questions 1-2 Classes		Gender		
		Male	Female	Total
Experimental classes	Count	38	24	62
	% within classes	61.29%	38.71%	100%
Control classes	Count	35	23	58
	% within classes	60.34%	39.66%	100%
Total	Count	73	47	120
	% within classes	60.83%	39.17%	100%

Pearson Chi-Square Value  $\chi^2 = 0.111$  Degrees of freedom (df) = 1  
Possibility (P) = 0.739

The following pie charts showed the gender difference more clearly:



**Figure 4.1 Demographic information in experimental classes (Gender)**



**Figure 4.2 Demographic information in control classes (Gender)**

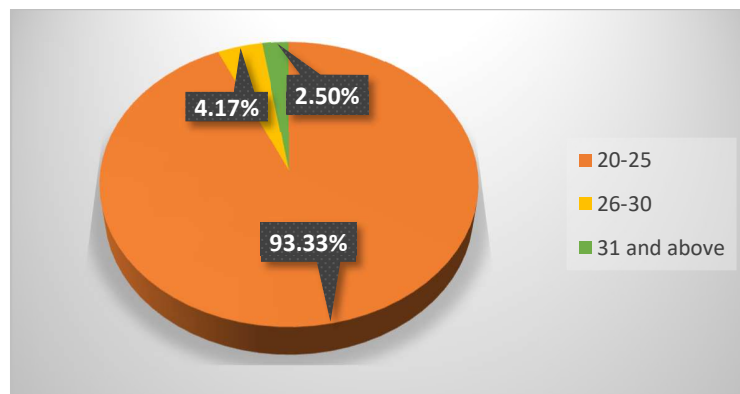
The Pearson Chi-Square test is the degree of deviation between the actual observed value and the theoretical inferred value of the statistical sample (Brown, 1988). The degree of deviation between the actual observed value and the theoretical inferred value determines the size of the Chi-Square value; if the Chi-Square value is larger, the greater the degree of deviation between the two; conversely, the smaller the deviation between the two values, the smaller the Chi-Square value; if the two values are exactly equal, the Chi-Square value is 0, indicating that the theoretical and the observed value are exactly the same. At the same time, if  $P < 0.05$ , it means there is the significant difference between the two, and if  $P > 0.05$ , it means there is no difference between them.

According to Table 4.2 as well as Figure 4.1 and Figure 4.2, it showed that the percentage of male participants was dominantly large in both the experimental classes (61.29%) and the control classes (60.34%), which is typical for the School of Mechanical Engineering and the School of Mathematics and Statistics. The gender variable could not be controlled due to the fact that the 120 postgraduates were chosen randomly from the 186 postgraduates who were willing to join in the study, but there was no statistical difference between the two groups ( $\chi^2 = 0.111$ ,  $P = 0.739 > 0.05$ ) in gender.

**Table 4.3 Demographic information (Age)**

Question 3	Count	Percentage	Valid Percentage
A. 20-25	112	93.33%	93.33%
B. 26-30	5	4.17%	4.17%
C. 31 and above	3	2.5%	2.5%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

The following Figure 4.3 showed the age difference more clearly:



**Figure 4.3 Demographic information (Age)**

According to Table 4.3 and Figure 4.3, the majority (93.33%) of the postgraduate student participants' were aged between 20 and 25. As for the postgraduates whose age was between 26 and 30 (4.17%) and between 31 and above (2.5%), they occupy 6.67% in total.

**Table 4.4 Demographic information (Source of students)**

<b>Question 4</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. 985	0	0%	0%
B. 211	3	2.5%	2.5%
C. General	108	90%	90%
D. Independent	9	7.5%	7.5%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Chinese universities and colleges are divided into four kinds. Theoretically, the quality of the students and their academic ability and level of study also vary depending on the level of the university they attend. The higher the level of the university is, the better the ability and the level of study of the postgraduates are, and vice versa.

Among all the universities in China, the top tier are the “985 project” universities, which only include 39 top universities. These universities represent the best teaching and scientific research level in China and enrol top students from all over the world. The second tier is formed by the “211 project” universities. This group includes 115 universities, whose required scores in the entrance examination are only a little lower than for “985 project” universities but much higher than the other two levels. The third tier is made up of “general universities” which include most local or provincial public universities, colleges and other educational institutions. The fourth tier consists of “independent universities”, most of which were founded between 2000 and 2005 and belong to the group of private institutions and colleges. These institutions enrol students who are generally better academically than students in specialized or technical schools.

As shown in Table 4.4, most of the postgraduates (90%) received their bachelor degree from general universities, while only 3 postgraduates (2.5%) from the “211 project” universities and 9 students (7.5%) from the independent universities, which occupied 10% of the postgraduates.

#### **4.2.2 Questionnaire Part II: Online Experience**

Prior online experience of the postgraduates was a key element to be considered before the empirical study. On the one hand, with the innovation and development of information technology, it was unavoidable for the postgraduates to learn and adopt some

knowledge by surfing online. On the other hand, online learning was one of the most important steps in the blended learning. By analysing the data of Questions 5-11, the background information and context of their internet use could be fully understood. This information proved helpful in the design of the academic English course, especially in applying blended learning better.

**Table 4.5 Online experience (Years surfing online)**

<b>Question 5</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. 1—4 years	7	5.83%	5.83%
B. 5—8 years	47	39.17%	39.17%
C. More than 8 years	66	55%	55%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Table 4.5 showed that 94.17% postgraduates had online experience for more than 5 years, including 39.17% postgraduates having 5-8 years of surfing online and 55% postgraduates had more than 8 years of online experience. This can be taken as indication that these students had full ability to use the internet. Only 7 postgraduates, 5.83%, had 1-4 years of online experience. Therefore, based on Table 4.5, it indicated that all these postgraduates had at least one-year experience of surfing online.

**Table 4.6 Online experience (Hours per day)**

<b>Question 6</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. 0—1 hour	0	0%	0%
B. 1—2 hours	23	19.17%	19.17%
C. 3—4 hours	52	43.33%	43.33%
D. 5—6 hours	30	25%	25%
E. more than 6 hours	15	12.5%	12.5%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

As shown in Table 4.6, there was no one who spent less than 1 hour per day online, showing that all these postgraduates did surf online at least 1 hour per day. Furthermore, the majority of the postgraduates (43.33%) spent 3-4 hours a day surfing online, and 30

postgraduates (25%) spent 5-6 hours a day. However, approximately one sixth (19.17%) of postgraduates only spent 1-2 hours, and the others spent more than 6 hours.

**Table 4.7 Online experience (Hours for studying)**

<b>Question 7</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. below 10%	20	16.67%	16.67%
B. 11—30%	64	53.33%	53.33%
C. 31—50%	22	18.33%	18.33%
D. more than 50%	14	11.67%	11.67%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

As Table 4.7 shows, the postgraduates used different hours online to study. 20 postgraduates (16.67%) only used their time below 10% to study, and the majority of these postgraduates (53.33%) could use 11-30% of online time for studying. Furthermore, 36 postgraduates (30%, 18.33% postgraduates used 31-50% and 11.67% postgraduates used above 50%) spent above 30% of time to study online, showing that they had formed the study habit, which would be helpful when they were taught in the blended learning mode.

**Table 4.8 Online experience (Purpose)**

<b>Question 8</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. to search for materials, news and so on	30	25%	25%
B. to learn something new or related to studies	43	35.83%	35.83%
C. to send emails	5	4.17%	4.17%
D. to go shopping, entertain and play games	31	25.83%	25.83%
E. to chat with friends	7	5.83%	5.83%
F. Others, such as .	4	3.33%	3.33%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

As for the purpose of surfing online, 35.83% postgraduates aimed to learn something new or related to their studies, which made up the largest group. The next was 25.83% postgraduates preferred to go shopping or entertainment, while 25% of the postgraduates searched online for learning materials. Furthermore, there were still 16 postgraduates who would like to send emails (5 students, 4.17%), chat with friends (7 students, 5.83%) or

doing other things (4 students, 3.33%), such as working a part-time job, downloading new software, observing the trend of the stock market and so on.

**Table 4.9 Online experience (Main place)**

<b>Question 9</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. internet bar	6	5%	5%
B. classrooms, library and study rooms	64	53.33%	53.33%
C. dormitory	38	31.67%	31.67%
D. Other places	12	10%	10%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

As can be seen from Table 4.9, the most popular places where postgraduates preferred to surf online were the classrooms, library and study rooms, which had a combined share of 53.33%. The second preferred main place where students spent their online time was the dormitory, followed by “Other places” (10%) and the internet bar (5%). Therefore, the places on campus were the main locations for students to go online.

**Table 4.10 Online experience (Communicative ways)**

<b>Question 10</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. QQ and WeChat	109	90.83%	90.83%
B. email	8	6.67%	6.67%
C. video or live-broadcasting platform	1	0.83%	0.83%
D. forum	2	1.67%	1.67%
E. Others, such as _____.	0	0%	0%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Table 4.10 shows the preferred medium postgraduates use to communicate in their daily life. The majority of them (109 students, 90.83%) choose QQ and WeChat, which are the most popular services in China. 8 postgraduates (6.67%) preferred to use email, while the rest used video, live-broadcasting platforms (1 student, 0.83%) and forums (2 students, 1.67%), respectively.

**Table 4.11 Online experience (Blended learning)**

Questions 11 Classes		Blended learning experience		
		Yes	No	Total
Experimental classes	Count	52	10	62
	% within classes	83.87%	16.13%	100%
Control classes	Count	47	11	58
	% within classes	81.03%	18.97%	100%
Total	Count	99	21	120
	% within classes	82.5%	17.5%	100%

Pearson Chi-Square Value  $\chi^2 = 0.648$  Degrees of freedom (df) = 1 Possibility (P) = 0.421

The majority of these postgraduates (99 students, 82.5%) had blended learning experience, while more than one sixth (21 students, 17.5%) had no such experience.

It should be noted that it would be challenging for those postgraduates who had no blended learning experience to be taught in this mode. If these 21 postgraduates were all in the experimental classes, it would affect the effectiveness, validity and reliability of the application of the empirical study. Therefore, Pearson Chi-square was applied to test the results.

There were 2.84% more postgraduates in experimental classes who reported that they understood the blended learning mode. However, the Pearson Chi-Square test showed (see Table 4.11) that no statistically significant difference existed between the two groups ( $\chi^2 = 0.648$ ,  $P = 0.421 > 0.05$ ) in their blended learning experiences.

#### **4.2.3 Questionnaire Part III: Attitudes towards the Academic English**

In order to address Research Question 1, the third part, which relates to students' attitudes towards the academic English course, is now presented.

**Table 4.12 Postgraduates' attitudes (Confronted with difficulties)**

<b>Question 12</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. consulting teachers and classmates	18	15%	15%
B. going to the library to search for relative materials	11	9.17%	9.17%
C. surfing online, such as Google, Wikipedia or Baidu	84	70%	70%
D. thinking on my own	6	5%	5%
E. ignoring it	1	0.83%	0.83%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Question 12 aimed to find out the postgraduates typically resolved difficulties or problems they encountered in their academic English studies. As shown in Table 4.12, the majority of these students (84 students, 70%) would surf online and use the internet search engines to search for a solution, indicating they had both the independent learning ability and the familiarity with this way of problem solving, which was also helpful for this blended learning practice. 15% of the students tended to consult others, such as teachers and classmates. Furthermore, there were still 11 postgraduates (9.17%) who favoured to use the traditional way—going to the library to search for relevant materials. 6 postgraduates persisted in thinking on their own and only 1 postgraduate student chose to ignore the difficulties.

**Table 4.13 Postgraduates' attitudes (Review the course)**

<b>Question 13</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. Yes, I will.	57	47.5%	47.5%
B. No, I won't.	14	11.67%	11.67%
C. It depends.	45	37.5%	37.5%
D. Don't know.	4	3.33%	3.33%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Based on Table 4.13, the majority of postgraduates (47.5%) would review the knowledge taught after the class to enhance their understanding. However, there were 14 postgraduates who would not review the lesson content at all. Furthermore, 45 postgraduates (37.5%) chose the “It depends” option, which meant whether they would

review the course depended on the knowledge itself, their personal situation at the time, or the requirements of the teachers. 4 postgraduates answered that they had not thought about this question.

**Table 4.14 Postgraduates' attitudes (Independent learning ability)**

<b>Question 14</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. strong	39	32.5%	32.5%
B. average	75	62.5%	62.5%
C. weak	6	5%	5%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Seen from Table 4.14, 75 postgraduates (62.5%) considered their independent learning ability to be average, while 39 postgraduates (32.5%) believed that they had strong independent learning ability. The rest (6 postgraduates, 5%) believed they had weak independent learning ability.

**Table 4.15 Postgraduates' attitudes (Academic English course)**

<b>Question 15</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. Excited, and I love English so much.	16	13.33%	13.33%
B. Interested, it will be helpful for my future study and work.	72	60%	60%
C. No feeling, it depends on teaching curriculum of the university.	28	23.33%	23.33%
D. Not interested, I prefer not to study English anymore.	2	1.67%	1.67%
E. Sorry, I never think of it or prefer not to say.	2	1.67%	1.67%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

When these postgraduates learned that they needed to complete an academic English course during the postgraduate period, only 13.33% (16 students) felt excited and showed a strong willingness to attend the course. The majority of them (72 students, 60%) chose the "interested" option, thinking the academic English course would be helpful for their future study and work. Furthermore, 28 postgraduates felt indifferent because it was

decided by the University curriculum. 3.34% of postgraduates preferred not having to study the course, chose to withhold their opinions or never thought about it.

**Table 4.16 Postgraduates' attitudes (Learning environment)**

<b>Question 16</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. Traditional face-to-face teacher-centred classroom.	23	19.17%	19.17%
B. Traditional face-to-face student-centred classroom.	15	12.5%	12.5%
C. Face-to-face lectures by teachers is the mainstay, supplemented by online independent learning by students.	30	25 %	25%
D. Students' online independent learning is the mainstay, supplemented by teachers' face-to-face lectures.	10	8.33%	8.33%
E. Blended learning with the combination of online independent learning and group work by students, face-to-face questions and answers and guidance by teachers.	42	35%	35%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

According to Table 4.16, 38 postgraduates preferred the traditional face-to-face learning environment, with 19.17% of them preferring the teacher-centred form and 12.5% of them preferring a student-centred teaching style. 82 postgraduates (68.33%) chose the blended learning mode with different patterns, for example, 25% of these postgraduates would like to have the face-to-face lectures by teachers as the mainstay, supplemented by online independent learning by themselves; only 8.33% students selected students' online independent learning as the mainstay, supplemented by teachers' face-to-face lectures; and 35% postgraduates, which was also the majority, wanted to enjoy blended learning in a combination of online independent learning and group work by students, face-to-face questions and answers and guidance by teachers.

**Table 4.17 Postgraduates' attitudes (Blended learning mode)**

<b>Question 17</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. Definitely yes, because face-to-face classroom is too boring, compared with the blended learning.	44	36.67%	36.67%
B. Yes, but with other reasons.	45	37.5%	37.5%
C. A bit hesitant to change the learning style, afraid that I won't be able to fit in.	21	17.5%	17.5%
D. Reluctant, feeling that it would increase the academic load.	4	3.33%	3.33%
E. Reluctant, worried about the inefficiency of independent learning.	6	5%	5%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

89 postgraduates (74.17%) held a positive attitude towards the blended learning mode and the numbers of Option A and Option B were approximately equal, which were 44 (36.67%) and 45 (37.5%), respectively. 21 postgraduates (17.5%) expressed hesitation, afraid that they would not fit in or able to follow the mode. 10 postgraduates (8.33%) felt that they were reluctant to adopt this blended learning mode, due to different reasons listed in the options.

**Table 4.18 Postgraduates' attitudes (Time length)**

<b>Question 18</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. 5-10 minutes	71	59.17%	59.17%
B. 11-20 minutes	31	25.83%	25.83%
C. 20-30 minutes	7	5.83%	5.83%
D. Above 30 minutes	11	9.17%	9.17%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Based on Table 4.18, 59.17% of postgraduates preferred to spend 5-10 minutes online/offline before/after face-to-face class to learn the content of the academic English course. The second most popular choice was Option B (11-20 minutes) with 25.83%. Only 18 postgraduates chose to spend more than 20 minutes in blended mode, while 11 of them

(9.17%) would like to use more than half an hour and 7 (5.83%) between 20-30 minutes, respectively.

#### 4.2.4 Questionnaire Part IV: Factors Influencing the Academic English Course Learning and Language Proficiency

In order to deeply mine information gathered through the questionnaire and find answers to Research Question 1, the fourth part, relating to factors affecting the academic English learning and language proficiency, is presented in the following.

**Table 4.19 Influencing factors (Effectiveness)**

<b>Question 19</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. accessibility of online courses	16	13.33 %	13.33 %
B. learning environment and learning atmosphere	36	30%	30%
C. interactivity within students or interaction between the teacher and students	21	17.5%	17.5%
D. course design and teaching strategies	44	36.67%	36.67%
E. Others, such as .	3	2.5%	2.5%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Question 19 aimed to identify the main factors that influenced the effectiveness of academic English learning from the perspective of the postgraduates. The first place is taken by “D. course design and teaching strategies”, receiving 36.67% (44 postgraduates) of the responses. “B. learning environment and learning atmosphere” comes in second place, 30% (36 postgraduates) of participants found the learning environment and atmosphere the main factor influencing effectiveness. The third most important factor is “C. interactivity within students or interaction between the teacher and students”, occupying 17.5% (21 postgraduates), and the fourth is “accessibility of online courses”. 3 postgraduates (2.5%) selected option “E”, providing additional factors, such as a poor network and the slow upload or download speed, redundancy of online information and inadequate functionality of the online platform.

**Table 4.20 Influencing factors (Proficiency)**

<b>Question 20</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. lacking skills and techniques to learn English language	69	57.5 %	57.5 %
B. lacking the independent learning ability and self-control ability	18	15%	15%
C. lacking timely feedback from teachers	10	8.33%	8.33%
D. lacking the leadership and guidance of the teacher	17	14.17%	14.17%
E. Others, such as .	6	5%	5%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Question 20 intended to identify the main negative factors in the postgraduates' mind that influenced their academic English learning and language proficiency. The majority of the postgraduates (69 postgraduates, 57.5%) chose as the main negative factor "A. lacking skills and techniques to learn English language", which showed that they subjectively attributed their underperformance in English language proficiency to their individual learning skills, or the lack thereof. The second and the third negative factors they chose were "B. lacking the independent learning ability and self-control ability" and "D. lacking the leadership and guidance of the teacher", reaching 15% and 14.17%, respectively. The fourth one was "C. lacking timely feedback from teachers", reaching 8.33%. 6 postgraduates (5%) mentioned several further factors, such as limited time and energy, the interface between the face-to-face classroom and the online course, lack of guided reading and pre-study sessions, insufficient plans and targets in learning English, lack of communication and interaction with others and insufficient novelty in teaching strategies and methods.

**Table 4.21 Influencing factors (Reasons)**

<b>Question 21</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. interest in knowledge itself	63	52.5%	52.5%
B. employment and education pressures	51	42.5%	42.5%
C. school context or peer influence	3	2.5%	2.5%
D. teachers' requirement	2	1.67%	1.67%
E. Others, such as .	1	0.83%	0.83%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Based on Table 4.21, the reasons which inspired the postgraduates to learn English well were listed in Question 21. 52.5% of postgraduates believed that interest in knowledge itself was the main factor which motivated them to study the academic English course. 42.5% of them, which was lower than “A. interest in knowledge itself” by 10%, considered “B. employment and education pressures” to be the power that drove them to study the course. The remaining 6 postgraduates chose “C. school context or peer influence”, “D. teachers' requirement” and “E. Others, such as parental expectations”, occupying 2.5%, 1.67% and 0.83%, respectively.

**Table 4.22 Influencing factors (Improved aspects)**

<b>Question 22</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. Facilitation and convenience of online learning	53	44.17%	44.17%
B. Integration of learning resources online and offline	35	29.17%	29.17%
C. Team/group work co-operation	22	18.33%	18.33%
D. Teachers' teaching strategies and methods	9	7.5%	7.5%
E. Others, such as .	1	0.83%	0.83%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Question 22 aimed to mine students' views on which essential aspect of the academic English teaching mode as currently practiced should be improved. 53 postgraduates (44.17%) considered the facilitation and convenience of online learning was the aspect which should be improved, showing that they paid attention to the online learning already.

35 postgraduates (29.17%) believed that it was necessary to integrate the learning resources online and offline in “B” option. “C. Team/group work cooperation” is the third highest option, being selected by 18.33% or 22 of the entire cohort of students. There were still 9 postgraduates who thought the teachers’ teaching strategies and methods were the most important aspects to be developed, reaching 7.5%. Only 1 postgraduate student (0.83%) preferred to maintain a good classroom discipline because he/she believed that noisy talking in the classroom influenced the academic English study.

**Table 4.23 Influencing factors (Classroom participation)**

<b>Question 23</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. Important, it can train the ability to express myself, to think and to improve my confidence.	92	76.67%	76.67%
B. Unimportant, not very helpful to one’s studies, and not very useful in improving grades.	21	17.5%	17.5%
C. Doesn’t matter or no comment.	7	5.83%	5.83%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Question 23 intended to discover the importance of classroom participation during the process of the academic English study from the perspective of the postgraduates. Based on Table 4.23, the majority of the postgraduates (92 postgraduates, 76.67%) said that classroom participation was important for improving their English proficiency, and 21 postgraduates (17.5%) thought it to be the opposite. There were 7 postgraduates, occupying 5.83%, who chose “C. Doesn’t matter or no comment”, showing an indifferent attitude toward classroom participation.

**Table 4.24 Influencing factors**

**(Communication or discussion about course-related knowledge)**

<b>Question 24</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. Yes, I will	110	91.67%	91.67%
B. No, I won’t	7	5.83%	5.83%
C. Don’t know	3	2.5%	2.5%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

It is useful for postgraduates in general to communicate or discuss course-related problems, difficulties and knowledge with their teachers and classmates, for they would frequently give them timely help and facilitate the smooth continuation of their studies (Wang, 2018; Jiang, 2019). Question 24 aimed to know whether the same would apply to the postgraduate participants in this research. According to Table 4.24, the majority of the postgraduates chose “A. Yes, I will”, showing their active behaviour in course-related communication, while 7 postgraduates chose not to communicate with others. In addition, there were still 3 of them showing an indifferent attitude and chose “C. Don’t know”.

**Table 4.25 Influencing factors (Difficulties)**

<b>Question 25</b>		<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A.	Listening and speaking	33	27.5%	27.5%
B.	Reading and writing	42	35%	35%
C.	Translating the text	24	20%	20%
D.	Cultural understanding	5	4.17%	4.17%
E.	Vocabulary and grammar	16	13.33%	13.33%
<b>Total</b>		<b>120</b>	<b>100%</b>	<b>100%</b>

Question 25 intended to work out the most difficult part in the mind of the postgraduates during the process of learning the academic English course. The first place was taken by “B. Reading and writing”, reaching 35% and 42 postgraduates, the second place was taken by “A. Listening and speaking”, reaching 27.5% and 33 postgraduates. The third was “C. Translating the text”, the fourth was “E. Vocabulary and grammar”, and the fifth was “D. Cultural understanding”, with 20%, 13.33% and 4.17%, respectively.

#### **4.2.5 Questionnaire Part V: Requirements for the Academic English Course Learning**

In order to deeply understand the difficulties and obstacles as well as the needs these postgraduates had met in Research Question 1, the fifth part which related to the requirements for the academic English course learning was presented.

**Table 4.26 Requirements (Interaction)**

<b>Question 26</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. Synchronous (at the same time as the session), because I can get feedback immediately.	35	29.17%	29.17%
B. Synchronous, because I'd like to share my ideas with others no matter how my English is.	36	30%	30%
C. Synchronous, because I enjoy the interaction with my teacher and classmates.	18	15%	15%
D. Asynchronous (before or after the session), because I am shy to share my ideas before others.	10	8.33%	8.33%
E. Asynchronous, because my oral English is not very good.	17	14.17%	14.17%
F. Asynchronous, because it has less pressure.	4	3.33%	3.33%
G. Others, such as .	0	0%	0%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Table 4.26 indicates that the majority of the postgraduates (89 postgraduates, 74.17%) preferred the synchronous interaction during their academic English course, while a minority (31 postgraduates, 25.83%) would like to prioritise asynchronous interaction with the teacher and classmates. Among the “A, B and C” options, which all belonged to the synchronous group, there were 36 postgraduates (30%) who chose to do the synchronous interaction because of the sharing of ideas (Option “B”), which was the highest percentage among the seven options. Option “A” was the preference for 29.17%, because 35 postgraduates hoped to achieve the feedback immediately. 18 postgraduates, or 15% of the students, love the synchronous interaction just because they enjoy the process of it. In the asynchronous sections, 17 postgraduates chose the “E” option, because they didn’t think their oral English was good enough. 10 of them (8.33%) chose option “D” due to their shyness, and 4 of them (3.33%) selected option “F” because they perceived asynchronous interaction as causing less pressure. Furthermore, nobody selected “G” to share other ideas about the interaction on the academic English course.

**Table 4.27 Requirements (Teachers)**

<b>Question 27</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. Teacher can give timely solution to my problem	39	32.5%	32.5%
B. Teacher can give timely feedback	21	17.5%	17.5%
C. Teacher can participate in our discussion and guide us to think positively	41	34.17%	34.17%
D. Teacher can supervise us in blended learning	19	15.83%	15.83%
E. Others, such as _____.	0	0%	0%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

As for the requirements for the teachers, according to Table 4.27, 34.17% of the postgraduates (41 students) selected option “C”, considering it was necessary that teachers could take part in their discussions and guide them to think positively. Option “A” scored 1.67% less than “C”, with 32.5% of postgraduates (39 postgraduates) believing that teachers need offer timely solutions to their problems. The third (“B”) and the fourth (“D”) options were closer, with the latter being 1.67% less than the former, 17.5% and 15.83% respectively. 21 postgraduates hoped that teachers could give timely feedback and 19 postgraduates thought teachers could supervise them in blended learning. In addition, there was nobody who chose “E” to illustrate other ideas about the requirements for teachers during the study process of the academic English course.

**Table 4.28 Requirements (Learning platform)**

<b>Question 28</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. MOOC	28	23.33%	23.33%
B. professional forums or communities	21	17.5%	17.5%
C. independent learning platform	18	15%	15%
D. learning platforms online provided by teachers	48	40%	40%
E. Others, such as _____.	5	4.17%	4.17%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Students had different preferences regarding the main learning platform of the academic English course. According to Table 4.28, two fifth of the postgraduates (40 postgraduates, 40%) would like to mainly use online learning platforms as recommended by their teachers. 23.33% of postgraduates preferred to use MOOCs, 17.5% of them often used professional forums or communities, and 15% of them chose to use independent learning platforms which were perhaps more tailored to their specific needs, that is to facilitate their English learning. Furthermore, there were still 5 postgraduates (4.17%) who added their own options besides the options mentioned above, such as e-Journal libraries and search engines.

**Table 4.29 Requirements (Learning material)**

<b>Question 29</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. English learning materials to broaden horizons	67	55.83%	55.83%
B. supporting materials of academic English course	42	35 %	35 %
C. quality learning materials in other universities	7	5.83%	5.83%
D. course plans or handouts of academic English course	2	1.67%	1.67%
E. Others, such as .	2	1.67%	1.67%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

Table 4.29 displays the students' preferences with regard to the learning materials. 55.83% of postgraduates considered learning materials that broadened their horizons were the ideal learning materials for their academic English course. Option "B" was selected 20.83% less than "A", with 35% of the students (42 postgraduates) believing that supporting materials of the academic English course were the ideal course materials. 7 postgraduates (5.83%) chose quality learning materials in other universities, and 2 students (1.67%) preferred course plans or handouts for the academic English course. Furthermore, there were 2 of the postgraduates (1.67%) who offered additional information, such as supporting materials of professional courses in English to enrich their knowledge.

**Table 4.30 Requirements (Content presentation methods)**

<b>Question 30</b>	<b>Count</b>	<b>Percentage</b>	<b>Valid Percentage</b>
A. PowerPoint	48	40%	40%
B. Language exercises and tests	4	3.33%	3.33%
C. Games, presentations or short plays	35	29.17%	29.17%
D. Short videos or audios	27	22.5%	22.5%
E. Others, such as _____.	6	5%	5%
<b>Total</b>	<b>120</b>	<b>100%</b>	<b>100%</b>

As for their preferences regarding content presentation methods, the postgraduates again opted for a range of different choices among the resources provided by teachers. According to Table 4.30, the majority of the postgraduates (48 postgraduates, 40%) preferred to use PowerPoint. 29.17% believed that games, presentations or short plays were appropriate ways to present the content they learn. 22.5% of postgraduates considered short videos or audios the most appropriate method to present content in the academic English course. A minority of students (4 postgraduates, 3.33%) thought language exercises and tests were best, presumably because they got used to learning via this method. In addition, there were 6 postgraduates offering other options, such as cartoons, instructional screenshots, recommended reading and video/audio recordings of lectures/tutorials (e.g. Panopto).

## **4.3 Pre-test and Post-test in Phase 2**

### **4.3.1 Pre-test**

The pre-test was conducted in Phase 2 of the empirical research as a preliminary basis for answering Research Question 2 which tackled the approaches and ways to develop blended learning with the aim to enhance students' English language proficiency.

As illustrated in Section 3.6.2 Pre-test and Post-test in Phase 2 and Table 3.4 The test format and patterns of the pre-test and the post-test, the pre-test was divided into five parts, listening, reading, translating, writing and speaking, for which the total score was 100. After the pre-test, the test papers were collected and scored, then test results were imported into SPSS 26.0 for data analysis. The statistics and results of the pre-test of the experimental classes and the control classes are shown in the following Table 4.31.

**Table 4.31 The descriptive statistics result of the pre-test**

	<b>Class</b>	<b>Number</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Std. Error Mean</b>
<b>Scores</b>	EC	62	77.16	9.249	1.175
	CC	58	77.88	10.021	1.316

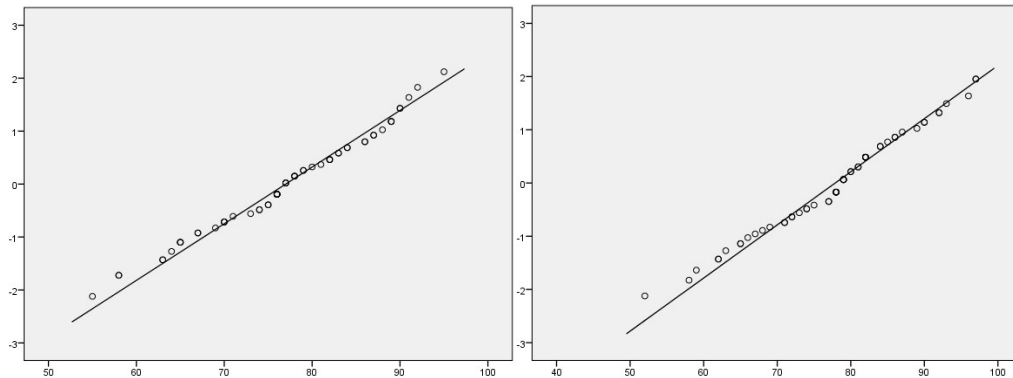
All participating postgraduates, 62 from the experimental classes (EC) and 58 from the control classes (CC), were tested. Table 4.31 shows that EC's pre-test mean score was 77.16 while CC's mean was 77.88. The mean gap between EC and CC was 0.72, showing that the mean score of EC was slightly lower than that of CC; however, the difference was small. The Standard Deviation value (Anderson and Anderson, 1958) was 9.249 in EC and 10.021 in CC, and the Standard Deviation value gap was 0.772, ranging from 0 to 1, showing its rationality and reasonability. The Standard Error Mean value (Anderson and Anderson, 1958) of EC and CC were both between 0 and 2, which meant the dispersion degree between EC and CC was generally similar, indicating there was no significant difference in their English language proficiency between EC and CC at the beginning of the experiment.

To ensure the validity of t-test (Welch, 1947; Kim, 2015), the normality test (Ghasemi & Zahediasl, 2012) should be done to satisfy the assumption that the data conforms to the normal distribution.

**Table 4.32 Test of normality of the pre-test**

<b>Class</b>	<b>Kolmogorov-Smirnov</b>			<b>Shapiro-Wilk</b>		
	<b>Statistic</b>	<b>df</b>	<b>Sig.</b>	<b>Statistic</b>	<b>df</b>	<b>Sig.</b>
EC	0.095	62	0.200	0.978	62	0.367
CC	0.125	58	0.204	0.979	58	0.420

According to the rules of normality tests, if the Sig. value of Kolmogorov-Smirnov (Lilliefors, 1967) is higher than 0.05, it means the data obey the normal distribution; if the Sig. value is lower than 0.05, it means the data don't obey the normal distribution and can't be used to do the t-test. The same applies to the Sig. value of Shapiro-Wilk (Mudholkar, Srivastava and Thomas, 1995). According to Table 4.32, the Sig. value of Kolmogorov-Smirnov in EC and CC were 0.200 and 0.204, and the Sig. value of Shapiro-Wilk were 0.367 and 0.420, respectively, all of which were higher than 0.05, so it could be considered that the scores of EC and CC in the pre-test obey the normal distribution.



**Figure 4.4 QQ plot of EC (left) and CC (right) in the pre-test**

In addition, the full name of QQ plot is Quantile-Quantile plot (Ghasemi and Zahediasl, 2012), mainly used to determine whether a series of values conform to the normal distribution, the horizontal coordinate is the theoretical value, the vertical coordinate is the actual value, when the coordinate value of vertical and horizontal coordinates are the same, the black line will be located on the line of  $y=x$ , if most of the points (indicating the values) are on this black line, it means they are in line with the normal distribution.

As was shown in Figure 4.4, the scores of EC and CC in the pre-test were close to the black line, showing that the data obeyed the normal distribution, which ensured the validity of the following  $t$ -test.

**Table 4.33 T-test of the statistics result of the pre-test**

	<b>Levene's Test for Equality of Variances</b>		<b><i>t</i>-test for Equality of Means</b>						
	<b>F</b>	<b>Sig.</b>	<b>t</b>	<b>df</b>	<b>Sig. (2-tailed)</b>	<b>Mean Difference</b>	<b>Std. Error Difference</b>	<b>95% Confidence Interval of the Difference</b>	
								<b>Lower</b>	<b>Upper</b>
Equal variances assumed	0.075	0.785	-0.408	118	0.684	-0.718	1.759	-4.202	2.766
Equal variances not assumed			-0.407	115.504	0.685	-.0718	1.764	-4.212	2.776

Table 4.33 aimed to check whether the pre-test results of EC and CC were significantly different from the perspective of *t*-test (Welch, 1947; Kim, 2015). According to Table 4.33, the Sig. value of Levene's Test (Vorapongsathorn, Taejaroenkul and Viwatwongkasem, 2004) for Equality of Variances was 0.785, which was higher than 0.05, meaning that the variance was homogeneous, showing the dispersion of the data from EC and CC was very similar. Furthermore, it showed that the Sig. (2-tailed) value of *t*-test for Equality of Means of EC and CC were 0.684, which was higher than 0.05. Therefore, there was no significance between the two group statistics of the scores of EC and CC in the pre-test.

Based on the above data analysis, it could be concluded that there was almost no difference between the EC and CC in terms of the English proficiency of the postgraduates at the beginning of the experiment.

#### **4.3.2 Post-test**

During the experiment, EC was taught by the blended learning, while CC was taught by the traditional teaching mode. In order to verify the effectiveness of teaching strategies applied in EC which facilitated the postgraduates to improve their English language proficiency, after a semester's experiment, a post-test was conducted and all these

postgraduates in EC and CC participated in the test. The statistics and results of the post-test of EC and CC was shown in Table 4.34.

**Table 4.34 The descriptive statistics result of the post-test**

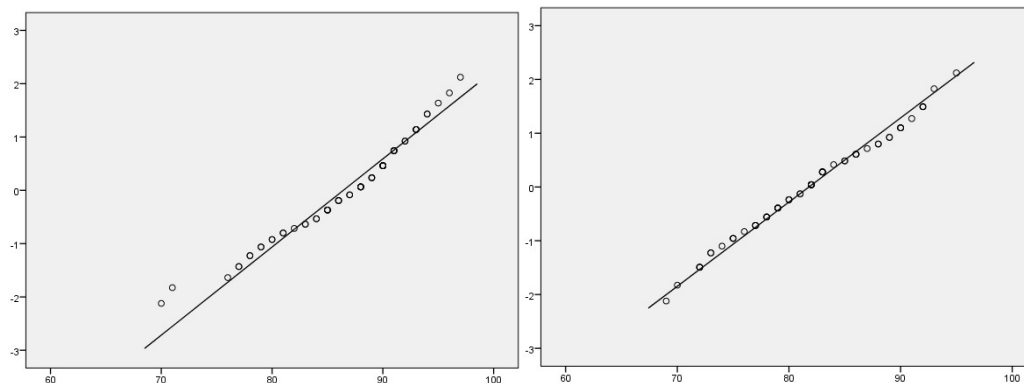
	Class	Number	Mean	Std. Deviation	Std. Error Mean
Scores	EC	62	86.45	5.922	0.752
	CC	58	81.79	6.387	0.839

As shown in Table 4.34, the mean score of EC is 86.45, much higher than that of CC with the score gap reaching at 4.66, which addressed the scores of the postgraduates in EC were higher than those of them in CC, showing that the English language proficiency of the former was better than that of the latter. The Std. Deviation value of EC was 5.922, lower than 6.387 of CC, the Std. Deviation value gap was 0.465, ranging from 0 to 1, which suggested that the distributions of scores in both EC and CC were similar, but that in EC was more concentrated. The Std. Error Mean value of EC and CC were both between 0 and 2, which meant the dispersion degree between EC and CC was generally similar. However, this still did not show that the performance of postgraduates in EC had improved significantly compared with that of those in CC. Therefore, a *t*-test was conducted on the post-test scores of EC and CC.

**Table 4.35 Test of normality of the post-test**

Class	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
EC	0.120	62	0.098	0.960	62	0.051
CC	0.080	58	0.200	0.981	58	0.496

To ensure the validity of the following *t*-test, a test of normality had been presented. According to Table 4.35, the Sig. value of Kolmogorov-Smirnov in EC and CC were 0.098 and 0.200, and the Sig. value of Shapiro-Wilk were 0.051 and 0.496, respectively, all of which were higher than 0.05, so it could be considered that the scores of EC and CC in the post-test obey the normal distribution.



**Figure 4.5 QQ plot of EC (left) and CC (right) in the post-test**

Furthermore, a QQ plot of EC and CC in the post-test had been done. As was shown in Figure 4.5, the scores of EC and CC in the post-test were close to the black line, which indicated that the data obeyed the normal distribution and could be used in the *t*-test.

**Table 4.36 T-test of the statistics result of the post-test**

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	0.383	0.537	4.146	118	0.000	4.659	1.124	2.433	6.884
Equal variances not assumed			4.135	115.651	0.000	4.659	1.127	2.427	6.890

As shown in Table 4.36, the Sig. value of Levene's Test for Equality of Variances was 0.537, which was higher than 0.05, meaning that the variance was homogeneous, showing the dispersion of the data from EC and CC in the post-test was very similar. The Sig. (2-tailed) value of the *t*-test for Equality of Means of EC and CC was 0.000, lower than 0.05, which indicated that there were significant differences in post-test scores between EC and CC.

Therefore, the above analysis illustrated that the post-test scores of postgraduates in EC had been significantly improved after taught by the blended learning.

#### 4.3.3 Comparison and Contrast of Pre-test and Post-test

Although the data analysis of the post-test of EC and CC showed that the postgraduates' English language performance and proficiency in EC had been developed to a good extent by the blended learning, the comparison and contrast of the scores of EC and CC in both pre-test and post-test should be made, which could better illustrate the above conclusion objectively, reliably and validly.

**Table 4.37 T-test for EC in both the pre-test and post-test**

	Test Value = 77.16					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
EC	12.354	61	0.000	9.292	7.79	10.80

Based on Table 4.37, the Sig. (2-tailed) value of the *t*-test for the scores of EC in the pre-test and post-test was 0, which was lower than 0.05, indicating that the differences between the scores of the pre-test and post-test in EC were all statistically significant and varied significantly.

**Table 4.38 T-test for CC in both the pre-test and post-test**

	Test Value = 77.88					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
CC	4.666	57	0.000	3.913	2.23	5.59

Based on Table 4.38, the Sig. (2-tailed) value of the *t*-test for the scores of CC in the pre-test and post-test was 0, which was lower than 0.05, indicating that the differences

between the scores of the pre-test and post-test in CC were all statistically significant and varied significantly.

According to Table 4.37 and Table 4.38, it showed that, after the experiment, the postgraduates had all improved their English language proficiency. Although Table 4.34 and Table 4.36 had shown the conclusion that the postgraduates in EC had achieved higher scores than those in CC in the post-test, a paired samples *t*-test should be done to verify it objectively.

**Table 4.39 A paired samples *t*-test for the comparison and contrast between EC and CC in the pre-test and post-test**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Difference	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 <sup>a</sup>	9.290	10.559	1.341	11.972	6.609	6.928	61	0.000
Pair 2 <sup>b</sup>	3.914	11.906	1.563	7.044	0.783	2.503	57	0.015

<sup>a</sup>: pair 1: the mean value of the post-test minus the mean value of the pre-test in EC

<sup>b</sup>: pair 2: the mean value of the post-test minus the mean value of the pre-test in CC

Based on Table 4.39, The Sig. (2-tailed) values were 0.000 of EC and 0.015 of CC, respectively, both of them lower than 0.05, which indicated that there was statistically significant in this paired samples *t*-test for the comparison and contrast between EC and CC in the pre-test and post-test. The mean of the paired difference of pair 1 was 9.290, which was much higher than that of pair 2 (3.914), addressing that the English language proficiency of the postgraduates in EC was much better than that of those postgraduates in CC. Therefore, the *t*-test result illustrated that the postgraduates in EC had been significantly improved after taught by the blended learning.

Furthermore, to use *t*-test to explore the effects of pre-post improvement and the effects of between-group difference separately would increase the chance of making a Type-I error, therefore, the researcher adopted the two-way mixed ANOVA (Hocking,

1973) to explore the interaction effect between test time points (pre-test vs. post-test) and Group (EC vs. CC).

**Table 4.40 Multivariate Tests<sup>a</sup>**

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial $\eta^2$
times	Pillai's Trace	0.260	41.428 <sup>b</sup>	1.000	118.000	0.000	0.260
	Wilks' Lambda	0.740	41.428 <sup>b</sup>	1.000	118.000	0.000	0.260
	Hotelling's Trace	0.351	41.428 <sup>b</sup>	1.000	118.000	0.000	0.260
	Roy's Largest Root	0.351	41.428 <sup>b</sup>	1.000	118.000	0.000	0.260
times * Group	Pillai's Trace	0.055	6.869 <sup>b</sup>	1.000	118.000	0.010	0.055
	Wilks' Lambda	0.945	6.869 <sup>b</sup>	1.000	118.000	0.010	0.055
	Hotelling's Trace	0.058	6.869 <sup>b</sup>	1.000	118.000	0.010	0.055
	Roy's Largest Root	0.058	6.869 <sup>b</sup>	1.000	118.000	0.010	0.055

Notes: a. Design: Intercept + Group

Within Subjects Design: times

b. May be used to adjust the degrees of freedom for the averaged tests of significance.

Corrected tests are displayed in the Tests of Within-Subjects Effects table.

Based on the results of Table 4.40, it showed four methods, such as Pillai's Trace, Wilks' Lambda, Hotelling's Trace and Roy's Largest Root. Because the value of  $p$  (the significance, Sig.) in all of them was the same, so the researcher took Pillai's Trace as an example to illustrate the results. The value of  $p$  was smaller than 0.05, indicating that the main effect of times (pre-test vs. post-test) was significant, so was the interaction effect of times (pre-test vs. post-test) and Group (EC vs. CC).

**Table 4.41 Tests of Within-Subjects Effects**

Source		Type III Sum of Squares	df	Mean Square	F	Sig.	Partial $\eta^2$
<b>times</b>	Sphericity Assumed	2612.324	1	2612.324	41.428	0.000	0.260
	Greenhouse- Geisser	2612.324	1.000	2612.324	41.428	0.000	0.260
	Huynh-Feldt	2612.324	1.000	2612.324	41.428	0.000	0.260
	Lower-bound	2612.324	1.000	2612.324	41.428	0.000	0.260
<b>times * Group</b>	Sphericity Assumed	433.124	1	433.124	6.869	0.010	0.055
	Greenhouse- Geisser	433.124	1.000	433.124	6.869	0.010	0.055
	Huynh-Feldt	433.124	1.000	433.124	6.869	0.010	0.055
	Lower-bound	433.124	1.000	433.124	6.869	0.010	0.055
<b>Error(times)</b>	Sphericity Assumed	7440.672	118	63.057			
	Greenhouse- Geisser	7440.672	118.000	63.057			
	Huynh-Feldt	7440.672	118.000	63.057			
	Lower-bound	7440.672	118.000	63.057			

According to Table 4.41, the values of  $p$  in different tests were the same. Because it did not meet the test for Sphericity Assumed, so it was chosen to analyse Greenhouse-Geisser test. It showed the same results with Table 4.40, indicating that the main effect of times was significant, so was the interaction effect of times and Group because the value of  $p$  was smaller than 0.05.

Therefore, the results of Table 4.40 and Table 4.41 verified that the results of Table 4.37 and Table 4.38, after the experiment, the postgraduates both in experimental classes and in control classes had all improved their English language proficiency.

**Table 4.42 Tests of Between-Subjects Effects**

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial $\eta^2$
Intercept	1565959.053	1	1565959.053	23194.318	0.000	0.995
Group	232.653	1	232.653	3.446	0.066	0.028
Error	7966.743	118	67.515			

Based on the results of Table 4.42, it showed that the main effect of Group (EC vs. CC) was not significant because the value of  $p$  was 0.066, which was higher than 0.05.

In view of the analysis of two-way ANOVA, the statistical analysis strategy is as follows. On the one hand, if there is no interaction effect between independent variables, focus on analysing the main effect; on the other hand, if there is an interaction effect between independent variables, focus on analysing the simple effect. In this case, the interaction effect of times and Group was significant, so the focus was on analysing the interaction effect and the simple effect.

**Table 4.43 Univariate Tests**

times		Sum of Squares	df	Mean Square	F	Sig.	Partial $\eta^2$
1	Contrast	15.449	1	15.449	0.167	0.684	0.001
	Error	10942.542	118	92.733			
2	Contrast	650.328	1	650.328	17.187	0.000	0.127
	Error	4464.872	118	37.838			

According to Table 4.43, it indicated that the simple effect of Group was not significant in the pre-test because the value of  $p$  was 0.684, which was much higher than 0.05. However, the simple effect of Group was significant in the post-test because the value of  $p$  was 0.000, which was lower than 0.05.

**Table 4.44 Pairwise Comparisons**

times	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig. <sup>b</sup>	95% Confidence Interval for Difference <sup>b</sup>	
						Lower Bound	Upper Bound
1	1	2	-0.718	1.759	0.684	-4.202	2.766
	2	1	0.718	1.759	0.684	-2.766	4.202
2	1	2	4.659*	1.124	0.000	2.433	6.884
	2	1	-4.659*	1.124	0.000	-6.884	-2.433

Notes: Based on estimated marginal means

\*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Based on Table 4.44, the posthoc pairwise comparisons between Group (EC vs. CC) showed the same results of Table 4.43, indicating the simple effect of Group was not significant in the pre-test, while the simple effect of Group was significant in the post-test because the value of  $p$  was 0.684 and 0.000, respectively. The results showed that there were no significant differences in English language proficiency of postgraduates in the experiment classes and the control classes, however, they presented a sharp difference after the empirical study.

**Table 4.45 Pairwise Comparisons**

Group	(I) times	(J) times	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
						Lower Bound	Upper Bound
1	1	2	-9.290	1.426	0.000	-12.115	-6.466
	2	1	9.290	1.426	0.000	6.466	12.115
2	1	2	-3.914	1.475	0.009	-6.834	-0.994
	2	1	3.914	1.475	0.009	0.994	6.834

Based on Table 4.45, the results of the posthoc pairwise comparisons between times (pre-test vs. post-test) showed that the simple effect of times was significant in Group 1

(EC) and Group 2 (CC) because the value of  $p$  was 0.000 and 0.009, respectively, which verified the results of Table 4.37, Table 4.38, Table 4.40 and Table 4.41.

The value of effect sizes (Cohen's  $d$ ) was 0.7576 based on the following formula.

$$d = \frac{M_1 - M_2}{s}$$

( $M_1$  = mean of group 1,  $M_2$  = mean of group 2)

Here, “s” means pooled standard deviations for the two groups. The formula of  $s$  is:

$$s = \frac{\sqrt{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}}{n_1 + n_2 - 2}$$

According to Cohen's (1988) labels for small ( $d = 0.2$ ), medium ( $d = 0.5$ ) and large ( $d = 0.8$ ) mean differences, the value of effect sizes was medium for the posthoc pairwise comparisons. However, according to Plonsky and Oswald (2014), Cohen's above labels should not generally be applied to second language research. Furthermore, they recommended researchers in second language research to adopt the field-specific benchmarks of small ( $d = 0.4$ ), medium ( $d = 0.7$ ) and large ( $d = 1.0$ ) to interpret the practical significance of second language learning effects more precisely.

Therefore, based on the two benchmarks mentioned above, the value of effect sizes  $d$  (0.7576) belonged to the medium, along with the value of  $p$  (0.000) in the simple effect of Group in the post-test of the posthoc pairwise comparisons between Group, addressed that the English language proficiency of the postgraduates in EC was much better than that of those postgraduates in CC, in other words, the postgraduates in EC had been better improved after taught by the blended learning, verifying the results of Table 4.39.

#### 4.4 Interviews in Phase 3

To clearly illustrate Research Question 3 “What recommendations could potentially be made for future academic English courses for postgraduates taught in a blended mode?”, the interviews for the teachers and the postgraduates were implemented in Phase 3.

Moreover, thematic analysis (Braun and Clarke, 2006; Alhojailan, 2012; Guest, MacQueen and Namey, 2012; Byrne, 2021) was applied to the transcriptions of these interviews (Appendix 9 and Appendix 10 shown as examples for the teacher and the postgraduate respectively) and the data analysis and results were shown in this section.

#### 4.4.1 Interview for Teachers

Teacher A and Teacher B who taught the experimental classes were interviewed, respectively, and the analyses of their interviews were shown based on their answers to the following six questions.

**Table 4.46 Thematic analysis of the teachers' interview**

No.	Theme	Definition	Sources	References	Teachers
1	Positive/affirmative attitude.	They felt satisfied with/ approved of some questions related to the blended learning.	4	2 for question 1 and 2 for question 3	Teacher A Teacher B
2	Negative attitude.	They felt unsatisfied with some of the online platforms.	2	2 for question 2	Teacher A Teacher B
3	Difficulties and obstacles.	The problems which teachers had met or not been satisfied with as well as some aspects which needed to be overcome in the application of the blended learning.	11	5 for question 1, 3 for question 2, 3 for question 3.	Teacher A Teacher B
4	Suggestions.	Suggestions for teachers, students, pedagogies and things related to the application of the blended learning.	20	7 for question 4, 5 for question 5 and 8 for question 6.	Teacher A Teacher B

The thematic analysis of the interview transcriptions of Teacher A and Teacher B showed that there were mainly four themes which were the most important focuses of the two teachers based on the interview questions. They expressed their positive and negative attitudes toward the blended learning process, respectively. Even though they met some difficulties and obstacles (11 sources) during the empirical study, they still gave out suggestions for teachers, students, pedagogies and things related to the application of the blended learning (20 sources), indicating that they had confidence to make it better and more smoothed in the future.

***Question 1. Do you think you will be able to adapt quickly to the blended learning?  
What are the main obstacles that affect your adaptation to the blended learning?***

Both teachers kept a positive attitude and believed that they could adapt quickly to the blended learning based on their enough and careful preparation for the course, just as what Teacher A said: “I have prepared a lot for the blended learning”. However, they did “meet some difficulties and obstacles” during the process of applying and adapting to the blended learning. For instance, Teacher A “always met some problems related to the information technology” and thought was the first obstacle she met, suggesting “it is very important for the university to offer some typical directions and trainings as well as teaching development lessons for us teachers ahead of the application of the blended learning”. However, because Teacher B had applied the blended learning for two semesters, she didn’t think the information technology was one of the difficulties she had met.

Furthermore, both of them expressed the idea that they would have more initiatives to implement blended learning if the university could provide more financial and spiritual incentives to inspire them to do more teaching practices.

Moreover, both of them claimed that it was essential for teachers to find out “the appropriate strategies”, which would improve and “facilitate the teaching of academic English course”, so that the postgraduates could learn the course easily and confidently as well as improve their English language proficiency. Teacher A also mentioned that would perhaps be better if she knew and grasped those strategies at the beginning of the empirical research based on what she said: “I used a lot of time to practice it and managed to exercise it with my students, which wasted so much time and made me exhausted”. Teacher B also thought “the online interaction is one of the obstacles which hinders the communication between the teachers and the postgraduates”, because English language learning needed to be fulfilled by the interaction and communication of the teaching and the learning participants.

As illustrated by both teachers, that would be better if the university could offer some typical directions, supporting measures, pedagogical trainings as well as teaching development, which could strengthen the capability of teachers’ teaching.

***Question 2. Do you find the blended learning platform easy to use? What are the most frequent questions or feedback from students?***

Both teachers had used the blended learning platforms during the application of the blended learning. They did agree that some of these blended learning platforms were easy to use, such as Pigai Wang they use, however, both of them had an unsatisfying experience related to some platforms, because “some platforms could make me and my students angry, even mad”. For instance, concerning the most frequent questions or feedback from these postgraduate, the quality of the blended learning platform was the top one. As for Teacher A, she reflected that some platforms were not very good and brought the users unsatisfying experiences, so she hoped some practical problems, such as “the learning materials and operational procedures” could be developed to facilitate students to use it better.

Teacher B concluded “it is very important to choose some good platforms because they would affect the degree of satisfaction of the postgraduates”. She stated that the good online platforms could “have a positive support” for the postgraduates, while the unsatisfying online platforms could “discourage their study enthusiasm and learning autonomy”, which would lead a worse result at the application of the blended learning.

The teachers both mentioned the other frequent feedback was the complaint of the internet. “The unstable internet” would give the teachers and the postgraduates the poor experiences during the blended learning process. “The repeated log-in and log-out” wasted a lot of time and consumed their patience to finish the assignments or tests online. As Teacher A mentioned, she had “met the problem for several times that it broke down during the period my students did online tests. When they logged in again, what they had completed in the test had not been saved. Therefore, what they could do was to do it again, which wasted a lot of time and energy as well as their confidence in the test”.

***Question 3. What is your opinion about the degree of your overall satisfaction with the effectiveness of current students’ (a) blended learning, (b) learning efficiency, (c) classroom interaction, (d) assessment and proficiency? Did it achieve the results you expected?***

Both teachers indicated their affirmative attitude toward this question and considered that “the effectiveness of these postgraduates is well-satisfying to a great extent”. For instance, Teacher A thought that “I am satisfied with the current classroom interaction, because some of these students have previewed the materials online, they can interact with me and other students actively and confidently”. Moreover, Teacher B believed that “...the blended learning, as a whole, was well applied during the procedures of this empirical research”.

However, they indicated that there still existed some problems. For instance, both teachers considered “...they need to improve and increase the learning efficiency of the postgraduates as soon as possible because some of them have wasted a lot of time and energy to do some assignments online”. Teacher A considered the reason for this was “not because the online assignments are difficult to do, but because they always chat a lot with friends or play some games during the process of completing their assignments”. Teacher B thought one of the reasons why they wasted so much time was “some of the postgraduates play some online games and browse some webpages, which need teachers guide them in the correct direction”.

Concerning the assessment and proficiency, Teacher A believed that “it can be better improved if they continue to use the blended learning in the next semester because I think they need more time to adapt to the new teaching and learning mode”. Besides what was told by Teacher A, Teacher B also worried it was difficult to do “a perfect assessment” because they could hardly monitor all the behaviors of each postgraduate student during the process of online teaching. For instance, a few postgraduates “chatted with their friends on other websites, or wandering in their minds without thinking about the topics they discussed”. Therefore, she suggested that the teachers could “pay attention to the whole teaching and learning process of the blended learning, and manage to figure out some better ways to solve the difficulties in assessments”. Furthermore, in order to improve the English language proficiency of the postgraduates, the teachers could design some projects “related to the practical experiences of these students or the real projects about their majors”.

***Question 4. What other suggestions do you have for blended learning as it is currently being implemented?***

Both teachers gave out several suggestions related to the different perspectives of the blended learning, including the suggestions for the teachers and the postgraduates. Moreover, they offered some same suggestions, showing the commonality of these issues.

One of the suggestions provided by the two teachers was that “the postgraduates should “keep a positive attitude toward the blended learning, even though they might not be satisfied with the system of the online platform” as well as “the assignments which needed to be accomplished” online and offline. The other of the suggestions given by them was related to the self-developments for teachers, for example, “teachers need to have a good mastery of the approaches and the appropriate technology or skills to serve for the proper purposes and goals at the proper time”.

Furthermore, Teacher A considered that teachers could “provide timely support for the postgraduates, not only during the classroom interaction period, but also during the teaching process”. For example, she suggested “we need to design a variety of forms of interaction which can arouse the interests of the postgraduates to communicate, and design some useful strategies to provide the necessary guidance and facilitate their study autonomy”. Teacher B believed that to stimulate the English learning potential and motivation was one of the most important issues for teachers, especially in the blended learning. She thought “the blended learning can offer a broad horizon for the postgraduates”. Therefore, if the teachers could help them inspire their interests and motivation in the academic English learning, the postgraduates could try their best to learn the course.

***Question 5. What Teaching and Learning strategies do you prefer when you implement blended learning? For example, CLT/ MI? Cooperative learning?***

Based on the interviews of Teacher A and Teacher B, it showed that different teachers preferred to use different strategies, even when they taught the same course.

Teacher A preferred to use the communicative language teaching approach (Richards and Rodgers, 2001) and the cooperative learning (Johnson and Johnson, 1979; 1994, 2007) to “help the postgraduates to share their creative learning and talent showing both online and offline, providing more opportunities to encourage them to show their collaborative abilities and practice their communicative abilities”. The reasons were the blended learning

environment could support effective combination of different communicative ways and the collaborative interaction was an essential element of the blended learning. She also used the flipped classroom teaching (Lage, Platt and Treglia, 2000; Bishop and Verleger, 2013) and Production-oriented Approach (Wen, 2007, 2008, 2013, 2017) sometimes, based on the teaching materials she taught.

However, Teacher B preferred the flipped classroom teaching and the communicative language teaching approach. She always assigned “some preview work for the postgraduates”, by using these two approaches, she could “teach the new lessons based on my checking and assessing their preview situations”. Furthermore, she applied the Production-oriented Approach proficiently because she had “the particular training for the approach, which showed that the teaching strategy training for teachers was useful and helpful”. She also mentioned Multiple Intelligences (Gardner, 1983, 1993, 1999, 2011) could be used at the beginning of the semester, which could “help the teacher get familiar with the different talents of the postgraduates” and design some of the teaching activities which were easier for them to complete. Moreover, she thought Scaffolding learning instruction (Bruner, 1978; Gibbons, 2002) related to Sociocultural Theory was useful when helping postgraduates achieve the tasks of online writing by using Pigai Wang.

Furthermore, both of them believed that they used all of these strategies and teaching practices recommended by the researcher, along with other approaches, such as Task-based learning (Willis, 1996; Nunan, 2004; Ellis, 2009) and the Problem-based learning (De Graaf and Kolmos, 2003; Hmelo-Silver, 2004; Hung, Jonassen and Liu, 2008) and so on. The only reason for them to use these strategies was the pragmatism based on the teaching goal and content as well as the needs of postgraduates.

***Question 6. Which aspects of teaching will you reflect on after the implementation of blended learning? For example, the use of software/technology.***

Both teachers talked about the same aspects, for instance, “the information technology as well as the skills of internet operation is very important during the implementation process of blended learning”. Moreover, they both mentioned that it was necessary to “develop and design the academic English course content scientifically, so as to plan the

teaching objectives, progress and ideas of teaching and learning to ensure the smooth implementation of the blended learning”.

Furthermore, Teacher A considered the teacher could “make a well-done preparation of the course”, which was particularly essential, including “the teaching materials and planned teaching activities as well as the preview and review of the course by the postgraduates”. Also, teachers needed to “design a scientific system of the assessment of the course, which can reflect the whole study process of the postgraduates”. For instance, a scientific system of the assessment of the academic English course could contain many aspects, such as the presentation of the postgraduates, their performance in the online/offline classes, the involvement of the classroom activities, their interaction with the teacher and classmates, some results of the quizzes, and the summative evaluations and exams.

In addition, Teacher B held the idea that “the training and self-development of teachers may particularly be improved based on the blended learning”. For example, the university could “regularly hold annual teacher workshops and salons of blended learning”.

Even though there were only six questions in the interview, which couldn’t contain all the suggestions and implications of applying the blended learning, the interviews of both teachers gave much inspiration and enlightenment to the researcher, which were discussed in the next chapter in detail.

#### **4.4.2 Interview for Postgraduates**

Six students who were in the experimental classes were interviewed, respectively, and the analyses of their interviews were shown based on their answers to the following six questions.

**Table 4.47 Thematic analysis of the postgraduates' interview**

<b>No.</b>	<b>Theme</b>	<b>Definition</b>	<b>Sources</b>	<b>References</b>	<b>Students</b>
1	Positive/affirmative attitude.	They felt satisfied with/ approved of some questions or advantages related to the blended learning.	37	11 for question 1, 4 for question 2, 12 for question 3, 4 for question 4, and 6 for question 6	Student A Student B Student C Student D Student E Student F
2	Negative attitude.	They felt unsatisfied with some aspects related to the blended learning.	5	1 for question 1, 2 for question 2 and 2 for question 4	Student A Student B Student E Student F
3	Difficulties and obstacles.	The problems which the postgraduates had met or not been satisfied with as well as some aspects which needed to be overcome in the application of the blended learning.	14	14 for question 2	Student A Student B Student C Student D Student E Student F
4	Suggestions.	Suggestions for teachers, peers, pedagogies and things related to the application of the blended learning.	19	2 for question 4, 13 for question 5 and 4 for question 6	Student A Student B Student C Student D Student E Student F

The thematic analysis of the interview transcriptions of the six postgraduates showed that there were mainly four themes which were the most important focuses based on the interview questions. They expressed their positive and negative attitudes toward the blended learning process, respectively. Based on their feedback of their attitudes, it indicated that they were in favour of the blended learning because there were 32 sources of positive attitude and only 5 sources of negative attitude. Even though they met some difficulties and obstacles (14 sources) which were discussed in the following part, they still gave out suggestions for teachers, peers, pedagogies and things related to the application of the blended learning (19 sources), indicating that they managed to get used to the blended learning which had brought them good learning experiences.

***Question 1. Do you prefer the blended learning when you study your academic English course? If yes, why? If not, why?***

Five of these postgraduates preferred the blended learning when they studied their academic English course. They talked about the reasons why they held the positive attitude toward it, such as, “it is more interesting than the traditional classroom teaching, I do love to communicate with my teacher and classmates online because I feel relaxed by using this way”, they’d like to “do some assignments online which save a lot of papers”, and they believed that the blended learning could bring them “more learning materials related to our study interests besides the textbook”.

However, one of them gave the negative answer to this question. In her opinion, the blended learning brought “a lot of troubles” in her life. At the beginning of the semester, she thought “I could use the online learning platforms by my smartphone, however, one of the them should be used on the computer or the laptop. Even though I have a laptop, I still don’t think it is convenient for me to study”. She also mentioned that all of her classmates had smartphones, but not all of them had laptops or computers, so “it is difficult for those students who didn’t have laptops or computers to complete some assignments on these online learning platforms”. This also indicated that the teachers needed to consider the problems of accessibility when applying the blended learning.

***Question 2. Do you think you can adapt quickly to the blended learning? What are the main obstacles affecting your adaptation to blended learning?***

Four of these postgraduates thought they could adapt quickly to the blended learning and two of them did not think so. The main obstacles affecting their adaptation to blended learning, in their minds, could be divided into two parts. One was from the outside, such as “the internet”. Though four of them preferred the novel way of online learning, they sometimes considered it as “a burden to finish the assignments online because of the troubles the internet brought”. The other was from the inside. All of them mentioned that, sometimes, it was “difficult to concentrate on the whole process of online learning”. They got distracted easily by their dormitory environment, the pop-up webpages or other things,

so that they skipped the explanation of knowledge points in time or they used “more time to complete the learning tasks and assignments”.

Furthermore, they believed that would be better if they had grasped some English learning strategies to accelerate their English learning online and offline because they thought one of the reasons why they performed poorly was they did not grasp the right approaches to study in blended learning.

In addition, three of them thought another obstacle was that when they encountered problems during their online learning, they were not able to “ask questions face-to-face with the teacher or discuss with the classmates face-to-face”. Therefore, when they were in the classroom, they might “forget their problems” or didn’t “want to think about those questions”, which could hinder their understanding of the English knowledge. In the long run, they accumulated more and more problems and were less and less able to keep up with the teaching of the academic English course.

***Question 3. What’s your opinion about the teacher’s teaching strategies, activity design, interaction, and classroom organization and management? Why?***

These postgraduates all believed that their teachers had “done a pretty good job” or “tried her best” when designing the teaching strategies, classroom activities, interactions and classroom organization and management. They were satisfied with what the teacher taught and considered these strategies, “even though I did not know what the strategies were called”, were carefully designed and they could follow their teacher’s guidance to get accustomed to the blended learning as well as achieve their English learning online and offline.

Particularly, after studying the academic English course for one semester under the direction of the blended learning, these postgraduates thought their English language proficiency had been better, as one of them said: “my English language proficiency has improved significantly, which makes me feel that this novel teaching model is very effective for my postgraduate English learning and performance improvement”.

***Question 4. Do you feel that current academic English studies are meeting your learning needs? If not, how should it be improved?***

Four of them felt satisfied with what the academic English course provided and thought the current academic English studies were meeting their learning needs, which indicating that the blended learning was quietly fitted with their English learning needs in the postgraduate study.

Two of them thought the course could be improved based on their own needs. One said: “I’d prefer to learn more about the academic writing because we postgraduates are required to publish 1 Science Citation Index paper or 2 Engineering Index papers written in English to meet one of the graduation requirements”. The other complained: “I hope the teacher can introduce more cultural knowledge related to the western countries because I want to pursue my doctoral degree abroad and desire to know more about the daily life and customs of different countries. Even though my requirements are based on my own needs, I believe there are many postgraduates who think the same as me.”

***Question 5. If you were asked to give advice to teachers about blended learning of the academic English course as it was currently practiced, which areas would you focus on?***

These postgraduates gave advices from different aspects, including things related to the internet, the design of classroom activities, the teaching materials, the assignments and tasks of the course.

All the postgraduates mentioned that “the internet and the online learning platforms should be improved” because they thought “these hardware and software as well as the platforms were the basic facilities and tools” for them to use in the blended learning of the academic English course. For instance, one of them said: “I’d not like to do online assignments partly because of the slow speed of the internet on campus”. And if he used the internet traffic of his own smartphone, he felt that he was reluctant to do so because he hoped to “use the traffic to do other things”.

Moreover, one of them thought the teacher could “provide more classroom activities, especially online practice”, to help the postgraduates practice their oral English because she did “like to communicate with the teacher and classmates online”, which made her relaxed and improved her oral English better in the semester.

Two of them considered the teacher could “provide more online resources of teaching materials”, because these resources were not only cheaper and more convenient than the traditional textbooks with which were difficult and heavy to bring, but also broadened their horizon and enriched their knowledge.

Two of them mentioned they preferred to do some of the assignments and tasks online, such as “preview and the review of the content of the course”, but they didn’t like to do others, for instance, translations for a paragraph, reading aloud followed by the recordings. Especially for the task to read a paragraph aloud, one of the students thought: “it is not for the postgraduates, but for the students in junior middle schools because it is so simple and boring that I do not want to do it from my bottom of heart.”. Even though these assignments could improve their English language proficiency, they still did not want to do “the homework without nutrition”.

***Question 6. Do you think that the current assessment is in line with your level of achievement as well as your purpose of improving English language proficiency? Is there anything that needs to be improved?***

All the postgraduates expressed a positive attitude or said “yes” without hesitation. And four of them believed the current assessment was “scientific”, “qualified” and “fair” because their teacher judged and examined each aspect of their English learning, including speaking, listening, reading, writing and translation abilities.

However, these postgraduates held different opinions on the things that needs to be improved. Two of them believed that the teacher could “increase the weight coefficient of the online learning”, and one of them hoped the teacher could “make the online and offline parts equally when doing the assessment”.

Furthermore, one of them mentioned that it was of great importance and necessity that the teacher could tell them “the assessment criteria at the very beginning of the course”, so that they could do better, following the assessing directions and they could decide by themselves “what to do or not to do” if they didn’t have enough time to finish all the tasks.

## **4.5 Chapter Summary**

In this chapter, the researcher did the data analysis of the questionnaire, the pre-test and the post-test as well as the interviews by using the relevant instruments, which could offer the answers to the research questions and provide enough materials and findings for the discussions and the implications in the next chapter.

## Chapter 5 Discussion

The researcher led a team of faculty members and conducted a series of related researches among the postgraduates in a local technical university in northeast China to explore and inform good teaching practices by evaluating the impact of an intervention on the blended learning of the academic English course for postgraduates.

Based on the analysis presented in Chapter 4, including the questionnaire, the pre-test, the post-test and the interviews, combined with the content of the literature review, this chapter discusses the findings of the research as well as the answers and solutions to the research questions of the thesis.

### 5.1 Findings for Research Question 1

Research Question 1 aimed to explore the current study situation of postgraduate learners on the academic English course. The findings of Research Question 1 were a prerequisite for better implementation of the empirical research because the researcher should understand the current study situation of the postgraduate learners to inspire and motivate them to fully take part in the empirical study of the academic English course in blended learning.

Therefore, the aim was to answer Research Question 1 before the start of the actual empirical research through use of a questionnaire. The purpose of the questionnaire was to get a clear understanding of the research context and to obtain background information on the postgraduate participants in the academic English course. This included demographic information and online experience, their attitudes, influencing factors, and expectations towards the academic English course. The collected information was then used in the design of the teaching activities under practical considerations.

#### 5.1.1 Demographic Information

The findings regarding the demographic information of these participants (See *Section 4.2.1 Questionnaire Part I: Demographic Information* for details) revealed that recent graduates make up the majority of postgraduates in general universities. Inclusion of a small number of graduates of former years ensured the applicability of the empirical

research. The findings of this study corroborated those of previous researches into the distribution of recent and former graduates on postgraduate courses (Yin and Huang, 2015).

The researcher's university is a provincial local technical university and one of the general universities which make up the majority of Chinese universities. Postgraduates in this university are therefore representative of the majority of postgraduates in China, which is why their feedback and replies, too, are considered to be informative and representative in the context of this study.

In this research, the majority (93.33%) of the postgraduate participants were age 20 to 25, indicating that most of the participants were recent graduates who continued their academic education as postgraduate students soon after receiving their bachelor degree. Postgraduates aged between 26 and 30 (4.17%) and between 31 and above (2.5%), together made up 6.67% of the entire group of participants. Judging by the age of the 8 students belonging to the last two age groups, it is likely that after graduation from the BA they had work experience or at least out of university education for a longer period of time.

The results of universities or colleges where these postgraduates earned their bachelor degrees showed that most of the postgraduates (90%) graduated from general universities, which might go some way in explaining why the pre-test revealed a very similar level of academic English prior to the instruction and intervention of the empirical study.

Therefore, the findings from the demographic information of these postgraduates confirmed a sufficiently similar starting position for all participants which ensured, first, the suitability of the selected postgraduate cohort for this research and, second, the applicability of this empirical research for addressing the research questions. The similarity between the participants with regard to their academic level and age made it easier for the researcher to design the blended learning in experimental classes. For instance, these recently-graduated postgraduates demonstrated good familiarity with the learning style and campus life at university; thus they could easily adjust to postgraduate life. The overwhelming majority of the participants had substantial online experience of a general nature (e.g. surfing the internet for various purposes). In addition, having graduated from university during the COVID-19 period, it is reasonable to assume that they also had previous online educational experience. The two factors together suggested that they would accept and adjust to blended learning fairly easily. As for the students who had a longer gap between graduating from a BA programme and enrolling on a postgraduate course,

though they might have continued their studies at postgraduate level for different reasons—some of them might even have a lower level of English language proficiency—most of them had much clearer aims and goals in their postgraduate learning. Therefore, despite the possibility of facing difficulties in learning, one can assume the ability on their part to work hard and solve the difficulties independently or cooperatively. to work hard and solve the difficulties independently or cooperatively.

Moreover, although these postgraduates displayed some demographic differences regarding, for instance, gender and age, comparison showed no statistically significant differences between them. The shared features discussed above verified that the random selection of participants was reasonable, and that both the experimental classes and the control classes entered the empirical study from a very similar starting point.

### **5.1.2 Online Experience**

The findings regarding students' online experience (See *Section 4.2.2 Questionnaire Part II: Online Experiences* for details) indicated that the computer proficiency of the postgraduates should be considered when designing an empirical study on blended learning. This is consistent with existing research findings, namely that the success of blended learning is highly dependent on the online proficiency of students (such as typing speed, the ability of conducting key word searches in search engines, and proficiency in internet manipulation) as well as on specific internet and computer applications (Felder and Spurlin, 2005). My research also supports the findings of Chou and Liu (Chou and Liu, 2005), suggesting that students who have basic IT skills and computer self-efficacy achieve better learning effectiveness than their counterparts in traditional classrooms. This link was moreover verified in the interviews with the postgraduates (See *Section 4.4.2 Interview for Postgraduates* for details).

The results of the online experience survey demonstrate that the students did get accustomed to the internet, and that they had the internet skills as well as the necessary information literacy to facilitate their English learning. For example, all of them spent at least an hour a day online and over a half of them (55%) had more than 8 years of online experience. This ensured the preparedness of the postgraduates in the experimental classes,

giving the researcher confidence that they were able to engage in blended learning without difficulties in relation to computer proficiency.

Furthermore, the postgraduates' online experience, reflected in their computer and internet skills, was taken into consideration when assessing the reliability of the experiment. For highly developed computer competence and proficiency are a prerequisite for blended learning effectiveness as noted by Hadad (2007). The academic English course in blended learning required a high level of information literacy as well as a certain level of computer skills. For example, the postgraduates in the experimental classes needed to be able to preview some course content online, finish many assignments online, and communicate with the teacher and the classmates online. All of these required that the postgraduates had a certain level of information literacy and online proficiency. If they had not been familiar with the computer and relevant internet skills, the teachers would not have been able to carry out the blended learning smoothly.

### **5.1.3 Attitudes towards Academic English**

The findings of the attitudes towards the academic English course (See *Section 4.2.3 Questionnaire Part III: Attitudes towards the Academic English* for details) revealed that the postgraduates' attitudes toward the academic English course was one of the factors that influenced the success of blended learning in the academic English course. The factor "attitude" did not only give a fairly accurate prediction of a student's engagement and satisfaction with the course, but also influenced their learning achievements. For instance, the postgraduates' attitudes towards the course had an influence on their English learning engagement, and their attitudes toward the blended learning and the online platform could affect their satisfaction with the blended learning process of the academic English course, which eventually could influence their learning achievement and, conversely, the quality of blended learning itself.

The findings in this study are consistent with the findings of Hadad's study (Hadad, 2007), that the success of blended learning depended heavily on students' attitudes, confidence and ability to engage in blended learning; they are, moreover, consistent with those of Kintu, Zhu and Kagambe (Kintu, Zhu and Kagambe, 2017), namely that students' attitudes in blended learning could predict students' satisfaction with learning

achievements. My research also supports the findings of Thai, De Wever and Valcke (Thai, De Wever and Valcke, 2017), suggesting that BL could have a positive impact on the students' intrinsic motivation.

The results showed that 99.17% of postgraduates held a positive attitude towards the difficulties they faced in the academic English course. By actively seeking solutions to difficult problems rather than being bent on giving up, these postgraduates were likely to be motivated to solving their learning difficulties and problems under the leadership of the teachers. Conversely, if they left the difficulties unaddressed, teachers would encounter great difficulties during teaching the academic English course in blended learning. Furthermore, 73.33% of the postgraduates considered taking the academic English course exciting or at least interesting, and 74.17% of the postgraduates preferred the blended learning mode. Both results revealed positive attitudes among the participants which was promising for the development of this empirical study.

Moreover, the results of the postgraduates' attitudes toward the length of online-study time gave the researcher a useful tip to design her research. 71 of 120 postgraduates preferred to spend 5-10 minutes online/offline before/after a face-to-face class to engage with the content of the academic English course. This indicated that the time length should be considered in the practical design of preview or review tasks. These should not be too long so as to avoid making the students tired or bored.

#### **5.1.4 Factors Influencing the Academic English Course Learning and Language Proficiency**

Learning and its outcomes are determined by many different factors, as has been highlighted by different studies which focused on various elements in accordance with the practical needs and aims of a course. In this empirical study, the findings regarding the key factors influencing the learning and language proficiency of students on the academic English course (See *Section 4.2.4 Questionnaire Part IV: Attitudes towards the Academic English* for details) can be listed as follows:

Firstly, the main factor that influences the effectiveness of the academic English course from the perspective of the postgraduates are the course design and the teaching strategies. This finding corroborates the findings of previous studies about the impact of

course design and teaching strategies on the students' academic performance and learning outcomes (Antonis, et.al, 2010; Jalbani, 2014, Raba, 2017).

On the other hand, the finding also confirmed the necessity and validity of the empirical research, because the primary aim of the research was to explore effective teaching strategies by evaluating the impact of the intervention on blended learning of the academic English course. This finding shows that the majority of the postgraduates attributed their learning effectiveness to the course design and teaching strategies. The focus on the teachers' teaching suggested to the researcher that she should pay much more attention on this particular factor when designing the empirical study at a later stage.

Secondly, the main negative factor thought by the postgraduates to influence their academic English learning and language proficiency was a lack of skills and techniques required for language learning. This finding shows that students subjectively linked their weaknesses in certain areas of English language proficiency to deficits in their own language learning skills and strategies. This finding is consistent with the findings of a previous study in China, showing that there is a strong relationship between the use of learning strategies and English language proficiency (Zhang, 2001).

This finding also shows the necessity and importance of teachers' leading and guiding role in the blended learning process. The results demonstrate that more than a half of the postgraduates (57.5%) believed that it was their own lack of useful English language learning skills and techniques that caused their underperformance in the academic English course. These postgraduates had been studying English at least 16 years because they were in the first year of their postgraduate studies. However, they still considered the above to be the most negative factor which indicates that in addition to English language these postgraduates also needed to be taught study strategies under the guidance of teachers involved in the blended academic English course. Therefore, during the empirical study, in the experimental classes, the teachers used the novel and appropriate teaching strategies not only to teach English, but also to provide some typical and useful language learning skills and strategies.

Thirdly, the factors which motivated the postgraduates to learn English included intrinsic factors and extrinsic factors. This finding verified the findings of a previous study by Gao (Gao, 2013) who found that the factors that motivated students to learn English were comparatively complex, depending on their own needs.

In this research, the results show that intrinsic factors, such as interest in knowledge itself (52.5%), was one of the major reasons for the postgraduates to learn English, indicating a good foundation of the empirical research due to the positive influence on motivation that an intrinsic desire to learn on the academic English course has. On the other hand, the results also reveal extrinsic factors, particularly employment and education pressures (42.5%) which both were other important reasons for them to learn the course. The findings related to extrinsic factors reminded the researcher to add some extra teaching materials related to employment or doctoral studies; for example, in writing classes, the teachers could assign homework related to the world of work, such as the writing of curriculum vitae, or give some guidance for the publication of academic papers.

Furthermore, based on the results of the questionnaire, some other specific factors influencing the academic English course learning and language proficiency could be identified. For instance, the research found that communication counts among the factors that influence the English language proficiency. This, too, is consistent with the studies of several researchers (Hymes, 1971; Widdowson, 1978; Savignon, 1987). The results show that 92 postgraduates considered classroom participation important, and 110 of them preferred to use communication tools to communicate with teachers and peers after class. This finding also implied two insights for the researcher. One was that the researcher should pay attention to the cultivation of the communicative competence of the postgraduates during the teaching process in blended learning. The other was that the researcher needed to design some activities and use teaching strategies related to Communicative Language Teaching to inspire communication among these postgraduates in and after class.

#### **5.1.5 Requirements for the Academic English Course**

The finding of the requirement for interaction in the academic English course showed that the majority of the postgraduates (89 postgraduates, 74,17%) preferred synchronous interaction directed or guided by a teacher. This finding corroborates the findings of a previous study on Chinese postgraduates (Wang and Cai, 2023) which indicated that postgraduates would rather participate in the online or offline synchronous activities with the help and guidance of teachers. Therefore, this finding proposed a requirement for the

researcher, namely that she should design some teaching activities that involved the postgraduates as a group to stimulate synchronous interaction, along with the directions of teachers.

The findings of the requirement for the online platform in the learning of the academic English course show that online learning platforms provided by teachers were the most accepted online platforms from the perspective of the postgraduates, which is consistent with the findings of a previous study by Cui and Wang (Cui and Wang, 2014). This finding was helpful for establishing a good foundation between teachers and postgraduates in this empirical research because the latter preferred to use the platforms that were recommended by the former, which indicated that the latter would accept the learning skills and strategies recommended by the former as well.

The findings of the requirement for learning materials indicated that besides textbooks and reference books, English learning materials to broaden horizons (55.83%) and supporting materials of the academic English course (35%), were considered as the ideal learning materials for most of them to use in the academic English course. This finding corroborated the findings of a previous study by Wang and Wei (Wang and Wei, 2020), showing that postgraduates generally have the need to enrich their knowledge and to learn more, and that they had clear aims when learning English. Therefore, in the empirical research, the researcher needed to prepare the extracurricular learning materials meeting the needs of the postgraduates, which could in turn be helpful for their English language learning and proficiency.

The findings of the requirement for content presentation methods show that the postgraduates preferred many different methods of presenting the learning materials, which was consistent with the findings of a previous study by Wang and Wei (Wang and Wei, 2020). The results of content presentation methods indicated that the postgraduates would prefer PowerPoint (40%), followed by games, presentations or short plays (29.17%), and short videos or audios (22.5%). The findings also provided the researcher a useful suggestion that she could choose these options to design the content presentation in the empirical research.

All in all, the findings related to Research Question 1, along with the insights gained from the critical literature review, not only provide a comprehensive picture of the current study situation of the postgraduates on the academic English course. They moreover inspire

the researcher to devise some useful pedagogies, but also provided some good suggestions for her to design, refine and implement the empirical study.

## **5.2 Findings related to Research Question 2**

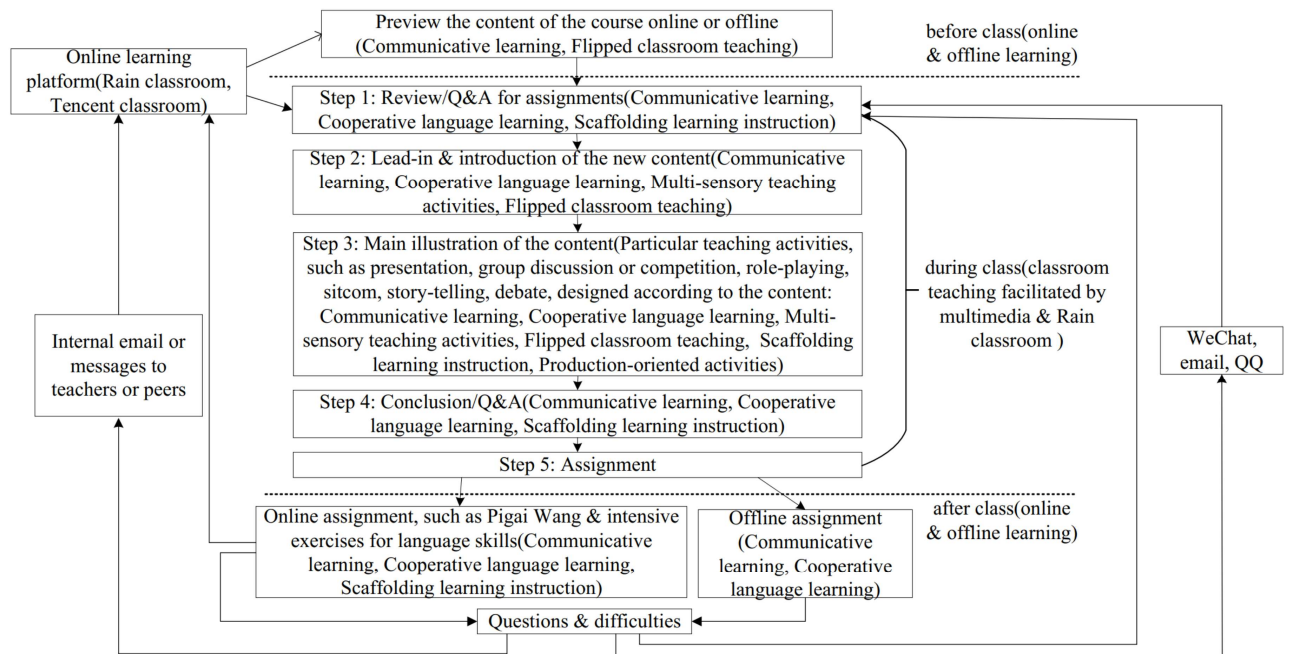
Research Question 2 aimed to identify teaching practices that could be applied by teachers to improve the English language proficiency and attainment of the postgraduates in the blended academic English course. In order to answer Research Question 2, the researcher used the critical literature review to get a better understanding of blended learning and some theories and approaches to teaching and learning. The critical understanding of the academic literature was meant to inspire and guide her in the design of relevant teaching practices.

Based on teaching practices provided in the critical literature review and the findings for Research Question 1, the researcher drew up an initial draft of a blended learning flow chart for experimental classes, aiming to improve English language proficiency and achievements for postgraduates in academic English courses taught in a blended mode. Furthermore, based on the discussions and suggestions with Teacher A and Teacher B, who would teach the postgraduates in the experimental classes, the researcher refined the blended learning flow chart for experimental classes, and both Teacher A and Teacher B agreed to use it in this empirical research.

Therefore, during the teaching time between the pre-test and the post-test, teachers in the experimental classes implemented these teaching practices in blended learning of the academic English course for postgraduates, while teachers in the control classes held the traditional classroom teaching as usual. The results of the pre-test and post-test of the experimental classes and the control classes showed that the achievements of the experimental classes were better than those of the control classes. Therefore, the teaching practices applied in the experimental classes have been demonstrated to be effective in improving the English language proficiency and achievements for postgraduates in the blended learning version of the academic English course.

The final version of the blended learning flow chart for experimental classes was shown in Figure 5.1 (hereafter referred to as FC). It included the process of the classroom teaching and the particular teaching practices, along with online learning, to show how

blended learning in the academic English course was operated and facilitated by these teaching practices effectively.



**Figure 5.1 A blended learning flow chart for experimental classes (FC)**

According to Figure 5.1, it could be seen that the teaching process of blended learning was complex, and so were these teaching practices. In order to illustrate the findings of these teaching practices clearly, in this section, the researcher followed the sequence of subsections of *Section 2.3 Theories and Approaches of Teaching and Learning*. Not only makes this the structure of this section clearer, it also links these teaching practices more closely to the previous literature review. Moreover, in each subsection, the researcher interpreted teaching practices with examples taken from the empirical research, based on the different steps of FC in the teaching process.

### 5.2.1 Teaching Practices Directed by Communicative Language Teaching

The finding concerning teaching practices directed by Communicative Language Teaching indicates that Communicative learning (Richards and Rodgers, 2001) is one of

the most often used teaching practices in empirical research. This finding corroborates the findings of a previous study in English teaching strategies (Li, 2021), suggesting that the communicative learning method is one of the most commonly used methods in English teaching.

The reasons why communicative learning is often used mainly focused on two aspects. On the one hand, one of the aims of English language learning in the academic course was to improve the listening and speaking capacity of postgraduates. The more they communicated and practiced with others in English, the better their English listening and speaking skills would be. Consequently, the researcher designed FC with communicative learning at almost every teaching step. On the other hand, based on the questionnaire and the findings for Research Question 1, communication was one of the key factors which influenced the English language proficiency of postgraduates. This suggested to the researcher the need to design some activities and use teaching strategies related to Communicative Language Teaching, thus encouraging the communication between these postgraduates for a real purpose in and after class.

For example, Step 1 of FC mainly had two functions in the teaching process. One was to review the main points and difficulties in order to draw a close connection with the content of the previous class as well as to prepare the new learning unit. The other was to answer the questions around the assignments.

In Step 1, communicative learning was a good way to review the academic English course. Teachers could prepare a lot of questions related to the content covered in last period, such as “What’s the main idea of the text?” “How did the author describe the car he drove?” “Do you understand the connoted meaning of ‘risk assessment’ based on the illustration by David Hanks?” and so on. Then, postgraduates could answer these questions one by one in English. By doing so, not only did the postgraduates review the main language points and difficulties in last period, they also practiced their English listening and speaking skills. After the review part, teachers could ask the postgraduates some questions, such as, “Could you please recite the poem we have learnt during the last period?” to help them imitate the pronunciation and tone in English poems, “Do you have any difficulty in doing the assignment?” “What is your main difficulty in the online assignment?” to help them solve these difficulties. Also, teachers could directly point out

the main points in the assignments, especially when they found some items were answered wrongly by many postgraduates.

Step 4 of FC was a concluding part, similar in function to Step 1. In Step 4, teachers could review what they had taught in this class or teachers could help the postgraduates to think over the issues in cases where they did not fully grasp the ideas of the teachers. Therefore, in Step 4, teachers could still use communicative learning as one among several useful teaching practices. For example, in Unit 1 *Traits of the Key Players* in *English Integrated Course for Postgraduates*, the teacher could ask the postgraduates to make an oral presentation or engage in a dialogue to debate the merits and demerits of key players' job hopping. By doing so, the postgraduates could not only use the new words and expressions they learnt in this unit, but they could also conclude the main traits of the key players and tell the advantages and disadvantages of key players' job hopping with their own understanding of the text.

Moreover, especially when teachers used *English Listening and Speaking for Postgraduates* in listening and speaking classes, communicative learning could be used more frequently than other teaching practices. Firstly, the teacher could create some communicative activities based on the actual communicative situations given in the book, such as the "Questions and Answer session" at the international conferences. Then, the postgraduates could use the English words they had learnt to imitate and master communicative sentence patterns and express them appropriately, so that they could experience the joy of using English to communicate and to improve their communicative competence.

Besides the synchronous communicative learning between teachers and postgraduates in traditional classroom teaching mentioned above, there still was asynchronous communicative learning online. By using Rain classroom, teachers could assign intensive listening and speaking exercises. Postgraduates could complete the tasks online and leave a message for teachers through the internal email, WeChat or QQ in case they had some difficulties to complete those exercises. Before the next class, teachers could log into Rain classroom to check the answers of postgraduates and reply to the emails or messages in WeChat and QQ. Using these asynchronous communicative learning online tasks, postgraduates were enabled to engage in real asynchronous communication with teachers, thus ensuring continuous learning both online and offline.

Furthermore, because the assignment of listening and speaking online could ease the nervousness of postgraduates, some of them preferred to use this way to practice their listening and speaking ability based on the findings of Research Question 1. Therefore, in the empirical research, teachers in experimental classes designed many asynchronous communicative exercises online for postgraduates to do in order to satisfy their needs and requirements.

### **5.2.2 Teaching Practices Directed by Cooperative Learning**

The findings relating to teaching practices directed by Cooperative Learning indicated that cooperative language learning (Johnson and Johnson, 1979, 1994, 2007; Deng and Che, 2010) could lead the postgraduates to cooperate online and offline with each other to learn and to improve their English language proficiency in blended learning. This finding was consistent with the findings of Xiao and Shi (2013) that cooperative language learning was beneficial in the teaching activities online and offline in public courses of blended learning.

Based on the literature review of Cooperative Learning, the researcher reminded the teachers in the experimental classes to pay attention to the following aspects of the grouping rule in cooperative activities in order to achieve multilateral interaction in teaching and thus improve teaching efficiency. On the one hand, groups of cooperative language learning should consist of two to six students, and in their composition display reasonable differences in gender, aptitude, personality traits, academic achievement, and family social background, highlighting their heterogeneity. Based on these heterogeneous groups, postgraduates could release their potential and current abilities to cooperate with each other, making up for inefficient communication or behaviour in the online and offline learning process, which could finally promote their English language proficiency and confidence. On the other hand, the overall level of each group was basically the same, each group being a miniature or cross-section of the whole class. Seen as a whole, the groups in the class should be homogeneous. Heterogeneity within groups could lay the foundation for mutual cooperation in blended learning of the academic English course, while homogeneity between groups could create the conditions to ensure fair competition among all groups in the class.

For instance, Step 3 of FC was the main illustration part in the classroom teaching. Teachers needed to design many teaching activities according to the content of textbooks. Among all these teaching activities, group discussion and debate, which were mainly directed by cooperative language learning, were often employed by teachers.

Take Unit 2 *Art of the Table* in *English Integrated Course for Postgraduates* as an example. Its reading focus is *Culinary delights in China*, introducing many regional Chinese cuisines. The author wrote several long paragraphs a lot of jargon associated with cooking in the article to explain the complex process and unique ways to cook these dishes. Although the dishes were not strange to the postgraduates, the cooking procedures and ingredients were unfamiliar to most of them, hence they were difficult for them to understand. Therefore, in order to help postgraduates understand this part in the text, ease the nervousness of the postgraduates and create a harmonious learning atmosphere, teachers could divide the postgraduates into several small heterogenous groups with topics around different regional cuisines and let them explain the way to cook the particular dishes in classroom teaching.

Within the group, the postgraduates could prepare for the topic in a relaxed way as well as communicate and cooperate with their partners. Besides the textbook, they could search online for ways to facilitate illustration of the topic, using iPads and smartphones. Then one member of the group could be the representative to share in their own words their understanding of how to cook a dish cooking, along with showing the pictures or videos of the dish online. With the effort of all group members, they could achieve a better understanding of this text as well as improve their English language proficiency during the process of cooperative activities.

Also, teachers could use large group competitions as an alternative teaching practice within cooperative language learning. For example, the teacher could divide the postgraduates into two large groups to compete against one another. One was to design questions and the other was to answer them. Based on their understanding of the text, the postgraduates could ask some interesting and stimulating questions which would require the peers in the other group to think quite a lot. With a sense of group honour, the postgraduates took the initiative to cooperate with each other, stimulated their interest to understand the text in depth, and improved their reading comprehension of English.

In addition, teachers could also assign a five-minute debate for postgraduates to accomplish the teaching practice of cooperative language learning in Step 4 and Step 5 (assignment) of FC. For example, teachers could give postgraduate the following topics: “Which one is healthier, cuisines in the north or in the south of China?” “Which western-style fast food do you prefer, fish and chips or fried chicken?” Such debates could arouse the interests of postgraduates to discuss and communicate with others online and offline. The choice of topic is not important, what is important though is that the students think about the topic and explain their ideas reasonably in English with the collaborative power with their peers.

### **5.2.3 Teaching Practices Directed by Multiple Intelligences**

The findings from the teaching practices directed by Multiple Intelligences indicated that multi-sensory teaching activities (Armstrong, 2000, 2009; Gardner, 1983, 1999, 2006, 2011) were beneficial to stimulate the interest of postgraduates to learn English and improve their language proficiency. This finding supported the findings of a previous study in English teaching (Huang, 2003), suggesting that teachers could set up multi-sensory teaching activities according to students’ individual differences, and use such teaching content as to arouse their interests and improve their English language proficiency.

Based on the literature review of Multiple Intelligences and the findings of Research Question 1, the researcher encouraged the teachers in the experimental classes to consider the differences between the postgraduates in the teaching design. For the teaching activities not only had to satisfy the needs of the postgraduates and support their learning, but also to facilitate the teaching on the course. The following teaching practices were often used in this empirical research.

Multi-sensory teaching activities related to linguistic and musical intelligence, such as listening to audio recordings and singing English songs, and combining speaking and role-playing activities, were able to arouse the interests of the postgraduates and thus facilitate the English learning. For instance, in Step 3 of FC, in order to enlarge the vocabulary of the postgraduates, teachers replaced the lyrics of some popular songs with some difficult new words and expression in the unit. Their interests and related intelligences stimulated, these postgraduates would easily remember the new words and

expressions. Furthermore, teachers could use dubbing games or role-playing activities to help postgraduates correct their pronunciations and recite some important sentence patterns easily.

Graphic and semantic organizers as multi-sensory teaching activities directed by Multiple Intelligences could be used to improve their reading comprehension ability. For example, in Unit 3 *The Gloriousness of English* in *English Integrated Course for Postgraduates*, in order to make the postgraduates understand the development of English language, the teacher used a tree diagram to show the complex history and other branches of the English language. Presented in this way, the information was much easier for the postgraduates to understand and remember. The other case in point was in Step 3 of FC. The teachers illustrated complicated structures of the texts or passages by using mind maps (Buzan, T., and Buzan, B., 2002; Buzan, T., and Buzan, B., 2006) or graphic pictures, helping postgraduates improve their comprehensive understanding while doing the reading comprehension questions.

Furthermore, considering the different intelligences and preferences of postgraduates, teachers provided self-directed English learning resources online based on the postgraduates' individual practical needs in English learning. For example, there were a variety of different online learning question types (such as Multiple choices, Filling the blanks, short answer questions) that could be selected based on postgraduates' learning habits, allowing them to learn independently at their own pace.

Moreover, besides the compulsory online learning content, teachers also prepared additional exercises for those who had the capacity to learn at a faster pace or preferred to improve their English language proficiency in specific areas. For example, postgraduates who were weak in speaking could complete more online speaking exercises; those who were good at writing could do more writing assignments, and those who were slow learners could note their learning priorities online so that they could continue learning next time.

In addition, according to the findings from Research Question 1, most of the postgraduates preferred to spend 5-10 minutes online/offline before/after classroom teaching in learning the content of the academic English course. So, teachers designed the above exercises, the preview and review tasks in practical need around 8 minutes online, which was short enough to keep the postgraduates from getting tired or bored.

#### 5.2.4 Teaching Practices Directed by Flipped Classroom

The findings from teaching practices directed by Flipped Classroom indicated that flipped classroom teaching (Lage, Platt and Treglia, 2000; Bishop and Verleger, 2013) had a positive impact on improving postgraduates' English language proficiency in blended learning. This finding was consistent with the findings of many previous researches, such as Sun's empirical study (Sun, 2016), which showed that the English proficiency of the experimental class, who were taught using the flipped classroom method, was significantly higher than that of the control class. Missildine, et. al.'s research (Missildine, et. al., 2013), indicates that flipped classroom teaching could improve the performance of students.

Flipped classroom teaching was a particular element in the application of blended learning (Missildine, et. al., 2013). In this empirical research, flipped classroom teaching was mainly used in preview before class and Step 2 of FC as a critical teaching practice to do the lead-in and introduction of the new content.

For instance, in Unit 4 *Love and Marriage* in *English Integrated Course for Postgraduates*, before the classroom teaching, teachers prepared a 5-minute video on the online learning platform to show the unique characteristics of romantic love and long-term love, respectively, with new words and phrases in this unit. At the end of the video, there was a discussion topic "What characteristics are common to both—romantic love and long-term love?" By using the online video clip, teachers were able to accomplish two teaching aims: One was to help postgraduates to grasp the new words and expressions which were useful in understanding the text of the video illustration. The other was to cultivate their speaking capacity and creative thinking skills by utilising the discussion topic.

In Step 2 of FC in the classroom teaching, teachers were able to ask some of the postgraduates to answer the question given at the end of the video clip and accomplish the flipped classroom teaching. Based on the answers of postgraduates, teachers guided the postgraduates to think further, with questions such as "With the diversity of marriage in the world, how to use cross-cultural and multicultural comparisons to consider many critical issues that confront the family of the twenty-first century?" By doing these, teachers were able to help postgraduates express their perspectives in English and have a deeper understanding of the content of the textbook, which would be beneficial for improving their English language proficiency and performance in the long run.

Furthermore, teachers used flipped classroom teaching as a facilitating tool in Step 3 of FC to save explanation time while teaching face-to-face in the classroom. For instance, in Step 3, it always took teachers a long time to concentrate on the important and difficult points of the textbook, such as the explanation of the subjunctive mood, the writing and translation skills and so on. By using the flipped classroom technique, teachers were able to free up a significant amount of classroom teaching time.

Before the classroom teaching, teachers could prepare the important content into a 10- to 15-minute online micro-video. Into this micro-video, teachers could integrate many practices, such as well-designed questions, carefully prepared PowerPoints, stimulating animations or cartoons, interesting storytelling and so on, so as to stimulate postgraduates' interest in learning English and expound the important content in detail. Then, these postgraduates could concentrate on watching the micro-video online in advance and completing online exercises to check their initial learning, and at the same time, they could decide whether to play back, pause or repeat according to their absorption of new knowledge. Finally, in classroom teaching, teachers could illustrate the important content briefly and answer the questions of postgraduates to realise the full process of flipped classroom teaching, which not only saves classroom teaching time, but also accomplishes the process of knowledge transmission and improves the English language proficiency of these postgraduates.

### **5.2.5 Teaching Practices Directed by Sociocultural Theory**

The findings from the teaching practices directed by Sociocultural Theory indicated that scaffolding learning instruction (Bruner, 1978; Gibbons, 2002) related to Zone of Proximal Development (ZPD, one of the key concepts of Sociocultural Theory) can support students in tackling difficult learning tasks. This finding confirmed the findings of a previous study of ZPD in English teaching (Wu and Gao, 2008), suggesting that scaffolding learning instruction has benefits in English language teaching.

For example, in Step 3 of FC, when illustrating the main content in classroom teaching, the teacher could design many interesting but useful questions to guide the postgraduates to dig into the texts to find out the connotative meaning of the writer, facilitating and

scaffolding the postgraduates to understand the texts and passages as well as conquer the cultural differences between Chinese and English.

To give another example, English writing was considered one of the most difficult skills for postgraduates to master based on the findings relating to Research Question 1. In Step 5 of FC, teachers assigned writing assignments using Pigai Wang. Teachers needed to think carefully about the topics of the assignments. The topic would ideally not be one that is unfamiliar to the postgraduates, but it could be slightly above the level of their daily writing, and be of some depth and difficulty. With the scaffolding learning instruction, based on the scoring of the online platform, teachers were able to refine the writing assignments of postgraduates by illustrating their mistakes and errors as well as some useful proper terms, expressions and sentence patterns to cultivate their English writing ability and improve their English language proficiency.

Furthermore, in many steps of FC, scaffolding learning instruction was used solely or together with other different teaching practices based on the teaching content. For example, in Step 1 and Step 4, it was used with communicative learning or cooperative language learning to help postgraduates to grasp the difficulties they met.

Take the review of new words and expressions in Unit 5 *Living a Healthier Life* in *English Integrated Course for Postgraduates* as an example. Teachers showed different groups of new words with similar forms on PowerPoint and guide postgraduates to differentiate them, such as “*content, contend, context, contest*”, “*mortal, mental, metal, medal*” or “*require, inquire, enquire, acquire*” and so on. Because it was difficult for postgraduates to remember all the words with similar forms clearly in a minute, teachers needed to scaffold them by some teaching practices.

There were some alternative ways to do that. For example, teachers also used scaffold learning instruction solely, giving some examples in the text or making some interesting sentences to help them to remember and differentiate them, such as *Tom contended for the contest, so he tried his best to memorize the content by associating everything in the context.* Also, teachers used scaffold learning instruction and communicative learning together, asking some of the postgraduates to read, translate and explain these words, and giving some hints and help when they needed to be scaffolded. Or teachers used scaffold learning instruction together with communicative learning and cooperative language learning,

handing out leaflets of new words to different groups and guiding them to do a story-telling activity cooperatively, using all these words.

In addition, from the perspective of ZPD, teachers who used scaffolding learning instruction acted in a mediating role. They needed to scaffold postgraduates not only in regard to the English teaching and learning, but also in relation to emotional communication and satisfaction (Gibbons, 2002; Shao and Feng, 2011). Therefore, in this empirical research, teachers not only provided timely and strong support in English language learning, online and offline; they also offered encouraging words and expressions to support the postgraduates' emotional needs as well as to develop their confidence in order to inspire them to continue their English language learning.

#### **5.2.6 Teaching Practices Directed by Production-oriented Approach**

The findings from teaching practices directed by a Production-oriented Approach indicated that production-oriented activities (Wen, 2007, 2008, 2013, 2014, 2015, 2016, 2017) could have a positive impact on developing postgraduates' comprehensive English language skills and proficiency. This finding was consistent with the findings of previous empirical studies guided by the Production-oriented Approach, such as Zhang's (2016) research confirming the positive effects of production-oriented activities on English teaching by receiving more satisfactory pedagogical feedback in the research; another study conducted by Zhang (2017), based on a two-week experimental study of college students' writing skills, showed that the experimental group taught by production-oriented activities outscored the control group in the language achievement test.

Production-oriented activities, such as story-telling, presentation, role-play, sitcom performance and English fun contests, focused on the output of English language learning of postgraduates and could be used in many steps of FC. In this empirical research, they were mainly applied in Step 3 in the classroom teaching, depending on the teaching materials and content. At the same time, teachers often integrated and coordinated the production-oriented activities with other teaching practices in order to achieve the better effectiveness of all these teaching practices.

Take Unit 3 *Academic Communication—Enlightenment of Mind in English Listening and Speaking for Postgraduates* for example. In this unit, one of the study focuses is to

learn how to behave in an international academic conference, including language expressions, gestures, clothing and etiquette. It would be boring for most postgraduates if teachers only let them listen to the records or watch some videos to learn these with teachers' illustrations in class. So, teachers would adopt some production-oriented activities, along with other teaching practices, such as flipped classroom teaching, scaffolding learning instruction and cooperative language learning, to guide the postgraduates to learn these.

Before class, there was a video task online, which was a form of flipped classroom teaching, for postgraduates to do. Teachers asked postgraduates to watch the video "*How to organise language and express opinions in an international academic conference in English*" as a preview task. In this video, teachers would introduce the speaking skills and difficult sentence patterns of the main content in the unit, which laid a good foundation for postgraduates to continue their English learning in classroom teaching.

In classroom teaching, after the realization of flipped classroom teaching in Step 2, postgraduates were ready for production-oriented activities in Step 3. Therefore, in Step 3, teachers could smoothly apply production-oriented activities based on the teaching materials in the book, just as the production-oriented activity—role-playing activity—in this unit.

Before the practice of a role-playing activity, the teacher illustrated her design of the activity and the requirements for postgraduates. During the activity, the teacher would mediate or guide postgraduates only when they deviated from the original design. At the same time, the teacher would apply scaffolding learning instruction timely to help them to complete the activity.

According to the design of the teacher, postgraduates imitated roles in an international academic conference. Based on the verbal and non-verbal information provided in the teaching materials online and offline, they paid particular attention to imitating their English sentences and appropriate gestures, and using different words, expressions and intonations according to the roles they played cooperatively and creatively, so as to improve their listening and speaking capacities. Furthermore, postgraduates could also pay attention to their clothing and etiquette as they played, which was a better way for them to actively accept and learn these vividly from the role-playing activity.

At the end of the activity, the teacher would comment on the output and performance of the postgraduates' comprehensive English language skills in order to improve their

English language proficiency. Thus, the whole process of a production-oriented activity was completed.

In addition, based on the teaching practices of production-oriented activities, the researcher considered that teachers needed to pay attention to their roles as mediators when applying production-oriented activities in blended learning in the academic English course, which is consistent with the findings of Cao's (2017) research in discussing the mediating role of teachers in the Production-oriented Approach. Therefore, in the teaching practices of production-oriented activities, teachers were not only facilitators, consultants, and helpers providing "horizontal scaffolding" to support and assist postgraduates, but also designers, organisers, leaders, and directors of the classroom offering "vertical scaffolding" to design the production-oriented activities to improve postgraduates' English language proficiency.

### **5.3 Findings for Research Question 3**

Research Question 3 aimed to offer some useful suggestions and recommendations for future blended learning in an academic English course for postgraduates. In order to answer Research Question 3, the researcher conducted interviews with two teachers and six postgraduates in the experimental classes after the empirical research.

Based on the thematic analysis of the interviews, all of them gave useful suggestions for future study and practices. All interviewees in this empirical research had a positive attitude towards the application of blended learning in the academic English course. However, besides this positive feedback, both teachers and postgraduate also mentioned that they met some difficulties or felt dissatisfied with some issues related to the application of blended learning in the academic English course for postgraduates.

Based on the conversations with teachers and postgraduates in the interview, the researcher found that, from the interviewees' perspectives (two teachers and six postgraduates in the experimental classes), if these difficulties and dissatisfaction could be resolved, it would make the application of blended learning in the academic English course for postgraduates smoother and more helpful to improve postgraduates' English language proficiency. Therefore, these difficulties or dissatisfaction could be another way to propose suggestions and for the empirical research.

Furthermore, besides the above, the researcher also formulated some tips as supplementary recommendations for the future application of blended learning in the academic English course for postgraduates from the findings of Research Question 1 and Research Question 2 based on the empirical research.

In addition, according to the data analysis and results of the transcriptions of the interview, the researcher could divide these suggestions and recommendations roughly into three categories: the university, teachers and postgraduates. Therefore, in order to illustrate the findings related to Research Question 3 clearly, the researcher structured this section by using these three categories.

### **5.3.1 Recommendations for the University**

In the interviews, both teachers and postgraduates thought the university was a key element in developing the application of blended learning. Therefore, they put forward suggestions which, from their perspectives, could offer useful advice to the university and facilitate the future enhancement of academic English teaching and learning through blended learning. The findings from these suggestions and recommendations for the university mainly focus on the following three aspects.

Firstly, the university needs to offer better internet construction for the teachers and the postgraduates, especially a stable internet connection, fast internet speed and good multimedia devices. This finding from the interviews is consistent with the findings of some studies of blended learning, such as the suggestions made by Graham, Woodfield and Harrison (2013) and Ma, Ge and Hu (2021), all of whom indicate that better internet construction is one of the prerequisites of the successful application of blended learning. The available IT hardware impacts upon the quality of teaching and learning, its effectiveness, and both student and teacher satisfaction in blended learning.

Based on the interviews and the questionnaire that were carried out in this empirical research, it can be demonstrated that both the teachers and most of the postgraduates pay attention to the online infrastructure. They also mentioned that a weak internet infrastructure was one of the main difficulties they encountered. For example, one of the postgraduates interviewed complained that “In my opinion, the main obstacles affecting my adaptation to blended learning is the internet, because it always breaks down during

the time we use it and this makes me crazy, especially when I find what I have done suddenly vanishes in the webpage”. This echoes what was said by a teacher: “The internet is which should have a better infrastructure. We have met the problem for several times that it broke down during the period my students did online tests. When they logged in again, what they had completed in the test had not been saved. Therefore, what they could do was to do it again, which wasted a lot of time and energy as well as their confidence in the test.”

Such unsatisfactory experiences and feelings towards the internet would surely influence the satisfaction, efficiency, evaluation and teaching quality of the academic English course taught by blended learning. Therefore, in order to satisfy the needs of both teachers and the postgraduates, the university needs to achieve more developed and reliable IT systems.

Secondly, the university needs to develop an incentivization policy to protect and incentivize teachers to implement blended learning. Incentivization could be achieved through immaterial or financial resources. This recommendation from teachers and students also supports the findings of Cui and Wang (2014), suggesting that the incentives offered by a university affect teachers’ initiative and thus play a crucial role in the implementation of blended learning.

The interviews with teachers of the experimental classes revealed that the teachers believed that their workload had increased rather than decreased as a result of implementing blended learning in their courses as part of this empirical research. These teachers had to learn or relearn how to use new technology platforms; furthermore, they had to adjust their teaching style, reorganise the course content, create a large number of video resources, and participate in online discussions.

So, from their perspectives, if the university wanted to wholly implement blended learning in the academic English course at postgraduate level, then policy support from the university would have to offer teachers more incentives to promote this practice and encourage them to increase their initiatives and commitment to course design and implementation.

For example, university leaders could design and develop a promotion plan for teachers who successfully completed the transition of their courses to blended learning. Or, the university could offer extra financial allowances to reward teachers for outstanding

dedication and effort in the application of blended learning. Or, the university could offer teachers more freedom to design and implement blended learning, for instance by allowing them to change class times with the aim to adapt to new online and offline delivery patterns designed to accomplish teaching effectiveness optimisation.

Thirdly, the university needs to organise or provide regular staff development opportunities for teachers around blended learning. The finding of this recommendation corroborates findings of previous research into the application of blended learning, such as the suggestions made by Graham, Woodfield and Harrison (2013).

Before the application of the empirical research, the researcher offered special teacher training sessions for the teachers in the experimental classes. The training content included the use of modern educational technology, enhancement of teaching practices directed by theories of and approaches to teaching and learning, designing and creating online courses, creating videos for micro-courses, constructing classes on online learning platforms, achieving flexibility and proficiency in the use of online platforms and deepening the understanding and application of the academic English course' teaching materials.

After these trainings, the two teachers expressed that they were very happy to have the rare chance to attend these professional trainings, showing more confidence in their use of modern educational technology. Besides that, they would love to conduct the empirical research carefully and cooperatively, which ensured that the application of the empirical research was done well.

Also, in the interviews following the empirical research, both teachers conveyed the necessity and importance of the training. Therefore, based on their suggestions and the practice of the empirical research, the researcher considered that support from the university was needed in at least the following two areas.

On the one hand, the university could offer teachers the necessary training, for instance in teachers' workshops and working groups, before implementing blended learning in the academic English course, so as to help them become familiar with the online operation and master the process online and offline. The content of the workshops and salons could mainly cover the concept of blended learning and its development status at home and abroad; it could furthermore include cutting-edge developments in academic blended learning; the use and maintenance of the online platform; last but not least, the experience of teachers who have tried blended learning as well as the training of

newcomers to blended learning. By attending the workshops and salons, the teachers would not only familiarise themselves with the theory of blended learning, they would also develop the skills of using blended learning in teaching and build a communication platform for the exchange of best practice. Furthermore, the university also could give full play to the demonstration role of excellent cases, thus effectively improving teachers' ability to implement blended teaching in the academic English course.

On the other hand, the university could establish a blended learning implementation support team to solve problems encountered by teachers in a timely way, or establish a community of teachers who were adept at blended learning to build up a mechanism for helping other teachers to facilitate their application of the blended learning.

To conclude, universities are not only providers of the hardware and software resources needed to carry out blended learning, but also the suppliers of incentive policies, training services and technology services which are also important influencing factors in the application of blended learning in the academic English course as well as the professional development of teachers.

### **5.3.2 Recommendations for Teachers**

Teachers are at the core of the application of blended learning. A successful implementation of blended learning depends much on the teachers' teaching designs and their own qualities in teaching. Therefore, based on the interviews and the empirical research, the findings of implications and recommendations for teachers can be summarised as follows:

Firstly, teachers need to keep a positive attitude toward the application of blended learning in the academic English course because their initiative could support them to implement blended learning better and more smoothly. The findings of this recommendation for teachers were consistent with the findings of some previous studies, such as the suggestions of Wedell (2011) and Brew and Cahir (2014), indicating that teachers' initiative plays an important role in the teaching process, especially when teachers are required to engage with new or innovative strategic teaching and learning priorities in response to various developments or changes within the society, the institutions of Higher Education or within individual programmes.

In the interviews, Teacher A and Teacher B conveyed that they held positive attitudes towards the teaching initiatives employed in the empirical study, and that this positive attitude helped them put in the time and effort to do it carefully and patiently, overcome difficulties and achieve a better result in the postgraduates' English language proficiency and achievements.

In line with what they had expressed in the interview before the empirical research, there were mainly two reasons why they participated in this empirical study. On the one hand, they wanted to try out new teaching methods. After all, teaching using blended learning might be the trend in the future. A second reason was that they could practice it without any pressure to get familiar with blended learning in advance of this research. On the other hand, they wanted to challenge themselves, because blended learning was complex and involved a lot of teaching reform and innovation work. Therefore, they loved to spend more time and energy on preparing what was going to be taught in blended learning of the academic English course for postgraduates.

Furthermore, after the empirical research, both teachers also said that they were excited about the positive impact of the implementation of blended learning in the academic English course, "I think this way of teaching is more effective and these postgraduates are more active, unlike in the past when the teacher would continually talk and the students would remember or listen", and "Students are willing to participate and are very active, inspiring me to devote more to the teaching practices".

Therefore, in the implementing of blended learning in the academic English course for postgraduates, the more teaching initiative the teachers had, the better they fared in the teaching process, including their design of the course, their attitudes towards the difficulties they were confronted with, their motivations to engage with changes as a consequence of the new teaching practices. As a result, teachers could finally achieve a good impact on the effectiveness of blended learning in the academic English course for postgraduates as well as improve the postgraduates' English language proficiency.

Secondly, teachers need to develop good information literacy, IT proficiency and the corresponding skills and abilities, such as the use and maintenance of the online platform, the practice of the flipped classroom, and the operation of new information technology devices in blended learning. The findings of this recommendation are consistent with the findings of previous studies on blended learning, such as the findings of Wang, Shi and

Cui (2017) which suggest that the teacher's information literacy and proficiency has a direct impact on the teaching effectiveness and the students' satisfaction within blended learning.

Blended learning could not be implemented without the teacher's computer operation and online lecturing. Teacher A believed that "teachers should develop their information literacy and proficiency in the application of blended learning" because she "always had the teaching practices related to the information technology". Although the university had already improved the hardware and software infrastructure required for blended learning, such as internet and computers, Teacher B still considered that "teachers still need to improve their information literacy, proficiency and the corresponding abilities in the practice of the blended learning in order to effectively improve its educational and teaching quality and efficiency".

In the teaching of the academic English course in the blended learning mode, the advantages of internet applications, information-based teaching and information technology need to be effectively combined to help the teachers to perform a dual task: to encourage the postgraduates to study the English language, and, secondly, to enhance the quality of the English language teaching. Because blended learning is technology-supported and technology-enabled, teachers' information literacy and proficiency becomes the key to effectively promoting and enhancing the quality of blended learning in the academic English course for the postgraduates. If teachers could grasp the skills and abilities of information technology, they would design the academic English course more complex and advanced, which could surely help the postgraduates to become more involved in the academic English course as well as increase the interests and the satisfactions of the postgraduates to learn more about the course.

Thirdly, teachers need to adapt to new teaching practices as well as reforming their concept of teaching pedagogies which they have been used to in order to better implement blended learning of the academic English course for postgraduates. The findings of this recommendation corroborate those of previous research into the application of blended learning, such as the suggestions of Wang and Wei (2020), indicating that teachers need to actively adjust the corresponding teaching practices reasonably and appropriately, so as to better realise the effect of blended learning and improve the English proficiency of students.

As for university teachers, most of them are experienced teachers who have been in the field for several years or even decades. They have developed their own set of ideas and methods in the process of teaching, and they teach their students according to this set of ideas and methods. When blended learning suddenly replaces the traditional teaching, teachers need to abandon their past experiences, apply the concept of blended learning and teaching, learn again and start from scratch; and it takes a long period of practical education before teachers can develop their own set of new teaching ideas. Just like Teacher A said in the interview, “I used a lot of time to practice it and managed to exercise it with my students, which wasted so much time and made me exhausted. So, I think, if I had known and grasped those strategies or teaching pedagogies fully at the beginning of the experimental research, that would be much better. ...I think I can teach them more effectively and they can enjoy the academic English course more.”

Therefore, teachers need to strengthen their teaching practices online and offline. As Section 5.2 *Findings of Research Question 2* has expatiated on the teaching practices which could be beneficial to the implementation of blended learning in the academic English course, the researcher would not recite them again in this part, and just exemplify some of these teaching practices during its implementation.

For example, the teachers can use the flipped classroom teaching, communicative learning and cooperative language learning to discuss the previewed content with postgraduates during the class time in order to address the core tasks assumed by different knowledge points in the preview. Furthermore, the teachers could use tools such as computers and smartphones to enhance the fun and richness of teaching with multi-sensory teaching activities, assess student learning and set online feedback as the beginning of the next session of learning, which otherwise cannot proceed online. In this way, one can establish a more free and independent learning space for the postgraduates and help the teachers to evaluate, deal with and improve the postgraduates’ weaknesses and problems by using scaffolding teaching instruction and production-oriented activities.

Furthermore, there are also some details for teachers to consider when implementing blended learning in the academic English course. Based on the interviews, both teachers and postgraduates met with some difficulties during the online learning. For example, teachers considered “some platforms could make me and my students angry, even mad”; some postgraduates thought it was “difficult to concentrate on the whole process of online

learning” and they needed teachers to communicate with them synchronously, otherwise, they would “forget the problems online” when they had classes next day. As a result, teachers needed to select and recommend some stable online platforms, such as Pigai Wang, to postgraduates in order to avoid “the repeated log-in and log-out” when using the online platforms. Then, teachers also needed to design interesting online exercises and practical online learning tasks based on the needs of the academic English course as well as the needs of postgraduates and what could get them involved in the online learning. Furthermore, teachers could manage different ways to communicate with postgraduates synchronously or asynchronously in order to manage to communicate with or scaffold postgraduates timely. In addition, considering the different needs and features of postgraduates, the content and pace of online and offline teaching needs to be reasonably matched to ensure that the online and offline content not only form an integrated system but also match and complement each other. Ensuring the quality of teaching finally requires that teaching schedules and assignment tasks are arranged sensibly and realistically.

To conclude, teachers not only need to hold a positive attitude towards the implementation of blended learning in the academic English course, but also need to develop their information literacy and proficiency as well as update their teaching practices. Based on making full use of modern advanced information technology, teachers adopt multiple resources online and offline, and actively implement good teaching practices and activities through blended learning, in this way enhancing the English language proficiency of their postgraduates.

### **5.3.3 Recommendations for Postgraduates**

Postgraduates were at the centre and the most important subject of the blended learning. To better learn the academic English course taught by blended learning, the postgraduates still need to meet some requirements. Therefore, based on the interviews and the empirical research, the findings of suggestions and recommendations for postgraduates can be summarised and illustrated as follows:

Firstly, the postgraduates need to inspire a positive attitude toward blended learning of the academic English course because their attitude is one of the factors that influences

the success of blended learning in the academic English course. The findings of this recommendation for postgraduates corroborates the findings of Hadad's study (Hadad, 2007), that the success of blended learning depends heavily on students' attitudes, confidence and ability to engage in blended learning.

Moreover, the findings of this recommendation for postgraduates is also verified in the empirical research. As was shown in the interview of postgraduates as well as illustrated in Section 5.1.3 *Attitudes towards the Academic English*, the majority of the postgraduates preferred to study the academic English course by using blended learning, revealing a good trend for these postgraduates and ensuring the successful implementation of this empirical study.

Blended learning does pose challenges for some postgraduates, such as the higher computer proficiency, synchronous or asynchronous communication with others online, which could lead to a lower emotional satisfaction or a feeling of underachievement in blended learning of the academic English course to some extent. Therefore, for some postgraduates, when they first learn that the academic English course is taught as a blended course, they might become nervous or hold a negative attitude toward it.

However, blended learning also has many merits and advantages. For instance, it may be an active force driving the postgraduates' self-efficacy and intrinsic motivation to learn (Thai, De Wever and Valcke, 2017). By the same token, the higher a postgraduate's self-efficacy and intrinsic motivation is, the harder he/she may work, and the better learning outcomes he/she may achieve. Furthermore, better learning outcomes can increase his/her self-efficacy and intrinsic motivation, in the same way that higher confidence in their learning can cause a student to share more with peers and teachers in English. Later, it can help him/her form a good and positive circle in the blended learning process in the academic English course.

Therefore, at the very beginning of blended learning, the postgraduates need to have a positive attitude toward blended learning on the academic English course. With the guidance and help of their teachers, the postgraduates were able to develop more robust self-efficacy and confidence. Stimulating their intrinsic motivation, postgraduates were able to improve their English learning abilities and achievements as well as making up their English learning deficiencies by adopting blended learning in the academic English course.

Secondly, postgraduates need to adjust their learning styles and study habits to accommodate the changes blended learning of the academic English course brings in order to improve their English language proficiency and achievements. The findings of this recommendation also supported the findings of Çakıroğlu (2014), demonstrating a significant relationship between learning styles, study habits, and learning performances.

As shown in the interviews, the postgraduates had at least 16 years of experience studying in a face-to-face classroom. They had got used to the traditional teaching and learning mode, and had already formed their own learning styles and study habits accordingly. When they were confronted with blended learning, they were to some extent not adapted to the new way of learning. Just as one postgraduate expressed this in the interview, they considered that “it was difficult ...for me...maybe...still for some of my classmates to concentrate on the whole process of online learning” because “I may be distracted easily ..., so that some of us may skip the explanation of knowledge points in time”.

The main reasons for the difficulty above was that some postgraduates were accustomed to learning under the supervision of teachers and were insufficiently equipped in terms of their independent learning ability. It indicated that their existing learning styles and study habits hindered their involvement in blended learning in the academic English course, which could lead to poor learning performances in English.

As discussed in the critical literature review, blended learning changes the traditional way of relying exclusively on teachers to transmit English knowledge in the classroom. It offers online learning resources to allow the postgraduates to learn independently, watch videos of new knowledge repeatedly, and personalize their learning according to their own pace and learning needs. So, blended learning could be beneficial to those postgraduates who preferred the visual or auditory learning style paired with good independent learning ability and adequate study habits, such as previewing and reviewing in a timely manner, concentrating on class, reflection after practice online and offline and so on.

Therefore, with the online and offline guidance of teachers, postgraduates could change their learning styles as well as their study habits, fully realizing that they themselves were the main body of the academic English learning in blended learning. Moreover, postgraduates need to consciously build up awareness of participating in online learning,

learn to use information technology to solve problems in the learning process, and improve their independent learning ability.

Thirdly, postgraduates need to consciously develop their own English learning strategies in order to improve their English language proficiency in blended learning of the academic English course. The findings of this recommendation were consistent with the findings of Zhang (2001), showing that in blended learning, learning strategies had a significant positive impact on learning performance.

Moreover, the findings of this recommendation for postgraduates was also verified in this empirical research. As was shown in the interview of postgraduates as well as illustrated in Section 5.1.4 *Factors Influencing the Academic English Course Learning and Language Proficiency*, some postgraduates attributed their below par English language proficiency to a lack of appropriate learning strategies. In their mind, “it would be better if we had grasped some useful English learning strategies to accelerate or assist our English learning online and offline”.

Therefore, it is necessary for these postgraduates to unlearn and develop new learning strategies to improve their English learning skills and English language proficiency. Based on the empirical research, some learning strategies, especially cooperative communication strategies and reflective summarization strategies in English language learning, could be helpful for postgraduates to use.

On the one hand, the postgraduates could actively participate in collaborative English learning and online communication and interaction in English, which would improve their sense of belonging and immersion in online learning as well as improve their own English learning effect and proficiency. Moreover, participating in teams and learning communities would be very helpful to improve the postgraduates’ independent learning ability because they would definitely encounter obstacles and difficulties in the academic English learning, and then they need to figure out how to solve them by themselves or with their partners. On the other hand, the postgraduates can form a good habit of recording reflection notes, actively self-reflect on their English learning process and results after each class, and increase the number of repetitions for complex knowledge.

To conclude, postgraduates not only need to hold a positive attitude toward blended learning in the academic English course; they also need to adjust their learning styles and study habits as well as develop their learning strategies to accommodate the changes

blended learning of the academic English course brings in order to improve their English language proficiency and achievements. With the help and guidance of teachers, postgraduates would develop their independent learning skills and cultivate active behavioural engagement with blended learning of the academic English course, in this way improving their English language proficiency and achievements.

## **5.4 Chapter Summary**

Based on what has been discussed in the last chapter, this chapter illustrates the major findings for the three research questions. In the findings for Research Question 1, the researcher mainly concluded the current study situation of postgraduate learners on the academic English course from the following five perspectives based on the analysis of the questionnaire: demographic information, online experiences, postgraduates' attitudes, influencing factors, and requirements for the academic English course. In the findings for Research Question 2, the researcher focused on good teaching practices directed by the six theories and approaches which were reviewed in Chapter 2. Based on the results of the pre-test and post-test in the empirical research, these teaching practices had been verified to be beneficial to improve English language proficiency and achievements for postgraduates in the blended learning of academic English course. In the findings of Research Question 3, the researcher illustrated the recommendations from three perspectives, namely the university, the teachers and the postgraduates, in order to improve the teaching quality and effects as well as strengthen the English language proficiency of the postgraduates.

## Chapter 6 Conclusion, Limitations and Suggestions for Future Study

This chapter concludes this study by offering a brief summary of the answers to the three research questions. Limitations of the study as well as suggestions for the future study will be discussed also.

### 6.1 Conclusion

Information technology and the internet made blended learning on the academic English course for postgraduate students possible. Supported by different teaching strategies and learning theories, the application of several media in combination with an abundance of authentic language materials and images, formed a multi-dimensional learning environment. This assisted the teachers in transmitting English knowledge to the postgraduates via an online and offline classroom.

The academic English course is a compulsory course for non-English major postgraduates, playing an important role in English learning at postgraduate level. Aiming to improve the English language proficiency and academic attainments of the students, the researcher conducted empirical research focusing on blended learning in the academic English course at a provincial-level technical university in China.

The primary aim for this thesis was *to explore and inform good teaching practices by evaluating the impact of an intervention on the blended learning of academic English course for postgraduates*.

The research had three specific research questions:

**Research Question 1.** What is the current study situation of postgraduate learners on the academic English course?

**Research Question 2.** What teaching practices can be applied by teachers to improve the language proficiency and attainment of postgraduates in a blended learning academic English course?

**Research Question 3.** What recommendations could potentially be made for future academic English courses for postgraduates taught in a blended mode?

The research has been conducted by means of a questionnaire, a pre-test and a post-test as well as through interviews with both the teachers and the postgraduate students.

Based on the detailed analysis of the data mentioned above, the researcher accomplished the primary aim of the thesis, that is to propose answers to each of the three questions with reference to the concrete context in which the study took place, as well as the relevant research literature.

1. The questionnaire (see more detail in *Section 4.2 Questionnaire in Phase 1*) was used to investigate Research Question 1, and its findings were discussed in detail in *Section 5.1 Findings for Research Question 1*. In the findings for Research Question 1, the researcher described in detail the current study situations of postgraduate learners on the academic English course, drawing on the analysis of the questionnaire and presenting the findings under five headings: demographic information, online experience, postgraduates' attitudes, influencing factors, and requirements for the academic English course.

In terms of demographic information, the findings indicated that the majority of postgraduates in the provincial local technical university were freshly graduated. In terms of demographics, they belonged to the majority part of postgraduates in China. Their feedback on teaching practices and replies to questions posed by the researcher were both informative and representative of the postgraduate population as a whole. This confirmed the appropriateness and rigour of the planned research design as well as the validity and applicability of the data that were to be gathered at the next stages of the empirical research. Although these postgraduates displayed some demographic differences, for instance in regard to gender and age, homogeneous comparison showed no significant differences between them.

With regard to online experiences, the findings highlighted an important link between the computer proficiency of the postgraduates, on the one hand, and other factors such as motivation to study the course in the blended mode, the ability to deal with challenges, and learning satisfaction, on the other hand. The interrelatedness of these various factors should be considered when designing an empirical study of blended learning. The results of the analysis of the online experiences of these postgraduates confirmed that they got accustomed to the internet and that they developed both the internet skills and the information literacy necessary to facilitate their English learning, ensuring the postgraduates in experimental classes could participate in the blended learning of the academic English course without too much difficulty.

With respect to postgraduates' attitudes towards the academic English course and towards blended learning, the findings revealed that these were an important factor that influenced from the outset how students would engage with the course, how satisfied they were with their own progress, and how they would tackle difficult situations during the course. The results showed that most postgraduates held a positive attitude towards the academic English course taught through blended learning, and also that they were positive about their ability to tackle challenges that might arise during the course. This positive attitude provided a good starting point for my empirical study. However, it also raised the question of how this positive attitude can be actively utilised pedagogically during the course—instead of merely being taken as a passive influencing factor—and how can it be sustained in case of challenges in those students who are sceptical at the start of the course? Thinking of the above questions, I explained the purposes of the research before the application of this research, hoping that students would participate in it actively and positively. Moreover, during the whole course, teachers in the experimental classes continually gave timely feedback and guidance to their students online and offline to inspire them to keep their positive attitude towards the academic English course in blended learning.

Regarding influencing factors, the findings mainly focused on the following three aspects. (1) Teachers' course design and teaching strategies were the main factor that influenced the effectiveness of the academic English course from the perspective of the postgraduates. This finding, namely that the postgraduates think that the teachers are the key to their success, led me to reflect deeply during and after the research, and this is where it has broadened my views on influencing factors of students' English learning effectiveness. Besides the factor related to teachers, the empirical research clearly shows that the postgraduates' own motivation, confidence and resilience, as well as peer collaboration are equally powerful factors influencing their success. There are several implications from this finding for future studies and how we need to think about blended learning. One is, in future study, we perhaps need to re-balance the different factors that determine student success and satisfaction on the academic English course in blended learning. The other implication is that students need to reflect on their role more than they currently do because the need to re-balance mentioned above is one consequence of the blended learning environment which places more responsibility on the students as

independent learners. (2) Lacking skills and techniques to learn English language were the main negative factor that influenced their academic English learning and language proficiency in the postgraduates' mind. This finding also highlighted the necessity and importance of teachers' leading and guiding the blended learning process. Additionally, the research provided important reference points for the researcher regarding the application of the research and the recommendations for the postgraduates in their future study. (3) Intrinsic factors, such as interest in knowledge itself, and extrinsic factors, such as employment and education pressures, constituted the primary factors motivating the postgraduates to learn English. This finding reminded the researcher to add some extra teaching materials related to employment or future doctoral studies as a way to link course content to future application in the world of work.

Concerning requirements for the academic English course, the findings mainly focused on the following four aspects: interactions directed or guided by teachers, online platform recommended by teachers, English learning materials suggested by teachers, content presentation methods used by teachers. The findings for these requirements showed that postgraduates needed the support and guidance from teachers in their blended learning of the academic English course. On the other hand, the findings of these requirements also provided necessary information for the researcher to design her research in order to satisfy the needs of these postgraduates.

From the perspective of pragmatism, the findings of Research Question 1 were a prerequisite for better implementation of the empirical research because the researcher should understand the current study situation of postgraduate learners to inspire and motivate them to take fully part in the empirical study of the academic English course in blended learning. Therefore, based on the findings of Research Question 1, the researcher not only understood the context of teaching and learning of the academic English course for postgraduates, laying a solid foundation for the empirical research, but also obtained useful information in designing the teaching practices in blended learning of the academic English course for postgraduates.

2. The aim of the pre-test and the post-test (See more detail in *Section 4.3 Pre-test and Post-test in Phase 2*) was to evaluate the impact of the intervention into teaching practices stated in Research Question 2. Between the pre-test and the post-test, teachers in the experimental classes implemented some teaching practices in blended learning of the

academic English course for postgraduates, while teachers in the control classes held the traditional classroom teaching as usual. The results of the pre-test and post-test of the experimental classes and the control classes showed that the achievements of the experimental classes were better than those of the control classes. Therefore, the teaching practices applied in the experimental classes have shown to be beneficial for improving English language proficiency and achievements for postgraduates in the blended learning of academic English course. The findings for Research Question 2 were illustrated in detail in *Section 5.2 Findings for Research Question 2*, focusing on the good teaching practices directed by the six theories and approaches which were illustrated in Chapter 2. Looking down the line, this is where I think blended learning needs to be in 5 years' time and this is how we get there.

The findings from the analysis of teaching practices directed by Communicative Language Teaching indicated that Communicative learning (Richards and Rodgers, 2001), as one of the most often used teaching practices in the empirical research (see Figure 5.1 *A blended learning flow chart for experimental classes*). The focus was mainly on improving the listening and speaking capacity of postgraduates. Moreover, especially when teachers used *English Listening and Speaking for Postgraduates* in their listening and speaking classes, communicative learning could be used more frequently than other teaching practices.

On the other hand, the findings from the application of teaching practices directed by Cooperative Learning indicated that cooperative language learning (Johnson and Johnson, 1979, 1994, 2007; Deng and Che, 2010) could lead the postgraduates to cooperate online and offline with each other to learn and to improve their English language proficiency in blended learning. This method could be used in all steps in classroom teaching and in part of the online practices included in Figure 5.1. Teachers were able to adopt teaching practices related to cooperative language learning, such as heterogeneous group discussion, debate and group competition, to achieve the teaching aim in their classes.

The findings of teaching practices directed by Multiple Intelligences indicated that multi-sensory teaching activities (Armstrong, 2000, 2009; Gardner, 1983, 1999, 2006, 2011) were beneficial to increase the interests of postgraduates to learn English and improve their language proficiency. Multiple Intelligences methods were mainly used in Step 2 *Lead-in and Introduction of the new content* and Step 3 *Main illustration of the*

*content* (see Figure 5.1). Some multi-sensory teaching activities, such as listening to audio recordings and singing English songs, and combining speaking and role-playing activities, aroused the interest among students and facilitated the English learning of the postgraduates. Graphic and semantic organizers were used to improve their reading comprehension ability. Furthermore, considering the different intelligences and preferences of postgraduates, teachers provided self-directed English learning resources online based on the postgraduates' individual practical needs in English learning.

The findings from the analysis of teaching practices directed by Flipped Classroom indicated that flipped classroom teaching (Lage, Platt and Treglia, 2000; Bishop and Verleger, 2013) had a positive impact on improving postgraduates' English language proficiency in blended learning. In this empirical research, flipped classroom teaching was mainly used in preview before class and Step 2 *Lead-in and Introduction of the new content* in Figure 5.1. Furthermore, teachers used flipped classroom teaching as a facilitating tool in Step 3 *Main illustration of the content* in Figure 5.1 to save the explanation time in classroom teaching.

The findings from teaching practices directed by Sociocultural Theory indicated that scaffolding learning instruction (Bruner, 1978; Gibbons, 2002) related to Zone of Proximal Development (ZPD, one of key concepts of Sociocultural Theory) could solve or support the difficult learning tasks of the academic English learning and support the postgraduates to continue their study smoothly in blended learning, which could mainly be used in Step 3 *Main illustration of the content* in Figure 5.1. Furthermore, in many steps in Figure 5.1, scaffolding learning instruction could be used solely or together with other different teaching practices based on the teaching content.

The findings of teaching practices directed by Production-oriented Approach indicated that production-oriented activities (Wen, 2007, 2008, 2013, 2014, 2015, 2016, 2017) could have a positive impact on developing postgraduates' comprehensive English language skills and proficiency, which could be mainly used in Step 3 *Main illustration of the content* in Figure 5.1. Teachers adopted production-oriented activities, such as story-telling, presentation, role-playing, sitcom performance and English fun contests, focused on the output of English language learning of postgraduates. Teachers were also able to integrate and coordinate the production-oriented activities together with other teaching

practices in order to realize the better effectiveness of all these teaching practices, depending on the teaching materials and content.

From the perspective of practical teaching needs, I answered Research Questions 2 and explored the teaching practices to improve English language proficiency and attainments for postgraduates in blended learning of the academic English course. The findings of these teaching practices are helpful, practical and easy to be adopted by teachers who teach the similar subjects within the teaching context of blended learning, and therefore I find my thesis important and useful.

3. Interviews (See more detail in *Section 4.4 Interview in Phase 3*) were conducted to investigate Research Question 3. Supplemented by the findings of Research Question 1 and Research Question 2, the findings related to Research Question 3 were illustrated in detail in *Section 5.3 Findings for Research Question 3*. In the findings for Research Question 3, the researcher illustrated the recommendations from three perspectives—the university, the teachers and the postgraduates—in order to improve the teaching quality and effects as well as strengthen the English language proficiency of the postgraduates.

The university is the supporter and the policy maker which influenced the effectiveness of blended learning in the academic English course for postgraduates. Therefore, firstly, the university needs to offer a better internet infrastructure for the teachers and the postgraduates, such as fast and stable internet, and good multimedia devices including their service; secondly, the university needs to develop policies that protect and incentivize teachers to implement blended learning through public acknowledgement and financial resources; thirdly, the university needs to organize, provide or encourage teachers to participate in staff training in the area of blended learning, gradually institutionalising regular staff development and training opportunities. By doing so, the university could provide a good blended learning environment, which would be beneficial to both teachers and postgraduates.

Teachers are at the heart of the application of blended learning. A successful implementation of blended learning depends much on the teachers' teaching designs and their own teaching skills. Therefore, firstly, teachers need to keep a positive attitude toward the application of blended learning in the academic English course because their initiatives could support them to implement blended learning better and more smoothly; secondly, teachers need to develop good information literacy, IT proficiency and corresponding skills

and abilities, such as the use and maintenance of the online platform, the practice of the flipped classroom teaching, and the operation of new information technology devices in blended learning; thirdly, teachers need to adapt to new teaching practices and reform their inherited teaching pedagogies in order to better implement blended learning of the academic English course for postgraduates.

Postgraduates were the centre and the most important subject of the blended learning. To have better learning experiences and outcomes in the academic English course taught by blended learning, the postgraduates still need to meet some requirements. Firstly, the postgraduates need to inspire a positive attitude toward blended learning of the academic English course because their attitude is one of the factors that influence the success of blended learning in the academic English course; secondly, postgraduates need to adjust their learning styles and study habits to accommodate the changes blended learning of the academic English course brings in order to improve their English language proficiency and achievements; thirdly, postgraduates need to consciously develop their own English learning strategies in order to improve their English language proficiency in blended learning of the academic English course.

Based on the findings of Research Question 3, the researcher provided some useful suggestions and recommendations, helping the university, teachers and postgraduates collaborate with each other to achieve an improved outcome of the application of this research in future academic English courses for postgraduates delivered through blended learning.

All in all, the researcher has taken a broad approach to the empirical research, both in terms of methodology (mixed-methods) and in terms of the range of issues she addresses. When it was completed, this empirical research answered all the research questions in a satisfactory manner. In addition to the specific findings mentioned above, one of the key contributions of this thesis, in my view, is that it shows the interrelationship between a whole range of different factors in the academic English course on blended learning, namely, innovative teaching practices, student and teacher IT proficiency, quality and reliability of IT equipment, student motivation, collaborations, learning satisfaction/teaching satisfaction, staff development and training, appropriate scheduling of online and offline content, etc.. Apart from innovative teaching practices, which is one of the most important findings in the thesis, collaboration is the factor that provides ample room for

further reflection and investigation. In blended learning, collaboration has at least six dimensions: collaboration between university and teachers, collaboration between university and students, collaboration between teachers, collaboration between students, collaboration between teachers and students, and collaboration among university, teachers and students. How these collaborations actually happen in an academic English course on blended learning—how university, teachers and students collaborate with each other—this is one area I wish to focus on in the future. Moreover, based on the findings of this empirical research, I believe that only when these six dimensions of collaborations work smoothly can our hope for improved results in the academic English course on blended learning come true.

## **6.2 Limitations of the Study**

Although the results show that this empirical research has achieved certain results, there are still some limitations. These can be summarised as follows:

First of all, the sample size of the study is limited. There are only 4 teachers and 120 postgraduates who participated in the research. They reflect some of the characteristics and problems of participants as a whole. But because the sample size of this study is relatively small, it cannot represent all the teachers and the postgraduates accurately, so there will be some limitations when the researcher extends the findings from this cohort of students to postgraduates in other majors.

Secondly, the experimental research time was limited. In order to achieve even clearer results when measuring the effects of the teaching experiment, a longer implementation time is required. It is not possible to detect lasting effects in a short-term experiment. After the experimental research, the postgraduates will return to the previous learning state, which means most of them will continue to be taught in the traditional learning mode in the academic English course. Furthermore, to achieve best possible outcomes from blended learning, teachers and postgraduates need to work together and cooperate with each other. This, too, needs a lot of time and energy on both sides, as they explore suitable ways of interaction.

### **6.3 Suggestions for Future Study**

In order to further study the effects of implementing blended learning in the academic English course for postgraduates, based on the limitations of this study, some suggestions for future research can be made.

First of all, researchers could expand the scope of research participants in future research, for example, by including all postgraduates in the university, by including a certain number of postgraduates from other universities, or by enlarging the number of academic majors covered by the research. Such an extended scope would enhance the credibility of the research results and allow researchers to generalise certain findings to some extent. Furthermore, researchers also could increase the number of participating teachers, including both male and female, with a view to investigating whether or not there are observable differences between the two genders.

Secondly, in order to increase the comprehensiveness of the data, researchers could employ appropriate additional research methods, such as classroom observation or analysis of data derived from journals or online platforms. In this way, researchers can understand the experimental results from different perspectives.

Thirdly, the teachers could further strengthen theoretical study and combine theory with practice, thus creating a virtuous learning cycle that moves seamlessly between theoretical reflection and application. This would also to some extent close the gap between researchers and practitioners. In future research, researchers could constantly improve their professional ability and enrich their teaching experience through involvement in the actual English teaching process, and then extend the research time and experimental time of the blended learning, so as to cultivate the postgraduates' interest in English learning as well as fundamentally enhance the postgraduates' initiative and creativity.

Through such future studies, researchers will be able to develop and evaluate new and improved sets of pedagogical guidelines and teaching strategies for blended learning. These studies will hopefully fill some of the remaining gaps or shortcomings in the pedagogy, teaching strategies, and teaching methods applied in the academic English course for the postgraduates in a Chinese provincial university.

## Bibliography

Adams, J., Hanesiak, R. M., Owston, R., Lupshenyuk, D., & Mills, L. (2009). Blended learning for soft skills development. *Institute for Research on Learning Technologies*. York University.

Alammary, A., Sheard, J., & Carbone, A. (2014). Blended learning in higher education: Three different design approaches. *Australasian Journal of Educational Technology*, 30(4).

Alhojailan, M. I. (2012). Thematic analysis: A critical review of its process and evaluation. *West East Journal of Social Sciences*, 1(1), 39-47.

Aliaga, M., & Gunderson, B. (1999). *Interactive statistics*. Prentice Hall.

Allan, C. N., Campbell, C., & Crough, J. (Eds.). (2019). *Blended Learning Designs in STEM Higher Education: Putting Learning First*. Springer.

Allen, I. E., & Seaman, J. (2003). Sizing the Opportunity: The Quality and Extent of Online Education in the United States, 2002 and 2003. *Sloan Consortium (NJ1)*.

Allen, I. E., & Seaman, J. (2007). *Online nation: Five years of growth in online learning*. Sloan Consortium. PO Box 1238, Newburyport, MA 01950.

Anderson, K. (2007). Tips for teaching: Differentiating instruction to include all students. *Preventing School Failure*, 51, 49-54.

Anderson, T. W., & Anderson, T. W. (1958). *An introduction to multivariate statistical analysis* (Vol. 2). New York: John Wiley & Sons.

Antonis, K., Daradoumis, T., Papadakis, S., & Simos, C. (2010). Evaluation of the effectiveness of a web-based learning design for adult computer science courses. *IEEE Transactions on Education*, 54(3), 374-380.

Armstrong, T. (1999). *Seven kinds of smart: Identifying and developing your multiple intelligences*. New York: Penguin Putnam Inc.

Armstrong, T. (2000). *Multiple intelligences in the classroom* (2nd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.

- Armstrong, T. (2009). *Multiple intelligences in the classroom* (3rd ed.). Alexandria, VA: Association for Supervision and Curriculum Development.
- Aronson, E. (1978). *The jigsaw classroom*. SAGE.
- Bachman, L. F. (1990). *Fundamental considerations in language testing*. Oxford university press.
- Bachman, L. F., & Palmer, A. S. (1996). *Language testing in practice: Designing and developing useful language tests* (Vol. 1). Oxford University Press.
- Baepler, P., Walker, J. D., & Driessen, M. (2014). It's not about seat time: Blending, flipping, and efficiency in active learning classrooms. *Computers & Education*, 78, 227-236.
- Banditvilai, C. (2016). Enhancing students language skills through blended learning. *Electronic Journal of e-Learning*, 14(3), pp223-232.
- Bao, J. S., Wang, J., Gu, L. Y. (2005). *Focus on the classroom*. Shanghai: Shanghai Foreign Language Education Press. 鲍建生,王洁,顾冷远. (2005). *聚焦课堂*.上海:上海外语教育出版社.
- BERA. (2018). *Ethical Guidelines for Education Research*, four edition. <https://www.bera.ac.uk/publication/ethical-guidelines-for-educational-research-2018> [accessed 12 December 2021]
- Bergman, J., & Sam, A. (2012). *Flip your Classroom Reach Every Student in Every Class Every Day*. United States: International Society of Technology in Education.
- Bernard, R. M., Borokhovski, E., Schmid, R. F., Tamim, R. M., & Abrami, P. C. (2014). A meta-analysis of blended learning and technology use in higher education: From the general to the applied. *Journal of Computing in Higher Education*, 26(1), 87-122.
- Bersin, J. (2004). *The blended learning book: Best practices, proven methodologies, and lessons learned*. John Wiley & Sons.

Binet, A., & Simon, T. (1961). The Development of Intelligence in Children. In J. J. Jenkins & D. G. Paterson (Eds.), *Studies in individual differences: The search for intelligence*. pp. 81–111. Appleton-Century-Crofts.

Bishop, J. L., & Verleger, M. A. (2013). The flipped classroom: A survey of the research. In *ASEE national conference proceedings, Atlanta, GA* (Vol. 30, No. 9, 1-18).

Bliuc, A. M., Goodyear, P., & Ellis, R. A. (2007). Research focus and methodological choices in studies into students' experiences of blended learning in higher education. *The Internet and Higher Education*, 10(4), 231-244.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77-101.

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical guide for beginners*. SAGE.

Breen, M. P., & Candlin, C. N. (1980). The essentials of a communicative curriculum in language teaching. *Applied linguistics*, 1(2), 89-112.

Brew, A., & Cahir, J. (2014). Achieving sustainability in learning and teaching initiatives. *International Journal for Academic Development*, 19(4), 341-352.

Brown, D. (1988). *Second Language Learning*. Cambridge: the Press of the University of Cambridge.

Brown, D. (2002). English language teaching in the "Post-Method" era: Towards better diagnosis, treatment, and assessment. In J. C. Richards & W. A. Renandya (eds.). *Methodology in Language Teaching*. Cambridge, England: Cambridge University Press, 9-18.

Brown, D. (2007). *Principles of Language Learning and Teaching*. 5th ed. White Plains, NY: Pearson Longman.

Brumfit, C., and Johnson, K. (1979) *The Communicative Approach to Language Teaching*. Oxford: Oxford University Press.

Bruner, J. (1978). The Role of Dialogue in Language Acquisition. In *The Child's Conception of Language*, ed. A. Sinclair, R. Jarvella, and W. Levelt. New York: Springer-Verlag.

Buzan, T., & Buzan, B. (2002). *How to mind map*. London: Thorsons.

Buzan, T., & Buzan, B. (2006). *The mind map book*. Pearson Education.

Byrne, D. (2021). A worked example of Braun and Clarke's approach to reflexive thematic analysis. *Quality & Quantity*, 1-22.

Çakıroğlu, Ü. (2014). Analyzing the effect of learning styles and study habits of distance learners on learning performances: A case of an introductory programming course. *International Review of Research in Open and Distributed Learning*, 15(4), 161-185.

Candlin, C., & Mercer, N. (Eds.). (2001). *English language teaching in its social context: A reader*. Psychology Press.

Cao, P. S. (2020). Research on the construction and effect of blended teaching model of ESP course based on flipped classroom. *Foreign Language World*, (06):87-94. 曹佩升.(2020).基于翻转课堂的 ESP 课程混合式教学模式构建与效果研究. *外语界*, (06):87-94.

Cao, Q. Z. (2017). An analysis of the mediating role of teachers in the “production-oriented approach”: an example of the fourth unit of the second book of “*New Generation College English*”. *Chinese Foreign Language Education*, (1): 15-22. 曹巧珍. (2017).“产出导向法”之教师中介作用探析——以《新一代大学英语》第二册第四单元为例. *中国外语教育*, (1): 15-22.

Carliner, S. (2004). *An overview of online learning*. Human Resource Development.

Chang, S. L. (2017). Research on the development of teaching materials by “production-oriented approach”. *Modern Foreign Languages*, (3): 359-368. 常小玲. (2017).“产出导向法”的教材编写研究. *现代外语*, (3): 359-368.

Chen, H. T. (2013). Theoretical flaws of communicative pedagogy. *Academic Exchange*, (S1):221-222. 陈洪特.(2013).交际教学法在理论上的缺陷.学术交流,(S1):221-222.

Chen, J. L. (2004). *Modern foreign language teaching research: a theory and methodology*. Shanghai: Shanghai Foreign Language Education Publishing House.

Chen, Y. (2019). The localization dilemma and solution path of flipped classroom in college English. *Educational Theory and Practice*, 39(30):37-39. 陈艳.(2019).大学英语翻转课堂的本土化困境及解决路径.教育理论与实践, 39(30):37-39.

Chenoweth, N. A., Ushida, E., & Murday, K. (2006). Student learning in hybrid French and Spanish courses: An overview of language online. *CALICO journal*, 115-146.

Cheung, W. S., & Hew, K. F. (2011). Design and evaluation of two blended learning approaches: Lessons learned. *Australasian Journal of Educational Technology*, 27(8).

Chomsky, N. (1957) *Syntactic Structures*, The Hague: Mouton.

Chong, M. (2020). The key to cooperative problem-solving skills is cooperation. *Educational Science Research*, (05):1. 冲漠.(2020).合作解决问题能力的关键是合作.教育科学研究, (05):1.

Chou, S. W., & Liu, C. H. (2005). Learning effectiveness in a Web-based virtual learning environment: a learner control perspective. *Journal of computer assisted learning*, 21(1), 65-76.

Christensen, C. M., Horn, M. B., & Staker, H. (2013). Is K-12 Blended Learning Disruptive? An Introduction to the Theory of Hybrids. *Clayton Christensen Institute for Disruptive Innovation*.

Clark, D. (2003). *Blend it like Beckham*. Epic Group PLC. Retrieved October 3, 2006.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*, 2nd ed. Hillsdale, NJ: Erlbaum.

Colis, B., & Moonen, J. (2001). Flexible Learning in a Digital World: Experiences and Expectations. *Open & Distance Learning Series*. London: Kogan-Page.

Comas-Quinn, A. (2011). Learning to teach online or learning to become an online teacher: An exploration of teachers' experiences in a blended learning course. *ReCALL*, 23(03), 218-232.

Cook, V. (2011). *Second Language Learning and Language Teaching* (4th ed.). Beijing: Foreign Language Teaching and Research Press.

Cortina, J. M. (1993). What is coefficient alpha? An examination of theory and applications. *Journal of Applied Psychology*, Vol 78(1), 98-104.

Creswell, J. W. (1998) *Qualitative inquiry and research design: Choosing among five traditions*, Thousand Oaks, CA: Sage.

Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing among Five Traditions*. Third ed., 44. Thousand Oaks, Calif.; London: Sage Publications.

Creswell, J. W. (2014). *Qualitative, quantitative and mixed methods approaches*. Sage. p. 247.

Creswell, J. W., Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334.

Crouch, C. H., & Mazur, E. (2001). Peer Instruction: ten years of experience and results. *American Journal of Physics*, 69(9), 970-977.

Cui, Y. H., Wang, Y.. (2014). Flipped classroom and its application in college English teaching. *China Educational Technology*, (11):116-121. 崔艳辉,王轶.(2014). 翻转课堂及其在大学英语教学中的应用. *中国电化教育*, (11):116-121.

De Graaf, E., & Kolmos, A. (2003). Characteristics of problem-based learning. *International Journal of Engineering Education*, 19(5), 657-662.

Deng, H., Che, Y. (2010). An empirical study on the impact of cooperative language learning on learners' metacognitive abilities. *Foreign Language*, (06):57-63.  
邓海,车瑜.(2010).合作语言学习对学习者元认知能力影响的实证研究. *外语界*, (06):57-63.

Denzin, N. K. (1978). *Sociological methods: A sourcebook*. New York, NY: McGraw-Hill.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). *The Sage handbook of qualitative research*. SAGE.

Diep, A. N., Zhu, C., Struyven, K., & Blicek, Y. (2017). Who or what contributes to student satisfaction in different blended learning modalities?. *British Journal of Educational Technology*, 48(2), 473-489.

Ding Talk Lite. (2020). <https://tech.sina.com.cn/i/2020-04-08/doc-iimxxsth4256221.shtml> [accessed 29 Jun, 2021]

Ding, C. (2012). Research on the quality education of high-vocational college students based on multiple intelligence theory. *China Adult Education*.(10), 51-52. 丁翠玲.(2012).基于多元智能理论的高职大学生素质教育研究. *中国成人教育*.(10), 51-52.

Dörnyei, Z (2007). *Research Methods in Applied Linguistics*. Oxford University Press.

Driscoll, M. (2002). Blended learning: Let's get beyond the hype. *E-learning*, 1(4), 1-4.

Du, S. C. (2017). Research on the realization path and effect evaluation of blended learning in the context of MOOC. *China Agricultural University*. 杜世纯. (2017). MOOC 背景下混合式学习的实现路径与效果评价研究. *中国农业大学*.

Du, S. C., Fu, Z. T., & Wang, Y. (2014). The flipped classroom—advantages and challenges. In *2014 International Conference on Economic Management and Trade Cooperation* (pp. 17-20). Atlantis Press.

Dudeney, G., & Hockly, N. (2007). *How to teach English with technology*. Essex: Pearson Education Ltd.

Dzakiria, H., Mustaffa, C. S., & Abu Bakar, H. (2006). Moving forward with blended learning (BL) as a pedagogical alternative to traditional classroom learning. *Malaysian Online Journal of Instructional Technology (MOJIT)*.

Dziuban, C., Hartman, J., Juge, F., Moskal, P., & Sorg, S. (2006). Blended learning enters the mainstream. *The handbook of blended learning: Global perspectives, local designs*, 195, 206.

Ellis, R. (2009). Task-based language teaching: Sorting out the misunderstandings. *International journal of applied linguistics*, 19(3), 221-246.

Ellis, R., & Shintani, N. (2013). *Exploring language pedagogy through second language acquisition research*. London & New York: Routledge.

Ellis, R., Steed, A. F., & Applebee, A. C. (2006). Teacher conceptions of blended learning, blended teaching and associations with approaches to design. *Australasian Journal of Educational Technology*, 22(3).

Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs, H. (2014). Qualitative content analysis: A focus on trustworthiness. *SAGE open*, 4(1).

Ennis, R. H. (1989). Critical thinking and subject specificity: Clarification and needed research. *Educational researcher*, 18(3), 4-10.

Eom, S. B., Wen, H. J., & Ashill, N. (2006). The determinants of students' perceived learning outcomes and satisfaction in university online education: An empirical investigation. *Decision Sciences Journal of Innovative Education*, 4(2), 215-235.

Felder, R. M., & Spurlin, J. (2005). Applications, reliability and validity of the index of learning styles. *International journal of engineering education*, 21(1), 103-112.

Fraenkel, J., Wallen, N. and Hyun, H. (2012) *How to Design and Evaluate Research in Education*. 8th Edition, McGraw-Hill Companies, New York.

Franks, P. (2002). Blended Learning: What is it? How does it impact student retention and performance?. In *E-Learn: World Conference on E-Learning in Corporate, Government, Healthcare, and Higher Education* (pp. 1477-1480). Association for the Advancement of Computing in Education (AACE).

Gao Y. H., et al, (2013). *English Learning Motivation and Self-Identity Development of College Students—A Four-Year, Five-School Tracking Study*, Beijing: Higher Education Press.

Gao, J. (2017). Analysis and modelling of learners' learning behavior in SPOC environment. *Huazhong Normal University*. 高菊. (2017). SPOC 环境下学习者学习行为分析与建模. 华中师范大学.

Gardner, H. (1983). *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.

Gardner, H. (1993). *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.

Gardner, H. (1999). *Intelligence reframed*. New York, NY: Basic Books.

Gardner, H. (2006). *Multiple intelligences: New horizons*. New York, NY: Basic Books.

Gardner, H. (2011). *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books.

Gardner, H., Feldman, D. H., & Krechevsky, M. (1998). *Project spectrum: Early learning activities*. New York, NY: Teachers College Press.

Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The internet and higher education*, 7(2), 95-105.

Garrison, D. R., Vaughan, N. D. (2008). *Blended learning in higher education: Framework, principles, and guidelines*. John Wiley & Sons.

GDPR. (2018). *General Data Protection Regulation*. <https://gdpr-info.eu/> [accessed 12 December 2021]

Ghasemi, A., & Zahediasl, S. (2012). Normality tests for statistical analysis: a guide for non-statisticians. *International journal of endocrinology and metabolism*, 10(2), 486.

Gibbons, P. (2002). *Scaffolding language, scaffolding learning*. Portsmouth, NH: Heinemann.

Glasser, W. (1997). "Choice theory" and student success. *The Education Digest*, 63(3), 16-21.

Gong, J. Y. (2016). *Research on the Construction of English Speech Teaching Mode under the Perspective of Flipped Classroom*. Wuhan: Huazhong Normal University. 公佳颖.(2016).翻转课堂视角下的英语语音教学模式构建研究.武汉: 华中师范大学 .

Graham, C. (2006). Blended learning systems: Definition, current trends, and future directions. In C. Bonk, & C. Graham (Eds.), *The handbook of blended learning: Global perspectives, local designs*. San Francisco: Pfeiffer.

Graham, C., Woodfield, W., & Harrison, J. B. (2013). A framework for institutional adoption and implementation of blended learning in higher education. *The internet and higher education*, 18, 4-14.

Greenhalgh, T. (1997). *How to read a paper: Assessing the methodological quality of published papers*. *Bmj*, 315(7103), 305-308.

Guan, E. J, Zhang, H. F., Feng, C., Liu, W. X. (2020). An Empirical Study on the Effectiveness of Blended Teaching: taking an example of 68 multiple principles

in Shandong University of Technology. *Modern Educational Technology*, 30(03):39-44.

44. 管恩京, 张鹤方, 冯超, 刘文秀. (2020). 混合式教学有效性的实证研究——以山东理工大学的 68 门多学科课程为例. *现代教育技术*, 30(03):39-44.

Guest, G., MacQueen, K. M., & Namey, E. E. (2012). Introduction to applied thematic analysis. *Applied thematic analysis*, 3(20), 1-21.

Guillemin, M & Gillam, L. (2004). Ethics, Reflexivity, and “Ethically Important Moments” in Research. *Qualitative Inquiry*, 10(2): 261-280.

Gwet, K. (2001). Handbook of inter-rater reliability. *Gaithersburg, MD: STATAXIS Publishing Company*, 223-246.

Hadad, W. (2007). *ICT-in-education toolkit reference handbook*. InfoDev.

Hadley, A. (2009). *Teaching Language in Context*. Beijing: Foreign Language Teaching and Research Press.

Halliday, M.A.K. (1973). *Explorations in the Functions of Language*. London: Edward Arnold.

Halliday, M.A.K. (1975). *Learning how to mean: explorations in the development of language*. London: Edward Arnold.

Halliday, M.A.K. (1976[1961]). Categories of the theory of grammar. In Gunther Kress (ed.) *Halliday: System and function in language. Selected papers*, Oxford University Press, pp. 52-72.

Halliday, M.A.K. (1976[1969]). A brief sketch of systemic grammar. In G. Kress (Ed.), *System and function in language*. London: Oxford University Press, pp: 3-6.

Halliday, M.A.K. (1978). *Language as social semiotic: towards a general sociolinguistic theory*. London: Edward Arnold.

Halliday, M.A.K. (2002[1970]) Language structure and language function. In: Webster J (ed.) *On Grammar* (Vol. 1 in *The Collected Works of M.A.K Halliday*). London: Bloomsbury, 173–195.

Hao, Y. (2016). Exploring undergraduates' perspectives and flipped learning readiness in their flipped classrooms. *Computers in Human Behavior*, 59, 82–92.

Hara, N., Kling, R. (2000). Student distress in a web-based distance education course. *Information, Communication & Society*, 3(4), 557-579.

Harris, D. P. (1969). *Testing English as a Second Language*. McGraw-Hill Book Company.

Hartley, R. I., & Sturm, P. (1997). Triangulation. *Computer vision and image understanding*, 68(2), 146-157.

Hatch, J. A. (2002). *Doing Qualitative Research in Educational Settings*. Albany: State University of New York Press.

He, K. K. (2005). New developments in educational technology theory from Blending Learning. *Journal of the National Academy of Educational Administration*, (09):37-48+79. 何克抗.(2005).从 Blending Learning 看教育技术理论的新发展. *国家教育行政学院学报*, (09):37-48+79.

Henning, G. (1987). *A guide to language testing: Development, evaluation, research*. Thomson Learning Asia.

Hertz, R. Ed. (1997). *Reflexivity and Voice*. London: SAGE.

Hmelo-Silver, C. E. (2004). Problem-based learning: What and how do students learn?. *Educational psychology review*, 16(3), 235-266.

Hocking, R. R. (1973). A discussion of the two-way mixed model. *The American Statistician*, 27(4), 148-152.

Hong, K. S., & Lee, J. A. C. (2008). Postgraduate students' knowledge construction during asynchronous computer conferences in a blended learning environment: A Malaysian experience. *Australasian Journal of Educational Technology*, 24(1).

Hu, H. (2012). Implications of Multiple Intelligences Theory for New Curriculum Reform. *China Adult Education*, (05):113-114. 胡红梅.(2012).多元智能理论对新课程改革的启示. *中国成人教育*, (05):113-114.

Hu, J. H.. (2017). A comparative study of the differences in the effectiveness of flipped classrooms for promoting learning in foreign languages. *Foreign Language World*, (06):20-28. 胡杰辉.(2017).外语翻转课堂促学效能差异的对比研究. *外语界*, (06):20-28.

Hu, X., Hu, H. J.. (2019). Teaching Paths and Generative Strategies of English Communicative Pedagogy. *Curriculum. Teaching Materials. Teaching Methods*. 39(05):121-126. 胡潇译,胡海建.(2019).英语交际教学法的教学路径与生成策略. *课程.教材.教法*.39(05):121-126.

Huang, R. H., Ma, D., Zheng, L. Q., and Zhang, H. S. (2009). A blended learning-based curriculum design theory. *Research in e-learning*, (01):9-14. 黄荣怀, 马丁, 郑兰琴, 张海森. (2009).基于混合式学习的课程设计理论. *电化教育研究*, (01):9-14.

Huang, Y. (2003). On the Integration of Multiple Intelligences Theory into English Language Teaching. *Curriculum. Teaching materials. Pedagogy*, (11):39-42. 黄远振.(2003).论多元智能理论与英语教学的整合. *课程.教材.教法*, (11):39-42.

Huang, Y. Y., Gu, Y. G. (1996). A student-centered, multi-dimensional approach to teaching English in college. *Foreign Language Teaching and Research*, (02):9-13+80. 黄月圆,顾曰国.(1996).以学生为中心,多维一体的大学英语教学法. *外语教学与研究*, (02):9-13+80.

Hubackova, S., Semradova, I., & Klimova, B. F. (2011). Blended learning in a foreign language teaching. *Procedia-Social and Behavioral Sciences*, 28, 281-285.

Hung, W., Jonassen, D. H., & Liu, R. (2008). Problem-based learning. *Handbook of research on educational communications and technology*, 3(1), 485-506.

Hymes, D. (1971). Competence and performance in linguistic theory. In R. Huxley & E. Ingram (Eds.), *Language acquisition: Models and methods* (pp. 3-28). London: Academic Press.

Hymes, D. (1972). On communicative competence. In J. B. Pride & J. Holmes (Eds.), *Sociolinguistics* (pp. 269-293). Harmondsworth, UK: Penguin.

Hymes, D. (1974). *Foundations in sociolinguistics: An ethnographic approach*. Philadelphia: University of Pennsylvania Press.

Jalbani, L. N. (2014). The impact of effective teaching strategies on the students' academic performance and learning outcome. *Munich: GRIN Verlag*. Accessed November, 23, 2018.

Jensen, A. R. (2002). Galton's legacy to research on intelligence. *Journal of Biosocial Science*, 34(2), 145-172.

Jia, F.. (2020). Exploring the application of flipped classroom in English teaching. *Chinese Journal of Education*, (S1):79-80. 贾芳.(2020).翻转课堂在英语教学中的应用探讨. *中国教育学刊*, (S1):79-80.

Jia, Z.Y. (2015). Research on the design and application of information-based teaching based on blended learning. *Shaanxi Normal University*. 贾志宇.(2015). 基于混合式学习的信息化教学设计与应用研究. *陕西师范大学*.

Jiang, L. (2019). A practical study on enhancing college students' learning engagement in a blended learning environment. *Chongqing Normal University*. 姜丽.(2019). 混合式学习环境中提升大学生学习参与度的实践研究. *重庆师范大学*.

Johnson, D. W. & Johnson, R. T. (1974). Instructional goal structure: Cooperative, competitive, or individualistic. *Review of Educational Research*, 44, 213-240.

Johnson, D. W. & Johnson, R. T. (1979). Conflict in the classroom: Controversy and learning. *Review of Educational Research*, 49, 51-70.

Johnson, D. W. & Johnson, R. T. (1994). *Learning together and alone: Cooperative, competitive, and individualistic learning* (4th ed.). Needham Heights, MA: Allyn and Bacon.

Johnson, D. W., & Johnson, R. T. (2007). *Creative controversy: Intellectual challenge in the classroom* (4th ed.). Edina, MN: Interaction Book Company.

Johnson, D. W., & Johnson, R. T. (2009). An educational psychology success story: Social interdependence theory and cooperative learning. *Educational researcher*, 38(5), 365-379.

Johnson, D. W., Johnson, R. T., & Smith, K. (1998). Cooperative learning returns to college what evidence is there that it works?. *Change: the magazine of higher learning*, 30(4), 26-35.

Johnson, D. W., Johnson, R. T., & Smith, K. (2007). The state of cooperative learning in postsecondary and professional settings. *Educational Psychology Review*, 19(1), 15-29.

Johnson, D. W., Johnson, R. T., Holubec, E. J. & Roy, P. (1994). *The new circles of learning: Cooperation in the classroom and school*. ASCD.

Johnson, R. B. & Christensen, L. B., (2014). *Educational Research: Quantitative, Qualitative, and Mixed Approaches*. SAGE.

Jones, P., Skinner, H., Wong, L., Tatnall, A., & Burgess, S. (2014). A framework for investigating blended learning effectiveness. *Education+ Training*.

Khan, B. H. (Ed.). (1997). *Web-based instruction*. Educational Technology.

Khine, M. S., Lourdusamy, A. (2003). Blended learning approach in teacher education: combining face-to-face instruction, multimedia viewing and online discussion. *British Journal of Educational Technology*, 34(5), 671-675.

Kim, T. K. (2015). T test as a parametric statistic. *Korean journal of anesthesiology*, 68(6), 540.

Kinshuk, D., Yang, A. (2003). Web-based asynchronous synchronous environment for online learning. *USDLA Journal*, 17(2), 5-18.

Kintu, M. J., Zhu, C., & Kagambe, E. (2017). Blended learning effectiveness: the relationship between student characteristics, design features and outcomes. *International Journal of Educational Technology in Higher Education*, 14(1), 1-20.

Krashen, S. (1982). *Principles and practice in second language acquisition*. Oxford: Pergamon.

Krashen, S. (1985). *The Input Hypothesis: Issues and Implications*. London: Longman.

Krashen, S., & Mason, B. (2020). The optimal input hypothesis: Not all comprehensible input is of equal value. *CATESOL Newsletter*, 5.

Lage, M. J., Platt, G. J., & Treglia, M. (2000). Inverting the classroom: A gateway to creating an inclusive learning environment. *The journal of economic education*, 31(1), 30-43.

Lai, M., Lam, K. M., & Lim, C. P. (2016). Design principles for the blend in blended learning: a collective case study. *Teaching in Higher Education*, 21(6), 716-729.

Lantolf, J. P. (2004). Sociocultural theory and second and foreign language learning: An overview of sociocultural theory. In K. van Esch, & O. St. John (Ed.). *New Insights into Foreign Language Learning and Teaching*. Frankfurt am Main: Peter Lang.

Lantolf, J. P., & Appel, G. (Eds.). (1994). *Vygotskian approaches to second language research*. Norwood, NJ: Ablex.

Lantolf, J. P., & Thorne, S. L. (2006). *Sociocultural theory and genesis of second language development*. Oxford: Oxford University Press, 2006.

Lazer, D. (1999). *Eight ways of teaching: The artistry of teaching with multiple intelligences*. Palatine, IL: IRI Skylight.

Li, K. D, Zhao, J.H. (2004). The principle and application model of blended learning. *Research in Electronical Education*, (07):1-6. 李克东,赵建华.(2004).混合学习的原理与应用模式. *电化教育研究*, (07):1-6.

Li, M. T, Zhou, B. L. (2020). *English Listening and Speaking for Postgraduate Students*, Ed. Beijing: Foreign Language Teaching and Research Press.

Li, X. D. (2021). On the Complementary Application of Multiple English Teaching Methods in College English Classroom. *Overseas English*, (11):123-124.

李晓丹.(2021).论大学英语课堂中多种英语教学法的互补应用.海外英语,(11):123-124.

Lilliefors, H. W. (1967). On the Kolmogorov-Smirnov test for normality with mean and variance unknown. *Journal of the American statistical Association*, 62(318), 399-402.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE.

Liu, S. Z. (2009). A study of college students' attitudes towards interactive learning modes in multimedia environments. *Research on Electronic Education*, (07):98-102. 刘淑珍.(2009).大学生对多媒体环境下互动学习模式的态度研究.电化教育研究,(07):98-102.

Liu, Y. F.. (2016). Research on Cooperative Learning Community from the Perspective of Organizational Behavior. *Shandong Normal University*. 刘燕飞.(2016).组织行为学视角下合作学习共同体研究. 山东师范大学.

Lo, C. K., Hew, K. F. (2017). A critical review of flipped classroom challenges in K-12 education: Possible solutions and recommendations for future research. *Research and practice in technology enhanced learning*, 12(1), 1-22.

Louis M. Hsu & Ronald Field (2003) Interrater Agreement Measures: Comments on Kappan, Cohen's Kappa, Scott's  $\pi$ , and Aickin's  $\alpha$ , *Understanding Statistics*, 2:3, 205-219.

Lu, O. H., Huang, A. Y., Huang, J. C., Lin, A. J., Ogata, H., & Yang, S. J. (2018). Applying learning analytics for the early prediction of Students' academic performance in blended learning. *Journal of Educational Technology & Society*, 21(2), 220-232.

Lu, X., Zhao, G. D., Yuan, S., Li, Z. G. (2011). Research on Faculty Acceptance of Hybrid Learning in Universities: Taking PKU Academic Online as an Example. *Journal of Distance Education*, 29(02):62-69. 路兴, 赵国栋, 原帅, 李志刚. (2011). 高校教师的“混合式学习”接受度及其影响因素研究——以北大教学网为例. 远程教育杂志, 29(02):62-69.

Ma, H. L.. (2003). The meaning, elements and significance of cooperative learning. *Foreign Educational Research*, (05):16-19. 马红亮.(2003).合作学习的内涵、要素和意义. *外国教育研究*, (05):16-19.

Ma, J. Y.. (2018). A Study on the Development Status of Blended Teaching and Learning in Higher Education and the Protection System. *Southwestern University*. 马健云. (2018).高校混合式教学发展现状及保障制度研究. *西南大学*.

Ma, X. L., Liu, F.. (2018). Research on the reform strategy of “blended teaching” in colleges and universities. *Education Teaching Forum*, (34):128-129. 马晓亮,刘芬.(2018).高校“混合式教学”改革策略研究. *教育教学论坛*, (34):128-129.

Ma, X. L., Ge, J., Hu, Q. (2021). Exploring the effective practice mode of online and offline blended foreign language teaching. *Foreign language community*, (04):19-26. 马晓雷,葛军,胡琼.(2021).线上线下混合式外语教学的有效实践模式探究. *外语界*, (04):19-26.

Madsen, H. S. (1983). *Techniques in Testing*. Oxford University Press, 200 Madison Ave., New York, NY.

Marshall, C. & Rossman, G. B. (2011). *Designing Qualitative Research*. 5th ed. Thousand Oaks, CA: SAGE.

Mason, J. (2017). *Qualitative researching*. SAGE.

McGill, T. J., Klobas, J. E. (2009). A task–technology fit view of learning management system impact. *Computers & Education*, 52(2), 496-508.

Means, B., Toyama, Y., Murphy, R., & Baki, M. (2013). The effectiveness of online and blended learning: A meta-analysis of the empirical literature. *Teachers college record*, 115(3), 1-47.

Mei, R. (2011). New developments in the theory of multiple intelligences in Chinese school education. *Elementary and Secondary School Management*, (01):40-42. 梅汝莉.(2011).多元智能理论在中国学校教育中的新进展. *中小学管理*, (01):40-42.

Meng, Y. F., Lian, R., Guo, C. Y. (2004). A comparative study of expert-skilled-novice teachers' teaching strategies. *Psychological Development and Education*, (04):70-73. 孟迎芳, 连榕, 郭春彦.(2004).专家—熟手—新手型教师教学策略的比较研究. *心理发展与教育*, (04):70-73.

Meng, Y. R., Qin, L. L. (2019). Sociocultural Theory and Second Language Development—An Interview with James Lantolf. *Foreign Language Teaching*, 40(05):57-60. 孟亚茹, 秦丽莉.(2019).社会文化理论与二语发展—James Lantolf 访谈录. *外语教学*, 40(05):57-60.

Michinov, N., Morice, J., & Ferrières, V. (2015). A step further in Peer Instruction: Using the Stepladder technique to improve learning. *Computers & Education*, 91, 1-13.

Ministry of Chinese Education. (2007). *Teaching Requirements for College English Course*. Shanghai: Shanghai Foreign Language Education Publishing House. 中国教育部.(2007).大学英语课程教学要求. 上海:上海外语教育出版社.

Ministry of Chinese Education. (2012). *Ten-Year Development Plan for Education Informatization* (2011-2020). [http://old.moe.gov.cn//publicfiles/business/htmlfiles/moe/s3342/201203/xxgk\\_133322.html](http://old.moe.gov.cn//publicfiles/business/htmlfiles/moe/s3342/201203/xxgk_133322.html)[accessed 18 May 2020]. 中国教育部.(2012).教育信息化十年规划(2011-2020).

Ministry of Chinese Education. (2017). *College English Teaching Guide*. <http://sfs.ahu.edu.cn/2019/0402/c15142a197508/pagem.htm>[accessed 18 May 2020]. 中国教育部. (2017).大学英语教学指南.

Missildine, K., Fountain, R., Summers, L., & Gosselin, K. (2013). Flipping the classroom to improve student performance and satisfaction. *Journal of Nursing Education*, 52(10), 597–599.

Moebs, S., & Weibelzahl, S. (2006). Towards a good mix in blended learning for small and medium-sized enterprises—Outline of a Delphi Study. *Innovative Approaches for Learning and Knowledge Sharing*, (4227), 10-17.

Morse, J. M. & Richards, L. (2002). *README FIRST for a User's Guide to Qualitative Methods*. Thousand Oaks, London, New Delhi: Sage.

Mudholkar, G. S., Srivastava, D. K., & Thomas Lin, C. (1995). Some p-variate adaptations of the Shapiro-Wilk test of normality. *Communications in Statistics-Theory and Methods*, 24(4), 953-985.

Naughton, D. (2006). Cooperative Strategy Training and Oral Interaction: Enhancing Small Group Communication in the Language Classroom. *The Modern Language Journal*, 90:169–84.

Niu, F. R. (2020). The construction of teaching quality evaluation system of flipped classroom in finance. *Journal of Shanxi University of Finance and Economics*, 42(S2):125-128. 牛富荣.(2020).财政学翻转课堂教学质量评价体系的构建. *山西财经大学学报*, 42(S2):125-128.

Nunan, D. (1991). Communicative tasks and the language curriculum. *TESOL quarterly*, 25(2), 279-295.

Nunan, D. (1995). Closing the gap between learning and instruction. *Tesol Quarterly*, 29(1), 133-158.

Nunan, D. (2004). *Task-based language teaching*. Ernst Klett Sprachen.

Orsini-Jones, M., Conde Gafaro, B., & Altamimi, S. (2017). Integrating a MOOC into the postgraduate ELT curriculum: reflecting on students' beliefs with a MOOC blend. *Beyond the language classroom: Researching MOOCs and other innovations*, 71-83.

Oxford, R. L. (1993). Instructional Implications of Gender Differences in Second/Foreign Language (L2) Learning Styles and Strategies. *Applied language learning*, 4, 65-94.

Panitz, T. (1996). A definition of collaborative vs cooperative learning. [http://www.ccti.colfinder.org/sites/default/files/InService\\_International/resources/KD/M3/U3/A%20Definition%20of%20Collaborative%20vs%20Cooperative%20Learning.pdf](http://www.ccti.colfinder.org/sites/default/files/InService_International/resources/KD/M3/U3/A%20Definition%20of%20Collaborative%20vs%20Cooperative%20Learning.pdf) [accessed 6/1/2021]

Panitz, T. (1997). Collaborative versus cooperative learning: Comparing the two definitions helps understand the nature of interactive learning. *Cooperative learning and college teaching*, 8(2), 1-13.

Patton, M.Q. (1999). Enhancing the quality and credibility of qualitative analysis. *Health Sciences Research*, 34, 1189–1208.

Perrin, J. (1990). The learning styles project for potential dropouts. *Educational Leadership*, 48(2), 23-24.

Picciano, A. G. (2009). Blending with purpose: The multimodal model. *Journal of asynchronous learning networks*, 13(1), 7-18.

Plonsky, L., & Oswald, F. L. (2014). How big is “big”? Interpreting effect sizes in L2 research. *Language learning*, 64(4), 878-912.

Polit, D. F., & Beck, C. T. (2012). Gender bias undermines evidence on gender and health. *Qualitative health research*, 22(9), 1298.

Procter, C. T. (2003). Blended learning in practice. In *Proceedings of Conference on Education in a Changing Environment 2003*. Salford, UK: The University of Salford.

Qi, J. (2020). The new construction of teaching space in the flipped classroom: problems and responses. *Modern Educational Technology*. (02), 36-41. 齐军.(2020). 翻转课堂对教学空间的新建构:问题及应对.现代教育技术.(02),36-41.

Qiu, L. (2017). A study on the process design of language facilitation in “production-oriented approach”, *Modern Foreign Languages*, (03): 386-396. 邱琳.(2017). “产出导向法”语言促成环节过程化设计研究.现代外语,(03): 386-396.

Raba, A. A. A. M. (2017). The Impact of Effective teaching Strategies on producing fast and good learning outcomes. *International Journal of Research-Granthaalayah*, 5(1), 43-58.

Richards, J. & Rodgers, T. (2008). *Approaches and Methods in Language Teaching* (2nd ed.). Beijing: Foreign Language Teaching and Research Press.

Richards, J., & Rodgers, T. (2001). *Approaches and methods in language teaching* (2nd ed.). Cambridge: Cambridge University Press.

Robson, C. (2002). *Real world research: A resource for social scientists and practitioner-researchers*. Wiley-Blackwell.

Rodgers, T. S. (2001). *Language Teaching Methodology*. ERIC Issue Paper.

Ross, B., & Gage, K. (2006). Global perspectives on blending learning. *The Handbook of Blended Learning; Bonk, JC, Graham, RC, Eds*, 155-168.

Rovai, A. P., & Jordan, H. M. (2004). Blended learning and sense of community: A comparative analysis with traditional and fully online graduate courses. *International Review of Research in Open and Distributed Learning*, 5(2), 1-13.

Sands, P. (2002). Inside outside, upside downside: Strategies for connecting online and face-to-face instruction in hybrid courses. *Teaching with Technology Today*, 8(6), 6.

Savignon, Sandra J. (1987). *Communicative Language Teaching*. Theory into Practice. vol. 26, No. 4, 235-42.

Sawyer, R. K. (2006). Educating for innovation. *Thinking skills and creativity*, 1(1), 41-48.

Sawyer, R. K. (2014). The future of learning: Grounding educational innovation in the learning sciences. *The Cambridge handbook of the learning sciences*, 726-746.

Scida, E. E., & Saury, R. E. (2006). Hybrid courses and their impact on student and classroom performance: A case study at the University of Virginia. *CALICO journal*, 517-531.

Selltiz, C., Jahoda, M. and Deutsch, M. (1965). *Research Methods in Social Relations*, London, Methuen, pp. 2.

Shao, Q. Y., Feng, L. (2011). Teachers' mediating role in university English vocabulary teaching from the perspective of socio-cultural theory. *Journal of Beijing Jiaotong University: Social Science Edition*, 10(4), 105-109. 邵钦瑜, 冯蕾. (2011). 从

社会文化理论的视角论教师在大学英语词汇教学中的中介作用. 北京交通大学学报: 社会科学版, 10(4), 105-109.

Sharan, Y., & Sharan, S. (1992). *Expanding cooperative learning through group investigation* (Vol. 1234). New York: Teachers College Press.

Sharma, P., & Barrett, B. (2008). *Blended learning: Using technology in and beyond the language classroom*. Oxford: Macmillan.

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for information*, 22(2), 63-75.

Simons, H. (2009). *Case study research in practice*. SAGE publications.

Singh, H., & Reed, C. (2001). A white paper: Achieving success with blended learning. *Centra software*, 1, 1-11.

Slavin, R. E. (1978). Student teams and comparison among equals: Effects on academic performance and student attitudes. *Journal of Educational Psychology*, 70, 532-538.

Slavin, R. E. (1980). Cooperative learning. *Review of educational research*, 50(2), 315-342.

Slavin, R. E. (1995). *Cooperative learning: Theory, research, and practice* (2<sup>nd</sup> ed.). Needham Heights, MA: Allyn & Bacon.

Slavin, R. E. (1996). Research on cooperative learning and achievement: What we know, what we need to know. *Contemporary educational psychology*, 21(1), 43-69.

Smidt, S. (2009). *Introducing Vygotsky: A Guide for Practitioners and Students in Early Years Education*. Routledge.

Smith, G. G., & Kurthen, H. (2007). Front-stage and back-stage in hybrid e-learning face-to-face courses. *International Journal on E-Learning*, 6(3), 455-474.

Smyth, S., Houghton, C., Cooney, A., & Casey, D. (2012). Students' experiences of blended learning across a range of postgraduate programmes. *Nurse education today*, 32(4), 464-468.

Snider, D. P. (2001). *Multiple intelligences theory and foreign language teaching*. Unpublished doctoral dissertation, University of Utah, Salt Lake City.

Song, R. J., Sun, Y. X. (2020). Exploration and practice of physical chemistry teaching model. *Chemical Education(in English and Chinese)*,41(18):19-22. 宋若静, 孙玉希.(2020). 物理化学教学模式的探索与实践. *化学教育(中英文)*,41(18):19-22.

Spearman, C. (1904). "General Intelligence" Objectively Determined and Measured. *American Journal of Psychology*, Vol 15(2), 201-293.

Stacey, E., Wiesenber, F. (2007). A study of face-to-face and online teaching philosophies in Canada and Australia. *International Journal of E-Learning & Distance Education*, 22(1), 19-40.

Staker, H., & Horn, M. B. (2012). Classifying K-12 blended learning. *Innosight Institute*.

Stern, H. H. (1985). Review of J. W. Oller and P. A. Richard - Amato's *Methods That Work*. *Studies in Second Language Acquisition* (7): 249-251.

Stracke, E. (2007). A road to understanding: A qualitative study into why learners drop out of a blended language learning (BLL) environment. *ReCALL: the Journal of EUROCALL*, 19(1), 57.

Sun, F. (2017). Reflection on the concept of flipped classroom and future direction. *Journal of Electronic Education Research*, 38(10):18-22. 孙峰.(2017). 翻转课堂的理念反思与未来走向. *电化教育研究*,38(10):18-22.

Sun, S. G.. (2017). A study on the reflective practice of "teacher-student cooperative assessment" in the classroom. *Modern Foreign Languages*, (03): 397-406. 孙曙光.(2017). "师生合作评价"课堂反思性实践研究. *现代外语*, (03): 397-406.

Sun, Y. B.. (2016). The construction and empirical study of game-based flipped classroom teaching model: the case of "College English Reading and Writing

Translation” course. *Modern Education Technology*, 26(11):80-86. 孙彦彬. (2016). 游戏化翻转课堂教学模式的构建与实证研究——以“大学英语读写译”课程为例. *现代教育技术*, 26(11):80-86.

Tavakoli, H. (2012). *A Dictionary of Research Methodology in Applied Linguistics*. Rahnama Press.

Terrell, T. D. (1977). A natural approach to second language acquisition and learning. *The Modern Language Journal*, 61(7), 325-337.  
Tercanlioglu, L. (2004). Exploring gender effect on adult foreign language learning strategies. *Issues in educational research*, 14(2), 181-193.

Tesar, B. (2014). *Output-driven phonology: Theory and learning* (No. 139). Cambridge University Press.

Thabane, L., Ma, J., Chu, R., Cheng, J., Ismaila, A., Rios, L. P., ... & Goldsmith, C. H. (2010). A tutorial on pilot studies: the what, why and how. *BMC medical research methodology*, 10(1), 1-10.

Thai, N. T. T., De Wever, B., & Valcke, M. (2017). The impact of a flipped classroom design on learning performance in higher education: Looking for the best “blend” of lectures and guiding questions with feedback. *Computers & Education*, 107, 113-126.

The Chinese characteristics of “output-oriented method”. *Modern Foreign Languages*, 40(03):348-358+438. 文秋芳.(2017).“产出导向法”的中国特色. *现代外语*, 40(03):348-358+438. Wen, Q. F. (2017) .

The National Educational Technology Plan. (2000). E-learning: putting a world-class education at the fingertips of all Children. *Office of Educational Technology*. <https://files.eric.ed.gov/fulltext/ED444604.pdf> [accessed 31 March 2021]

The Postgraduate English Teaching Research Branch of Beijing Higher Education Society. (2020). *Syllabus of English for Non-English Major Degree Graduate Students*. Beijing: Press of Renmin University of China. 北京市高等教育学会研究生英语教学研究分会. (2020).非英语专业学位研究生英语教学大纲. 北京:中国人民大学出版社.

Thomas, G. (2017). *How to do your research project: A guide for students*. SAGE.

Thorne, K. (2003). *Blended learning: how to integrate online & traditional learning*. Kogan Page Publishers.

Thorne, S. (2005). Epistemology, politics and ethics in sociocultural theory. *Modern Language Journal*, 89, 393-409.

Thurmond, V. A. (2001). The point of triangulation. *Journal of nursing scholarship*, 33(3), 253-258.

Tian, A. L. (2015). Teacher role transformation and comprehensive literacy enhancement in the flipped classroom teaching model. *Teacher Education Research*, 27(05):84-88. 田爱丽.(2015).翻转课堂教学模式下教师角色转变与综合素养提升. 教师教育研究, 27(05):84-88.

Tomlinson, B., & Whittaker, C. (2013). *Blended learning in English language teaching*. London: British Council.

Tucker, B. (2012). The flipped classroom. *Education next*, 12(1), 82-83.

Ushida, E. (2005). The role of students' attitudes and motivation in second language learning in online language courses. *CALICO Journal*, 21(1), 49-78.

Valiande, S. (2010). *Differentiated teaching in mixed ability classrooms*. Unpublished doctoral dissertation, University of Cyprus, Nicosia.

Vo, H. M., Zhu, C., & Diep, N. A. (2017). The effect of blended learning on student performance at course-level in higher education: A meta-analysis. *Studies in Educational Evaluation*, 53, 17-28.

Vorapongsathorn, T., Taejaroenkul, S., & Viwatwongkasem, C. (2004). A comparison of type I error and power of Bartlett's test, Levene's test and Cochran's test under violation of assumptions. *Songklanakarin J. Sci. Technol*, 26(4), 537-547.

Vygotsky, L. (1978). Interaction between learning and development. *Readings on the development of children*, 23(3), 34-41.

Vygotsky, L. S. (1978). *Mind and Society: The Development of Higher Mental Processes*. Cambridge: Harvard University Press.

Vygotsky, L. S. (1978). *Mind in Society: the Development of Higher Psychological Processes*. Cambridge, Massachusetts: Harvard University Press.

Vygotsky, L. S. (1981). The genesis of higher mental functions. In J: V. Wertsch (ed.), *The concept of activity in Soviet psychology*. Armonk, NY: M. E. Sharpe, 144-188.

Wahab, Naemah Abdul; Othman, Jamal; Warris, Saiful Nizam. (2016). Blended learning in higher education: An overview. *E-Academia Journal UiTMT*, 5.2: 115-122.

Wang, L. (2018). Exploring the factors influencing students' deep learning in blended courses in colleges and universities. *Huazhong Normal University*. 王璐.(2018). 高校混合式课程中学生深度学习影响因素探究. *华中师范大学*.

Wang, S. Q., Feng, X. S. (2017). The Design and Practice of Blended Learning based on MOOC—a case of blended learning in Peking University during 2015-2016. *Modern Educational Technology*, 27(11):71-77. 王胜清,冯雪松.(2017).基于慕课的混合式教学的设计与实践——以 2015-2016 年北京大学开设的混合式课程为例. *现代教育技术*, 27(11):71-77.

Wang, T. (2002). A Brief Introduction to Cooperative Learning. *Chinese Journal of Education*, (01):32-35. 王坦.(2002).合作学习简论. *中国教育学刊*, (01):32-35.

Wang, Y. S.,Cai, L. M.. (2023). Why the same screen is not the same frequency: a qualitative study of the factors influencing postgraduates' engagement in online learning. *Degree and Graduate Education*, (05):68-78. 汪雅霜,蔡檬檬.(2023).同屏为何不同频:硕士研究生在线学习投入度影响因素的质性研究. *学位与研究生教育*, (05):68-78.

Wang, Y., Liu, M.. (2007). Multiple Intelligences Theory and its Exploration and Practice on College English Teaching. *Journal of Changchun University of Technology (Higher Education Research Edition)*, (01):101-102. 王轶,刘铭.(2007).

多元智能理论及其对大学英语教学的探索与实践.长春工业大学学报(高教研究版),(01):101-102.

Wang, Y., Shi, W. L., Cui, Y. H. (2017). Research on information literacy of young teachers in the "Internet+" era. *China Electrochemical Education*, (03):109-114. 王轶,石伟林,崔艳辉.(2017)."互联网+"时代青年教师信息素养研究.中国电化教育, (03):109-114.

Wang, Y., Wei, K. F.. (2020). Integration and construction of English intelligent learning mode from perspective of Big Data. *Teaching and Administration*, (09):98-100. 王轶, 卫柯帆. (2020). 大数据视角下英语智能学习模式的融合与构建. *教学与管理*, (09):98-100.

Watson, J., Murin, A., Vashaw, L., Gemin, B., & Rapp, C. (2013). Keeping Pace with K-12 Online & Blended Learning: An Annual Review of Policy and Practice. 10 Year Anniversary Issue. *Evergreen Education Group*.

Wedell, M. (2011). More than just 'technology': English language teaching initiatives as complex educational changes. *Dreams and realities: Developing countries and the English language*, 269-290.

Weis, L.& Fine, M. (2000). *Speed bumps: A student-friendly guide to qualitative research*. New York: Teachers College Press.

Welch, B. L. (1947). The generalization of 'STUDENT'S' problem when several different population variances are involved. *Biometrika*, 34(1-2), 28-35.

Wen, Q. F. (2007). Output-driven hypothesis and problem-driven hypothesis-A discussion on the reform of curriculum and teaching methods for English majors in the new century. *Paper for the First National Senior Forum for English Majors' Faculty Directors*. 文秋芳.(2007).输出驱动假设和问题驱动假设——论述新世纪英语专业课程设置与教学方法的改革.首届全国英语专业院系主任高级论坛论文.

Wen, Q. F. (2008). Output-driven hypothesis and English professional skills curriculum reform, *Foreign Language*, (02): 2-9. 文秋芳.(2008). 输出驱动假设与英语专业技能课程改革, *外语界*, (02): 2-9.

Wen, Q. F. (2013). The application of output-driven hypothesis in college English teaching: Reflections and suggestions. *Foreign Language*, (06):14-22. 文秋芳.(2013).输出驱动假设在大学英语教学中的应用:思考与建议. *外语界*, (06):14-22.

Wen, Q. F. (2014). Output-driven-input-enabling hypothesis: An attempt to construct a theory of foreign language classroom teaching in college. *Chinese Foreign Language Education*, (02):1-12. 文秋芳.(2014).输出驱动—输入促成假设:构建大学外语课堂教学理论的尝试. *中国外语教育*, (02):1-12.

Wen, Q. F. (2015). Building a theoretical system of “output-oriented method”. *Foreign Language Teaching and Research*, 7(04):547-558+640. 文秋芳.(2015).构建“产出导向法”理论体系. *外语教学与研究*, 7(04):547-558+640.

Wen, Q. F. (2016). “Teacher-student cooperative assessment”: a new form of assessment created by “output-oriented method”. *Foreign Language*, (05):37-43. 文秋芳.(2016).“师生合作评价”:“产出导向法”创设的新评价形式. *外语界*, (05):37-43.

Wen, Q. F. (2016). The production-oriented approach to teaching university students English in China. *Language Teaching*, 51(4), 526-540.

Wen, Q. F. (2017). The production oriented approach: A pedagogical innovation in university English teaching in China. In L. Wong & K. Hyland (eds.). *Faces of English: Students, Teachers, and Pedagogy*. London & New York: Routledge, 91-106.

Wertsch, J. V. (1985). The semiotic mediation of mental life: LS Vygotsky and MM Bakhtin. In *Semiotic mediation* (pp. 49-71). Academic Press.

Wette, R. (2011). Product–process distinctions in ELT curriculum theory and practice. *ELT journal*, 65(2), 136-144.

Whitelock, D., & Jelfs, A. (2003). Editorial: Journal of Educational Media special issue on blended learning. *Journal of Educational Media*, 28(2-3), 99-100.

Widdowson, H. G. (1972). The teaching of English as communication. *ELT Journal* (1), 1.

Widdowson, H. G. (1978). *Teaching language as communication*. Oxford: Oxford University Press.

Wilkins, D. A. (1972). *Linguistics in language teaching*. London: Edward Arnold.

Wilkins, D. A. (1976). *Notional syllabuses: a taxonomy and its relevance to foreign language curriculum development*. Oxford: Oxford University Press.

Williams, C. (2002). Learning on-line: A review of recent literature in a rapidly expanding field. *Journal of Further and Higher Education*, 26(3), 263-272.

Willis, J. (1996). A flexible framework for task-based learning. *Challenge and change in language teaching*, 52-62.

Wittrock, M. C. (1986). Students' thought processes. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed.) New York: Macmillan.

Wong, L. & K. Hyland (eds.). (2017). *Faces of English: Students, Teachers, and Pedagogy*. London & New York: Routledge.

Wu, L. R., Gao, S. X. (2008). The idea of "Zone of Proximal Development" and its implications for the reform of English language teaching. *Education and Career*, (12), 58-59. 吴丽荣,高素霞. (2008). "最近发展区"思想及其对英语语言教学改革的启示. *教育与职业*, (12), 58-59.

Xiao, H. H. (1995). *Dictionary of Decision Science*. Beijing: People's Publishing House. 萧浩辉.(1995). *决策科学辞典*.北京:人民出版社.

Xiao, J. F., Shi, J. F.. (2013). Research and exploration of blended learning mode. *China Distance Education*, (05):64-67. 肖金芳,施教芳.(2013).混合学习模式的研究和探索. *中国远程教育*, (05):64-67.

Xiong, H. H. (2020). *English Integrated Course for Postgraduate Students*, Ed. Beijing: Foreign Language Teaching and Research Press.

Xu, J. F., Lei, P. F. (2018). Research on foreign language classroom under socio-cultural perspective. *Modern Foreign Languages*, 41(4), 563-573. 徐锦芬, 雷鹏飞. (2018). 社会文化视角下的外语课堂研究. *现代外语*, 41(4), 563-573.

Xu, X. C., Wang, A. F. (2017). Deep integration of big data and multiple intelligence in education. *Educational Theory and Practice*, (25):32-35. 许晓川,王爱芬.(2017).大数据与多元智能在教育教学中的深度融合. *教育理论与实践*, (25):32-35.

Yan, J. L., Zhang, W. R., Yu, Y.. (2016). Reform and practice of school-based teaching of flipped classroom in audiovisual speaking course—taking Beijing Institute of Petrochemical Technology as an example. *Modern Education Technology*, 26(02):94-100. 严姣兰,张巍然,于媛. (2016).视听说课程翻转课堂校本教学的改革与实践—以北京石油化工学院为例. *现代教育技术*, 26(02):94-100.

Yang, F., Zhang, H. R., Zhang, W. X. (2017). A study on the Blended Learning based on MOOC and Rain Classroom—a case of the MOOC of *live English speaking and listening* Rain Classroom. *Modern Educational Technology*, 27(05):33-39. 杨芳,张欢瑞,张文霞.(2017).基于 MOOC 与雨课堂的混合式教学初探—以“生活英语听说”MOOC 与雨课堂的教学实践为例. *现代教育技术*, 27(05):33-39.

Yang, L. N., Yu S. Q.. (2009). Research and practice of communicative teaching method in English mobile learning. *Modern Distance Education*, (04):46-50. 杨丽娜,余胜泉.(2009).交际教学法在英语移动学习中的研究与实践. *现代远程教育*, (04):46-50.

Yang, L.F. (2015). The micro-lesson design of production-oriented approach of “motivating”: An example of the “Art and Nature” unit in the “*New Generation College English Comprehensive Course 2*”. *Chinese Foreign Language Education*, (04): 3-9. 杨莉芳.(2015).产出导向法“驱动”环节的微课设计—以《新一代大学英语综合教程 2》“艺术与自然”单元为例. *中国外语教育*, (04): 3-9.

Yin, R. K. (2009). *Case study research: Design and methods* (Vol. 5). SAGE.

Yin, S. T., Huang, X. F. (2015). A study on the present situation, problems and countermeasures in the informatization of postgraduate English Education. *Journal of Graduate Education*, (06):56-60. 尹松涛,黄雪飞(2015).研究生英语教育信息化:现状、问题与对策. *研究生教育研究*, (06):56-60.

Ying, J. Q., Ning, Q.. (2019). Research on the integrated mode of cooperative learning and independent learning in blended teaching of college English. *Educational Theory and Practice*, 39(03):45-47. 应洁琼,宁强.(2019).大学英语混合教学中合作学习与自主学习集成模式研究.教育理论与实践.39(03):45-47.

Yu, H.T. (2018). Exploring the five-step method of intelligent teaching in colleges and universities based on rain classroom: taking the course of “web education application” as an example. *Modern Educational Technology*, (09):55-58. 于洪涛.(2018).基于雨课堂的高校智慧教学五步法探究—以“网络教育应用”课程为例.现代教育技术,(09): 55-58.

Yu, Y. (2004). Multiple Intelligences Theory and Kindergarten Curriculum Research. *Preschool Education Research*, (05):26-28. 虞永平.(2004).多元智能理论与幼儿园课程研究.学前教育研究,(05):26-28.

Yuan, S. H., Liu, X. (2014). Status and common problems of MOOC practice in China’s universities—a case of Chinese MOOC research report. *Modern Distance Education Research*, (04):3-12+22. 袁松鹤,刘选.(2014).中国大学 MOOC 实践现状及共有问题—来自中国大学 MOOC 实践报告.现代远程教育研究,(04):3-12+22.

Zacharis, N. Z. (2015). A multivariate approach to predicting student outcomes in web-enabled blended learning courses. *The Internet and Higher Education*, 27, 44-53.

Zeng, L., Zhou D., Shi R. (2021). Research on the teaching strategy of applying flipped classroom in the course of Health Education in colleges and universities. *China Health Education*, 37(01):89-92. 曾靛,周典,施榕.(2021).高校《健康教育学》课程中应用翻转课堂的教学策略研究.中国健康教育, 37(01):89-92.

Zeng, Q. (2000). The essential elements of cooperative learning. *Academic Education*, (06):7-12. 曾琦.(2000).合作学习的基本要素.学科教育, (06):7-12.

Zeng, X. (2001). New Horizons for Teaching Multiple Intelligences Theory. *Comparative Educational Research*. (12), 25-29. 曾晓洁.(2001).多元智能理论的教学新视野.比较教育研究, (12), 25-29.

Zhang, W. J. (2016). An experiment of teaching English in college classroom based on “production-oriented approach”. *Foreign Language and Foreign Language Teaching*, (02): 106-114. 张文娟.(2016).基于“产出导向法”的大学英语课堂教学实验. *外语与外语教学*, (02): 106-114.

Zhang L. L. (2017). Research on the teaching effectiveness of “production-oriented approach”. *Modern Foreign Languages*, (03): 369-376. 张伶俐.(2017).“产出导向法”的教学有效性研究. *现代外语*, (03): 369-376.

Zhang, F. W. (2019). A Blackboard-based study on the impact factors on the quality of online interaction in College English. *Foreign Language E-learning*, (01):90-96. 张钊炜.(2019).基于 Blackboard 的大学英语在线交互质量影响因子研究. *外语电化教学*, (01):90-96.

Zhang, M. Y. (2001). Language learning strategies and English language proficiency: An investigation of Chinese ESL students at NUS. *Journal of RELT*, 1(4), 51-73.

Zhang, P. Q. (2020). A practical study of classroom teaching in the “enabling” session of production-oriented approach: A case study of students’ multimodal oral report design. *Frontiers of Foreign Language Education Research*, 3(03):11-18+90. 张佩秋.(2020).“产出导向法”促成环节的课堂教学实践研究——以学生多模态口头报告设计为例. *外语教育研究前沿*, 3(03):11-18+90.

Zhang, S. S., Xu, J. F. (2019). The effect of online automatic feedback on the writing of learners with different levels of English from a ZPD perspective. *Foreign Languages and Foreign Language Teaching*, (5), 30-39. 张姗姗, 徐锦芬. (2019). ZPD 视角下在线自动反馈对英语不同水平学习者写作的影响. *外语与外语教学*, (5), 30-39.

Zhang, W. (2020). Design of a model for developing independent learning ability of college students based on flipped classroom. *Journal of Southwest Normal University (Natural Science Edition)*, 45(08):125-130. 张伟.(2020).基于翻转课堂的大学生自主学习能力培养模式设计. *西南师范大学学报(自然科学版)*, 45(08):125-130.

Zhang, W. J. (2017). An experimental study on the impact of “production-oriented approach ” on college English writing. *Modern Foreign Languages*, (03):377-385. 张文娟.(2017).“产出导向法”对大学英语写作影响的实验研究. *现代外语*, (03):377-385.

Zhao, G. D., Yuan, S. (2010). Factors Affecting Students' Satisfaction in Blended Learning: the case of Peking University. *China Distance Education*, (06):32-38+79. 赵国栋,原帅.(2010). 混合式学习的学生满意度及影响因素研究—以北京大学教学网为例. *中国远程教育*, (06):32-38+79.

Zhao, J.(2018). A study on the diversification of assessment methods in the blended learning model of English in colleges and universities. *Shandong Normal University*. 赵静.(2018). 高校英语混合式学习模式下测评方式的多元化研究. *山东师范大学*.

Zheng, J.F., Jiang, C. H.. (2015). Problems and Strategies of Grouping of Cooperative Learning Group in English Classroom Teaching. *Educational Theory and Practice*.35(11):54-56. 郑家福,江超.(2015).英语课堂教学中合作学习小组分组的问题及策略. *教育理论与实践*,35(11):54-56.

Zheng, X. M., Wang, Y. S. (2014). How to use survey method scientifically in foreign language education research--an analysis based on CSSCI journal articles on foreign languages in China (2008-2013). *Foreign Language E-learning*, (04):8-13. 郑新民,王玉山.(2014).如何在外语教育研究中科学地使用调查法—基于我国外语类 CSSCI 期刊文章(2008-2013 年度)的分析. *外语电化教学*, (04):8-13.

Zheng, Y. Y. (2019). A study of the learning effects of a SPOC blended English academic writing course. *Foreign Language E-learning*, (05):50-55. 郑咏滢.(2019). SPOC 混合式教学在英语学术写作课堂中的促学效果研究. *外语电化教学*, (05):50-55.

Zhi, T. J. (2002). Multiple Intelligences: Implications for classroom teaching reform. *Elementary and Secondary School Management*, (05):9-11. 郅庭瑾.(2002).“多元智能”理论对课堂教学改革的启示. *中小学管理*, (05):9-11.

Zhou, W. (1997). The Enlightenment of Multiple Intelligences. *Shanghai Research on Higher Education*, (08):50-52. 周卫.(1997).多元智能论的启迪.上海高教研究,(08):50-52.

Zhou, X. (1992). A new view of children's intelligence: Multiple intelligence theory. *Mental Development and Education*, (02):22-26. 周欣.(1992).新的儿童智力观:多元智力理论.心理发展与教育,(02):22-26.

Zhu, F.. (2009). Influence of Western communicative method on foreign language teaching in China and reflection. *Educational Theory and Practice*. 29(12):56-57. 朱枫.(2009).西方交际法对中国外语教学的影响及思考.教育理论与实践,29(12):56-57.

Zuengler, J., & Miller, E. R. (2006). Cognitive and sociocultural perspectives: Two parallel SLA worlds?. *TESOL quarterly*, 40(1), 35-58.

## Appendix 1 Information Sheet and Consent Form (President)



### President Information Sheet

**Professional Doctorate Research Project:** An Exploration of Blended Learning in Academic English for Postgraduates—A Case Study from China

**Postgraduate researcher:** Yi Wang

**Supervisor:** Dr. Jessica Clapham: [j.clapham@uwtsd.ac.uk](mailto:j.clapham@uwtsd.ac.uk),

Dr. Ros Coard: [r.coard@uwtsd.ac.uk](mailto:r.coard@uwtsd.ac.uk)

Dear President Zhang,

I am writing to seek your consent for School of Foreign Languages and School of Graduate Students to take part in a research project about the innovative blended learning exploration of postgraduates in the academic English course in China that I am conducting as part of my Professional Doctorate research at Institute of Education and Humanities at University of Wales, Trinity Saint David in Wales.

#### **What is the study?**

The study aims to investigate and construct a quality blended learning mode in the postgraduate academic English course to enhance their English language proficiency. It hopes to make recommendations for future blended learning as well as identify a gap in blended learning pedagogies based on the empirical study in a Chinese provincial university.

#### **Why has these two schools been chosen to take part?**

I am an experienced teacher who have 18 years of teaching in School of Foreign Languages, Changchun University of Technology. Therefore, I am familiar with these teachers in School of Foreign Languages better as well as the average English proficiency of postgraduates in School of Graduate

Students, and can communicate with them frequently and easily, which will help me to carry out the empirical study.

**Do the schools have to take part?**

When you give the permission, it is entirely up to the participants (teachers and students) to decide whether they participate in the research or not. They may also withdraw their consents to the participation at any time during the project, without any repercussions to them, by contacting the researcher, Mrs. Yi Wang, email: 1904436@student.uwtsd.ac.uk.

**What will happen if the schools take part?**

With your agreement, I will invite the students in School of Graduate Students and teachers in School of Foreign Languages to participate in the research by issuing an invitation letter. Participants who voluntarily sign the letter of consent form will take part in my research and they are free to withdraw from the study at any time. I will follow the correct protocols, secured permission and ethical clearance during the whole process.

**What are the risks and benefits of taking part?**

The information given by participants in the study will remain confidential and will only be seen by the researcher and the supervisor listed at the start of this letter. None of them will be identifiable in any published report resulting from the study.

I anticipate that the findings of the study will be useful for improving the English language proficiency of postgraduates by using the innovative blended learning mode.

**What will happen to the data?**

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. All the details of participants will be masked by the numbers or English letters, and all information related to the research will have non-traceability to any participant to protect the privacy of participants. The records of this study will be kept private. Research records will be stored securely in a password-protected computer and only the research team will have access to the records. The results of the study will be presented at national and international conferences, and in written reports and articles.

**What happens if the participants change their mind?**

The participants can change their minds at any time without any repercussions. If they change their minds after data collection has ended, I will discard the data appropriately.

**Where can you get more information?**

If you would like more information, please contact Yi

Wang. Email: 1904436@student.uwtsd.ac.uk.

I do hope that you will agree that I can carry out my research in your university. If you do, please complete the attached consent form and return it to me.

This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. Full details are available on request.

Your approval and support would be highly appreciated.

Yours sincerely

Yi Wang

September, 2020

## **President Consent Form**

I have read the Information Sheet about the project and received a copy of it.

I understand what the purpose of the project is and what is required of me. All my questions have been answered.

Your name: \_\_\_\_\_

Role within the university: \_\_\_\_\_

Name of your university: \_\_\_\_\_

Please tick as appropriate:

I consent to the involvement of School of Foreign Languages and School of Graduate in the project as outlined in the Information Sheet. ☐

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

## Appendix 2 Invitation Letter and Consent Form (Teachers)



### Invitation of Teachers

**Professional Doctorate Research Project:** An Exploration of Blended Learning in Academic English for Postgraduates—A Case Study from China

**Postgraduate researcher:** Yi Wang

**Supervisor:** Dr. Jessica Clapham: [j.clapham@uwtsd.ac.uk](mailto:j.clapham@uwtsd.ac.uk),

Dr. Ros Coard: [r.coard@uwtsd.ac.uk](mailto:r.coard@uwtsd.ac.uk)

Dear teacher,

I am writing to seek your consent for taking part in a research project about the innovative blended learning exploration of postgraduates in the academic English course in China that I am conducting as part of my Professional Doctorate research at Institute of Education and Humanities at University of Wales, Trinity Saint David in Wales.

#### **What is the study?**

The study aims to investigate and construct a quality blended learning mode in the postgraduate academic English course to enhance their English language proficiency. It hopes to make recommendations for future blended learning as well as identify a gap in blended learning pedagogies based on the empirical study in a Chinese provincial university.

#### **Do you have to take part?**

It is entirely up to you whether you participate. You may also withdraw your consent to participation at any time during the project, without any repercussions to you, by contacting the researcher, Mrs. Yi Wang, Tel: 15843108868, email: [1904436@student.uwtsd.ac.uk](mailto:1904436@student.uwtsd.ac.uk).

#### **What will happen if you take part?**

With your agreement, I will invite you to participate in the research if you voluntarily sign the letter of consent form and you are free to withdraw from the study at any time. You will include any or all of the following data collection processes:

Discussions of EFL pedagogies used in blended learning mode.

Two classroom observations as the teaching process materials which will be recorded and analysed.

A 30-minute interview at a suitable and comfortable place. I would like to understand:

Your preferred blended learning mode.

Your perception of the improved blended learning experience.

Your obstacles and problems when improving your students' English proficiency when teaching based on the improved blended learning mode.

And I will follow the correct protocols, secured permission and ethical clearance during the whole process.

#### **What are the risks and benefits of taking part?**

The information given by you in the study will remain confidential and will only be seen by the researcher and the supervisor listed at the start of this letter. None of them will be identifiable in any published report resulting from the study.

I anticipate that the findings of the study will be useful for improving the English language proficiency of postgraduates by using the innovative blended learning mode.

#### **What will happen to the data?**

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. All the details of participants will be masked by the numbers or English letters, and all information related to the research will have non-traceability to any participant to protect the privacy of participants. The records of this study will be kept private. Research records will be stored securely in a password-protected computer and only the research team will have access to the records. The results of the study will be presented at national and international conferences, and in written reports and articles.

#### **What happens if you change your mind?**

You can change your mind at any time without any repercussions. If you change your mind after data collection has ended, I will discard the data appropriately.

#### **Where can you get more information?**

If you would like more information, please contact Yi Wang.

Email: 1904436@student.uwtsd.ac.uk.

I do hope that you will agree to your participation in the study. If you do, please complete the attached consent form and return it to me.

This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. Full details are available on request.

Your approval and support would be highly appreciated.

Yours sincerely

Yi Wang

September, 2020

## **Teacher Consent Form**

**Research Project:** An Exploration of Blended Learning in Academic English for Postgraduates—A Case Study from China

I (the participant) have read the Invitation about the project and received a copy of it.

I understand what the purpose of the project is and what is required of me. All my questions have been answered.

I agree to participate in these activities, realising I may withdraw at any time without penalty.

I agree that the research data gathered for this study may be published provided I am not identifiable.

Participant Name: \_\_\_\_\_

Participant Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Appendix 3 Invitation Letter and Consent Form (Students)



### Invitation of Students

**Professional Doctorate Research Project:** An Exploration of Blended Learning in  
Academic English for Postgraduates—A  
Case Study from China

**Postgraduate researcher:** Yi Wang

**Supervisor:** Dr. Jessica Clapham: [j.clapham@uwtsd.ac.uk](mailto:j.clapham@uwtsd.ac.uk),

Dr. Ros Coard: [r.coard@uwtsd.ac.uk](mailto:r.coard@uwtsd.ac.uk)

Dear Student,

I am writing to seek your consent for taking part in a research project about the innovative blended learning exploration of postgraduates in the academic English course in China that I am conducting as part of my Professional Doctorate research at Institute of Education and Humanities at University of Wales, Trinity Saint David in Wales.

#### **What is the study?**

The study aims to investigate and construct a quality blended learning mode in the postgraduate academic English course to enhance their English language proficiency. It hopes to make recommendations for future blended learning as well as identify a gap in blended learning pedagogies based on the empirical study in a Chinese provincial university.

#### **Do you have to take part?**

It is entirely up to you whether you participate. You may also withdraw your consent to participation at any time during the project, without any repercussions to you, by contacting the researcher, Mrs. Yi Wang, Email: [1904436@student.uwtsd.ac.uk](mailto:1904436@student.uwtsd.ac.uk).

#### **What will happen if you take part?**

With your agreement, I will invite you to participate in the research if you voluntarily sign the letter of consent form and you are free to withdraw from the study at any time. You will include any or all of the following data collection processes:

A questionnaire related to your English learning experience and obstacles or problems encountered when you were at the undergraduate level.

A pre-test and a post-test to test your English proficiency.

Two classroom observations as the teaching process materials which will be recorded and analysed in order to explore the appropriate course design.

A 30-minute interview at a suitable and comfortable place. I would like to understand:

Your preferred blended learning mode.

Your perception of the improved blended learning experience.

Your obstacles and problems when improving your English proficiency when taught by the improved blended learning mode.

Your online learning data recorded by the autonomous platform, which will be used to analyse your study habits.

Your online reflective journal which is used as your feedback of the research.

And I will follow the correct protocols, secured permission and ethical clearance during the whole process.

### **What are the risks and benefits of taking part?**

The information given by you in the study will remain confidential and will only be seen by the researcher and the supervisor listed at the start of this letter. None of them will be identifiable in any published report resulting from the study.

I anticipate that the findings of the study will be useful for improving the English language proficiency of postgraduates by using the innovative blended learning mode.

### **What will happen to the data?**

Any data collected will be held in strict confidence and no real names will be used in this study or in any subsequent publications. All the details of participants will be masked by the numbers or English letters, and all information related to the research will have non-traceability to any participant to protect the privacy of participants. The records of this study will be kept private. Research records will be stored securely in a password-protected computer and only the research team will have access to the records. The results of the study will be presented at national and international conferences, and in written reports and articles.

### **What happens if you change your mind?**

You can change your mind at any time without any repercussions. If you change your mind after data collection has ended, I will discard the data appropriately.

**Where can you get more information?**

If you would like more information, please contact Yi

Wang. Email: 1904436@student.uwtsd.ac.uk.

I do hope that you will agree to your participation in the study. If you do, please complete the attached consent form and return it to me.

This project has been reviewed following the procedures of the University Research Ethics Committee and has been given a favourable ethical opinion for conduct. Full details are available on request.

Your approval and support would be highly appreciated.

Yours sincerely

Yi Wang

September, 2020

## **Student Consent Form**

**Research Project:** An Exploration of Blended Learning in Academic English for Postgraduates—A Case Study from China

I (the participant) have read the Invitation about the project and received a copy of it.

I understand what the purpose of the project is and what is required of me. All my questions have been answered.

I agree to participate in these activities, realising I may withdraw at any time without penalty.

I agree that the research data gathered for this study may be published provided I am not identifiable.

Participant Name: \_\_\_\_\_

Participant Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Appendix 4 Questionnaire for Students in Phase 1



### Questionnaire

Dear students, thank you for participating in this survey. Blended learning is a combination of traditional face-to-face learning and online learning, a brand-new student-centered way of learning in the Internet era. Although research on blended learning has been carried out for several years, the voices of university postgraduates themselves are still very rare and precious. Therefore, the goal of this survey is to hear the real voices of postgraduates on blended learning. The information you fill in will be kept confidential in strict accordance with the relevant guidelines.

The main purpose of this questionnaire is to understand your current state of study and your evaluation and views on blended learning, your answers can help the researcher and teachers understand your real learning needs and ideas, in order to create a more appropriate learning environment and better strategies for you.

Thank you for your cooperation.

**1. Your gender is \_\_\_\_\_.**

- A. male
- B. female

**2. You belong to \_\_\_\_\_ in this empirical research.**

- A. Class A (Experimental class, School of Mechanical Engineering)
- B. Class B (Experimental class, School of Mathematics and Statistics)
- C. Class C (Control class, School of Mechanical Engineering)
- D. Class D (Control class, School of Mathematics and Statistics)

**3. You belong to the \_\_\_\_\_ age group.**

- A. 20-25
- B. 26-30
- C. 31 or above

4. Your undergraduate degree is awarded from \_\_\_\_\_ universities.
- A. 985
  - B. 211
  - C. general
  - D. independent
5. Your online experience is \_\_\_\_\_.
- A. 1—4 years
  - B. 5—8 years
  - C. more than 8 years
6. The average number of hours you spend online per day is approximately \_\_\_\_\_.
- A. 1—2 hours
  - B. 3—4 hours
  - C. 5—6 hours
  - D. more than 6 hours
7. Based on your experience, the percentage of your time spent studying online has been \_\_\_\_\_.
- A. below 10%
  - B. 11—20%
  - C. 21—30%
  - D. 31—50%
  - E. more than 50%
8. Your main purpose of surfing online is \_\_\_\_\_.
- A. to search for learning materials
  - B. to learn something new or related to studies
  - C. to send emails
  - D. to go shopping, entertain and play games
  - E. to chat with friends
  - F. Others, such as \_\_\_\_\_.
9. The main place you go online is \_\_\_\_\_.
- A. internet bar
  - B. classrooms, library and study rooms
  - C. computer rooms in the university
  - D. dormitory
  - E. Others, such as \_\_\_\_\_.

- 10. Your favorite way to communicate online is \_\_\_\_\_.  
A. QQ and WeChat  
B. email  
C. video or live-broadcasting platform  
D. forum  
E. Others, such as \_\_\_\_\_.**
- 11. If you are experiencing difficulties or problems with your studies, you typically seek to resolve them by \_\_\_\_\_.  
A. consulting teachers and classmates  
B. going to the library to search for relative materials  
C. surfing online, such as Google, Wikipedia or Baidu  
D. thinking on my own  
E. ignoring it**
- 12. Will you review the classroom knowledge after the class? \_\_\_\_\_.  
A. Yes, I will  
B. No, I won't  
C. It depends  
D. Don't know**
- 13. Do you have the experiences with online courses or blended learning? \_\_\_\_\_.  
A. Yes  
B. No**
- 14. You think you have a(an) \_\_\_\_\_ independent learning ability.  
A. strong  
B. average  
C. weak**
- 15. What's your feeling when you discover that you need to learn an academic English course during the postgraduate period? \_\_\_\_\_.  
A. Excited, and I love English so much.  
B. Interested, it will be helpful for my future study and work.  
C. No feeling, it depends on teaching curriculum of the university.  
D. Not interested, I prefer not to study English anymore.  
E. Sorry, I never think of it or prefer not to say.**
- 16. Which learning environment do you prefer? \_\_\_\_\_.  
A. Traditional face-to-face teacher-centered classroom.**

- B. Traditional face-to-face student-centered classroom.
- C. Face-to-face lectures by teachers is the mainstay, supplemented by online independent learning by students.
- D. Students' online independent learning is the mainstay, supplemented by teachers' face-to-face lectures.
- E. Blended learning with the combination of online independent learning and group work by students, face-to-face questions and answers and guidance by teachers.

**17. If possible, would you prefer to use blended learning to take the academic English course? \_\_\_\_\_.**

- A. Definitely yes, because face-to-face classroom is too boring, compared with the blended learning.
- B. Yes, but with other reasons.
- C. A bit hesitant to change the learning style, afraid that I won't be able to fit in.
- D. Reluctant, feeling that it would increase the academic load.
- E. Reluctant, worried about the inefficiency of independent learning.

**18. Will you spend about 20-30 minutes online/offline before/after face-to-face class in learning the content of the academic English course? \_\_\_\_\_.**

- A. Yes, I will because I am interested in the course content itself
- B. Yes, I will because it is necessary for me to preview or review the content
- C. Yes, I will because my teacher will request me to do that
- D. No, I think it takes too long, however, I prefer to spend less than 20 minutes
- E. No, I won't do that
- F. Sorry, I don't know

**19. The main factors in your mind that influence the effectiveness of academic English learning are \_\_\_\_\_. (You can choose more than one item.)**

- A. accessibility of online courses
- B. learning environment and learning atmosphere
- C. interactivity within students or interaction between the teacher and students
- D. the interface between face-to-face classroom and online course
- E. course design and teaching strategies
- F. Others, such as \_\_\_\_\_.

**20. The main negative factors in your mind that influence your academic English learning and language proficiency are \_\_\_\_\_. (You can choose more than one item.)**

- A. lacking skills and techniques to learn English language
- B. inadequate functionality of the online platform
- C. unappealing video images and content in academic English course
- D. lacking timely feedback from teachers
- E. without the leadership and guidance of the teacher
- F. rigid teaching course design
- G. insufficient novelty in teaching strategies and methods
- H. limited time and energy
- I. Others, such as \_\_\_\_\_.

**21. You think your academic English learning is mainly motivated by \_\_\_\_\_. (You can choose more than one item.)**

- A. interest in knowledge itself
- B. employment and education pressures
- C. parental expectations
- D. school context or peer influence
- E. teachers' requirement
- F. others, such as \_\_\_\_\_.

**22. What do you think are the areas in which the academic English teaching model as currently practiced should be improved? \_\_\_\_\_. (You can choose more than one item.)**

- A. Facilitation and convenience of online learning
- B. Creation of classroom atmosphere
- C. Integration of learning resources
- D. Maintenance of classroom discipline
- E. Team/group work co-operation
- F. Teachers' teaching strategies and methods
- G. Other suggestions, such as \_\_\_\_\_.

**23. Do you think classroom participation is important? \_\_\_\_\_.**

- A. Important, it can train the ability to express myself, to think and to improve my confidence.
- B. Unimportant, not very helpful to one's studies, and not very useful in improving grades
- C. Doesn't matter or no comment

**24. Will you use the communication tools (e.g. WeChat and QQ) to communicate and discuss course-related knowledge with teachers and classmates after class? \_\_\_\_\_.**

- A. Yes, I will
- B. No, I won't
- C. Not necessarily
- D. Don't know

**25. In your mind, \_\_\_\_\_ is the most difficult part for you to learning the academic course.**

- A. Listening and speaking
- B. Reading and writing
- C. Translating the text
- D. Cultural understanding
- E. Vocabulary and grammar

**26. Which one do you prefer during interaction of an academic English course? \_\_\_\_\_.**

- A. Synchronic (at the same time as the session), because I can get feedback immediately.
- B. Synchronic, because I'd like to share my ideas with others no matter how my English is.
- C. Synchronic, because I enjoy the interaction with my teacher and classmates.
- D. Asynchronic (before or after the session), because I am shy to share my ideas before others.
- E. Asynchronic, because my oral English is not very good.
- F. Asynchronic, because it has less pressure.
- G. Others, such as \_\_\_\_\_.

**27. In academic English learning, what do you need a teacher to do? \_\_\_\_\_.**

- A. Teacher can give timely solution to my problem
- B. Teacher can give timely feedback
- C. Teacher can participate in our discussion and guide us to think positively
- D. Teacher can supervise us in blended learning
- E. Others, such as \_\_\_\_\_.

**28. When studying the academic English, you often use \_\_\_\_\_ resources. (You can choose more than one item.)**

- A. MOOC

- B. professional forums or communities
- C. independent learning platform
- D. learning materials online provided by teachers
- E. Others, such as \_\_\_\_\_.

**29. In your opinion, \_\_\_\_\_ is the ideal learning resource of the academic English course besides the textbooks and reference books. (You can choose more than one item.)**

- A. English learning resources to broaden horizons
- B. supporting materials of academic English course
- C. quality learning resources in other universities
- D. course plans or handouts of academic English course
- E. Others, such as \_\_\_\_\_.

**30. What types of content presentation methods do you prefer among the resources provided by teachers? \_\_\_\_\_. (You can choose more than one item.)**

- A. PowerPoint
- B. Language exercises and tests
- C. Games, presentations or short plays
- D. Short videos or audios
- E. Others, such as \_\_\_\_\_.

(Adapted from Li Jiang, 2019; Lu Wang, 2018; Jianyun Ma, 2018; Shichun Du, 2017; Jing Zhao, 2016; Zhiyu Jia, 2015)

## Appendix 5 Pre-test in Phase 2



### English Language Proficiency Test for the Postgraduates (2020)

#### PART I Listening Comprehension (30')

##### Section A (4')

**Directions:** In this section, you will hear two news reports. At the end of each news report, you will hear two questions. Both the news report and the questions will be spoken only once. After you hear a question, you must choose the best answer from the four choices marked A), B), C) and D). Then mark the corresponding letter on Answer Sheet 1 with a single line through the center.

**Questions 1 and 2 are based on the news report you have just heard.**

1. A) She was pierced by a chicken bone.                      C) She suffered from lung cancer.  
    B) She was coughing all the time.                         D) She suffered from shock.
2. A) By eating chicken soup daily.                         C) Through a surgical operation.  
    B) Through regular exercising.                           D) By using traditional Chinese medicine

**Questions 3 and 4 are based on the news report you have just heard.**

3. A) It was born 13 years ago.                                 C) It got injured in a big bushfire.  
    B) It was Alice Gray's lovely pet.                         D) It ran away into a nearby forest.
4. A) They rebuilt the fencing around their farm.  
    B) They spent seven years replanting their farm  
    C) They claimed damages for their heavy losses  
    D) They installed a camera to monitor sheep activity.

##### Section B (6')

**Directions:** In this section, you will hear two long conversations. At the end of each conversation, you will hear three questions. Both the conversation and the questions will be spoken only once. After you hear a question, you must choose the best answer from the

four choices marked A), B), C) and D). Then mark the corresponding letter on Answer Sheet 1 with a single line through the center.

**Questions 5 to 7 are based on the conversation you have just heard.**

5. A) For the company's records. C) To follow the company's rule  
B) For future training purposes. D) To ensure information security.
6. A) To check her customer reference number.  
B) To inquire about the price of office chairs.  
C) To get her money back for the returned chair.  
D) To make complaints about its customer service.
7. A) She had to update its information. C) She lost it about three days ago.  
B) She forgot where she had left it. D) She was issued a new card.

**Questions 8 to 10 are based on the conversation you have just heard.**

8. A) He is feeling exhausted. C) He has to work late.  
B) He is tired of cooking. D) He wants to try Asian foods.
9. A) Book a table. C) Download a menu.  
B) Order a delivery. D) Locate a restaurant.
10. A) It is not tasty. C) It is too oily.  
B) It is not healthy. D) It is too spicy.

**Section C (12')**

**Directions:** In this section, you will hear two passages. At the end of each passage, you will hear three questions. Both the passage and the questions will be spoken only once. After you hear a question, you must choose the best answer from the four choices marked A), B), C) and D). Then mark the corresponding letter on Answer Sheet 1 with a single line through the center.

**Questions 11 to 13 are based on the passage you have just heard.**

11. A) Owners' personalities affect their cats' behaviour and wellbeing.  
B) Parents' personalities can affect the personalities of their children.  
C) Parents and cat owners alike experience high levels of anxiety  
D) More and more people are treating pet cats like their children.
12. A) Give their pets behavioural training  
B) Provide their pets with the best care.

- C) Know their pets' feelings and desires.
- D) Interact with their pets in novel ways.
- 13. A) More convincing explanation                      C) Collection of more data.
- B) More extensive sampling.                      D) Further investigation.

**Questions 14 to 16 are based on the passage you have just heard.**

- 14. A) People should do more running than mere walking
- B) Running is the best exercise for extending one's life.
- C) People should exercise at least 60 minutes every day.
- D) Running is the easiest form of exercise for most people.
- 15. A) Improving their brain function.
- B) Regulating their breathing rate
- C) Slowing down their ageing process
- D) Accelerating their blood circulation.
- 16. A) They found it easy to control their emotions.
- B) They struggled to handle negative emotions
- C) They were more eager to enjoy a movie.
- D) They were less affected by sad movies.

### **Section D (8')**

**Directions:** In this section, you will hear a lecture. At the end of the lecture, you will hear four questions. Both the lecture and the questions will be spoken only once. After you hear a question, you must choose the best answer from the four choices marked A), B), C) and D). Then mark the corresponding letter on Answer Sheet 1 with a single line through the center.

**Questions 17 to 20 are based on the passage you have just heard.**

- 17. A) He is a tour guide.                      B) He is a famous architect.
- C) He is a local entrepreneur.                      D) He is the owner of the Hill House.
- 18. A) He studied the blueprints of other famous buildings.
- B) He inquired about his client's family background.
- C) He observed his client's life and habits.
- D) He took a tour of his client's old home.
- 19. A) A house made of timber and brick.

- B) A house with a lot of free space.
  - C) A house of the current fashion.
  - D) A house of a unique design
20. A) They are well preserved and in pretty good shape.
- B) They are copies built to the architect's designs.
  - C) They were designed by another architect.
  - D) They were badly damaged but restored.

## **Part II Reading Comprehension (30')**

### **Section A (5')**

**Directions:** In this section, there is a passage with ten blanks. You are required to select one word for each blank from a list of choices given in a word bank following the passage. Read the passage through carefully before making your choices. Each choice in the bank is identified by a letter. Please mark the corresponding letter for each item on Answer Sheet 2 with a single line through the center. You may not use any of the words in the bank more than once.

**Questions 21 to 30 are based on the following passage.**

It is commonly believed that the great English dramatist and poet William Shakespeare was born in Stratford-on-Avon on April 23, 1564. But it is impossible to know the 21 day on which he was born.

Church records show he was baptized on April 26, and three days was a customary amount of time to wait before baptizing a newly born baby. Shakespeare's date of death is 22 known, however: it was April 23, 1616. He was 52 and had retired to Stratford three years before.

Although few plays have been performed or analyzed as extensively as the 38 plays Shakespeare wrote, there are few surviving details about his life. This 23 of biographical information is due primarily to his social 24 ; he was not a noble, but the son of a leather trader.

Shakespeare 25 attended the grammar school in Stratford, where he would have studied Latin and read 26 literature. He did not go to university and at age 18 married Anne Hathaway, who was eight years his 27 . They had four children, including the

twins, Hamnet and Judith. Nothing is known of the period between the birth of the twins and Shakespeare's 28 as a dramatist in London in the early 1590s.

In a million words written over 20 years, he 29 the full range of human emotions and conflicts with a 30 that remains sharp today. As his great contemporary the poet and dramatist Ben Jonson said, "He was not of an age, but for all time.

- |                 |                   |
|-----------------|-------------------|
| A) captured     | I) precision      |
| B) classical    | J) probably       |
| C) conclusively | K) quality        |
| D) emergence    | L) scarcity       |
| E) exact        | M) senior         |
| F) generated    | N) separated      |
| G) particular   | O) systematically |
| H) position     |                   |

### Section B (10')

**Directions:** In this section, you are going to read a passage with ten statements attached to it. Each statement contains information given in one of the paragraphs. Identify the paragraph from which the information is derived. You may choose a paragraph more than once. Each paragraph is marked with a letter. Answer the questions by marking the corresponding letter on Answer Sheet 2.

#### How to not be boring

A) Humans are creatures of habit. We love to establish a routine and stick with it. Then we often put ourselves on auto-pilot. Routines can be incredibly useful in helping you get things done. However, too much of a routine can also make you incredibly boring. Nevertheless, many people live lives that are boringly predictable, or live a life where everything is outlined or planned.

B) To tell the truth, interesting people are more popular among their friends. If you don't arouse someone's curiosity or brighten someone's day, you probably come across as being a little bit dull. But that doesn't mean your life has ended and you can't do anything to change it. If you find yourself searching for something to say beyond small talk, try these tactics to find more interesting approaches to conversation.

C) Recently, I was at a gathering of colleagues when someone turned to me and asked, "So, what's new with you?" Ordinarily, I think I'm a good conversationalist. After all, it's literally my job to talk to people and tell their stories or share their advice. And that's not exactly an unexpected question. Still, the only "new-to-me" topics that came to mind were my daughter's basketball tournament and my feelings about that morning's political headlines- neither amusing nor appropriate topics at that moment

D) Oh, no, I thought. Have I become boring? But sharing our experiences in an authentic way to connect with other people is what makes us interesting, says associate professor Michael Pirson. The hesitation I felt in not sharing the ordinary things that were happening in my life, and the wild mental search for something more interesting, may have backfired and made me seem less interesting.

E) "If someone is making up some conversation that might be interesting, it's probably not going to land well," says Pirson, whose expertise includes trust and well-being, mindfulness, and humanistic management. "It's going to feel like a made-up conversation that people don't necessarily want to tune in to."

F) The most interesting people aren't those who've gone on some Eat, Pray, Love journey to find themselves. Instead, Pirson says, they're those who examine the ordinary. "Often, the 'boring things' may not be boring at all. Maybe they are actually little miracles," he says. Share your observations about the world around you — interesting stories you heard or things you noticed— and you may be surprised by the universal connection they inspire.

G) This is essentially how Jessica Hagy starts her day. The author of *How to Be Interesting: An Instruction Manual*, Hagy spends a lot of time thinking about what's interesting to her. People who are interesting are persistently curious, she says

H) Think about the everyday things around you and ask questions about them. What is that roadside monument I see on my way to work every day? Who built that interesting building in my city? What nearby attractions haven't I visited? Why do people do things that way? Use what you find to ask more questions and learn more about the world around you. "Having that sort of curiosity is almost like a protective gear from getting into boredom," she says. And when you find things that are truly interesting to you, share them.

I) Television veteran Audrey Morrissey, executive producer of NBC's *The Voice*, is always looking for what will make a person or story interesting to viewers: It's usually a

matter of individuality. "Having a strong point of view, signature style, or being a super-enthusiast in a particular field makes someone interesting," she says. That means embracing what is truly interesting or unique about yourself. "Many people are 'not boring' in the way that they can carry a conversation or can be good at a social gathering, and so on. To be interesting means that you have lived life, taken risks, traveled, sought out experience to learn for yourself and share with others," she says

J) Of course, it's possible to be a fountain of knowledge and a boring person, says public relations consultant Andrea Pass. Paying attention to the listener is an important part of having a conversation that's interesting to both parties. Talking on and on about what's interesting to you isn't going to make you an interesting person, she says

K) "If the listener is not paying attention, it's your sign to shorten the story or change direction. Make sure to bring the audience into the conversation so that it is not one-sided," Pass says. Be a better listener yourself, and give others opportunities to participate in the conversation by inviting them with questions or requests to share their own experiences or thoughts. (e.g., "Now, tell me about your favorite book," or "Have you ever been to that attraction?") Questions are a powerful tool, especially when they encourage others to disclose information about themselves. A 2012 study from the University of California, Santa Barbara, found that roughly 40% of the time we are talking, we're disclosing subjective information about our experience. And when we're doing so, our brains are more engaged. So one strategy to leave others with the impression that you're a sparkling conversation partner is to get others to talk about themselves.

L) Being relatable is also essential, Morrissey says. "The best entertainment and storytelling comes from people who are relatable- those who don't shy away from opening up but freely share who they are and what they care about. These are the people viewers most relate to and find interesting. Being authentic, honest, and vulnerable is always interesting."

M) I have now come to realize that being boring, in actuality, is not only about who you are as a person, but also how you present yourself. No matter what, make sure you are having fun in life. Because when you are enjoying, people around you will begin to enjoy as well. Show some interest in them and they will definitely show some in you. If you are a very reserved person, this could be a little difficult at first. But with a little effort, you can definitely improve.

31. Pirson claims that some ordinary things may often prove to be miraculously interesting.

32. To make a conversation interesting, it is important that you listen to the other party attentively.

33. A person who is unable to stimulate others' curiosity or make their life enjoyable may appear somewhat boring.

34. Interesting people usually possess certain unique qualities, according to a TV program producer.

35. Be interested in others and they are sure to be interested in you.

36. The author considers himself usually good at conducting conversations.

37. Interesting people are always full of curiosity.

38. Falling into a routine can turn a person into an utter bore.

39. One strategy to be a good conversationalist is to motivate your partner to tell their own stories.

40. Interesting as it might appear, a made-up conversation will probably turn out to be dull.

### **Section C (15')**

**Directions:** There are 2 passages in this section. Each passage is followed by some questions or unfinished statements. For each of them there are four choices marked A), B), C) and D) You should decide on the best choice and mark the corresponding letter on Answer Sheet 2 with a single line through the center.

#### **Passage One**

**Questions 41 to 45 are based on the following passage.**

With obesity now affecting 29% of the population in England, and expected to rise to 35% by 2030, should we now recognise it as a disease? Obesity, in which excess body fat has accumulated to such an extent that health may be adversely affected, meets the dictionary definition of disease, argues Professor John Wilding. He points out that more than 200 genes influence weight. "Thus body weight is strongly influenced by biology- it is not an individual's fault if they develop obesity." Yet the widespread view is that obesity is self-induced and that it is entirely the individual's responsibility to do something about it. Recognising obesity as a chronic disease with severe complications rather than a lifestyle

choice "should help reduce the stigma and discrimination experienced by many people with obesity," he adds.

Professor Wilding disagrees that labelling a high proportion of the population as having a disease removes personal responsibility or may overwhelm health services, pointing out that other common diseases, such as high blood pressure and diabetes, require people to take action to manage their condition. He suggests that most people with obesity will eventually develop complications. "But unless we accept that obesity is a disease, we are not going to be able to tackle it," he concludes.

But Dr. Richard Pile, a physician with a special interest in diabetes, argues that adopting this approach "could actually result in worse outcomes for individuals and society." He believes that the dictionary definition of disease "is so vague that we can classify almost anything as a disease" and says the question is not whether we can, but whether we should, and to what end.

If labelling obesity as a disease was harmless then it wouldn't really matter, he writes. But labelling obesity as a disease "risks reducing autonomy, disempowering and robbing people of the intrinsic motivation that is such an important enabler of change." What's more, making obesity a disease "may not benefit patients, but it will benefit healthcare providers and the pharmaceutical industry when health insurance and clinical guidelines promote treatment with drugs and surgery," he warns.

**41. What does Professor John Wilding argue about obesity?**

- A) Its impact on society is expected to rise.
- B) It is now too widespread to be neglected.
- C) It should be regarded as a genetic disease.
- D) Its dictionary definition should be updated

**42. What is the popular view of obesity?**

- A) It is difficult to define.
- B) It is a modern disease.
- C) It has much to do with one's genes.
- D) It results from a lack of self-control.

**43. Why are some people opposed to labelling obesity as a disease?**

- A) Obese people would not feel responsible to take any action.
- B) Obese people would not be able to afford the medical costs.

- C) Obese people would be overwhelmed with anxiety.
- D) Obese people would be discriminated against.

**44. What does Dr. Richard Pile think of the dictionary definition of disease?**

- A) It is of no use in understanding obesity.
- B) It is too inclusive and thus lacks clarity.
- C) It helps little to solve patients' problems.
- D) It matters little to the debate over obesity.

**45. What is Dr. Richard Pile's concern about classifying obesity as a disease?**

- A) It may affect obese people's quality of life.
- B) It may accelerate the spread of obesity.
- C) It may cause a shortage of doctors.
- D) It may do little good to patients.

## **Passage Two**

**Questions 46 to 50 are based on the following passage.**

Nationwide, only about three percent of early childhood teachers are male in the U. S. Experts say this can have an impact on young children whose understanding of gender roles and identity are rapidly forming. Research has found that having access to diverse teachers is beneficial for children. For the youngest learners, it means they are more likely to get exposed to different varieties of play and communication. It also helps them develop healthy ideas around gender.

"In our world and our society, we have very specific stereotypes of gender roles," said Mindi Reich-Shapiro, an assistant professor in the teacher education department of the Borough of Manhattan Community College, and one of the authors of a recent study. "It's important for children to see other possibilities and other paths they can take."

Despite mostly feeling supported by colleagues and family members, many of the male educators surveyed in the study reported facing social or cultural resistance in their careers as early education teachers. Some also reported that there were parents surprised or concerned that their child had a male teacher. And they had been advised by colleagues or other staff not to hug children.

Reich-Shapiro and fellow researchers made several recommendations to increase male representation in the field. Low pay has long been acknowledged as a major issue in

the early childhood field. Over 70% of male educators who said they intended to stay in the early education workforce noted an increased salary was a major motivating factor for them to commit to the career long-term. The report suggests paying all early childhood educators the way elementary school teachers are paid

Cities and programs should establish support groups for male early childhood educators and provide mentoring and professional development advice for male educators and their program leaders.

The authors also suggest that traditional recruitment approaches for early childhood educators "do not address the gender gap in the field." They recommend providing young men opportunities to work with children through training and volunteer programs, targeting groups of men who are considering a career change, such as fathers.

**46. What do we learn from the first paragraph about early childhood education in the U. S. ?**

- A) It helps raise children's awareness of gender roles.
- B) It exposes children to different ways of interaction.
- C) It is negatively impacted by a lack of male teachers.
- D) It clearly aims to form children's identity through play.

**47. What does Mindi Reich-Shapiro emphasize in her comment on childhood education?**

- A) The importance of broadening children's horizons.
- B) The responsibilities of fathers for children's growth.
- C) The urgency of creating teacher education programs
- D) The role of teachers in motivating children to learn

**48. What do we learn about male teachers from their responses in the study?**

- A) Some of them find it awkward when hugging children.
- B) They feel pressured to keep up with female colleagues
- C) They find it hard to meet the expectations of kids' parents
- D) Many of them feel prejudiced against socially and culturally.

**49. What is needed for men to commit to early childhood education?**

- A) Higher pay.
- B) Job security.
- C) Social recognition

D) Better working conditions.

**50. What do the authors of the study recommend to bridge the gender gap in early childhood education?**

- A) Recruiting young men who have a passion for education young children
- B) Taking measures to attract prospective male teachers to work in the field.
- C) Persuading prospective fathers to consider a change in their career.
- D) Providing male teachers with more opportunities for advancement.

### **Part III Translation (15')**

**Directions:** For this part, you are allowed 30 minutes to translate a passage from Chinese into English. You should write your answer on Answer Sheet 2.

坎儿井(Karez)是新疆干旱地区的一种水利系统，由地下渠道将水井连接而成。该系统将春夏季节渗入地下的大量雨水及积雪融水收集起来，通过山体的自然坡度引到地面，用于灌溉农田和满足人们的日常用水需求。坎儿井减少了水在地面的蒸发，对地表破坏很小，因而有效地保护了自然资源与生态环境。坎儿井体现了我国人民与自然和谐共存的智慧，是对人类文明的一大贡献。

### **Part IV Writing (15')**

**Directions:** Suppose your university student union is planning to hold a speech contest. You are now to write a proposal for organizing the contest. The proposal may include the topic, aim, procedure and selection of contestants. You will have 30 minutes to write the proposal. You should write at least 120 words but no more than 180 words.

### **Part V Speaking (10')**

#### **Section A (1')**

**Directions:** You are given 1 minute to introduce yourself. Pay attention to your accent, tone and pronunciation.

#### **Section B (2')**

**Directions:** Please read the following passage aloud. Pay attention to your accent, tone and pronunciation.

All moms are working moms, and all moms face the challenge of prioritizing how they spend their time. Time management becomes absolutely critical. Often mothers must devote 40 to 50 precious hours a week to a job and still have to get many things accomplished: clean the house; do the laundry; shop for groceries; help kids with homework; be present at kids' activities; spend time with their partner; spend time with friends and family members; pursue personal interests of any kind, and so on. No wonder so many women I know are so tired!

Here are some tips from the “expert” Michelle La Rowe on how to deal with time-management challenges.

1. Smooth out the daily things in your mornings. It can be hard enough to get yourself ready, out of the door and off to work on time. So, do as much as you can the night before. Set out clothes for the next day—both for yourself and for your children. Make sure diaper bags, backpacks and your work bag are completely packed and ready. Wake up one full hour before your children do. This will allow you to drink coffee, get dressed, take care of your own pre-work tasks and get breakfast ready for the children.

2. Make sure you're not slipping at work. At this time and age you've got to keep your game face on no matter what's going on with your personal life. If you feel a nervous breakdown coming, take a personal day.

3. Devise a system for housework. Make sure your children are pitching in. It will teach them the importance of teamwork and give them survival skills and beneficial habits that will last a lifetime.

4. Divide up tasks with your partner.

5. Carve out time for romance. Make arrangements for a date night. Once or twice a year, coordinate personal days so you can be together without the children.

6. Maintain at least some semblance of a social life. Make specific plans with your close friends. It can be worth giving some time to talk, laugh and preserve important friendships.

7. Remember what matters most. Mother Teresa said, “it's not how much you do but how much love you put into the doing that matters.”

## **Section C (2')**

**Directions:** Please answer the following questions based on the passage you have just read. Pay attention to your accent, tone and pronunciation.

- (1) Who are the target readers of this passage?
- (2) To maintain some semblance of a social life, what should mothers do?

**Section D (2')**

**Directions:** Please do a personal statement based on the passage you have just read. You can discuss about the main idea of the passage, or you can state your perspective based on your understanding of the passage. Pay attention to your accent, tone and pronunciation.

**Section E (2')**

**Directions:** Please discuss the following topic with your partner and illustrate your opinions clearly. Pay attention to your accent, tone and pronunciation.

Some people believe it is important for the postgraduates to go to the big company with a lower position after their graduation. Other people consider it is a good choice for the postgraduates to work in the small company with a higher position. What's your opinion? And why?

## Appendix 6 Post-test in Phase 2



### English Language Proficiency Test for the Postgraduates (2020)

#### PART I Listening Comprehension

##### Section A (4')

**Directions:** In this section, you will hear two news reports. At the end of each news report, you will hear two questions. Both the news report and the questions will be spoken only once. After you hear a question, you must choose the best answer from the four choices marked A), B), C) and D). Then mark the corresponding letter on Answer Sheet 1 with a single line through the center.

**Questions 1 and 2 are based on the news report you have just heard.**

1. A) It found a pet dog on board a plane to a city in Texas.  
B) It had one of its cargo planes land at a wrong airport.  
C) It sent two dogs to the wrong destinations.  
D) It had two of its domestic flights mixed up.
2. A) Correct their mistake as soon as possible.  
B) Give the two pets a physical checkup  
C) Hire a charter jet to bring the pets back  
D) Send another plane to continue the flight

**Questions 3 and 4 are based on the news report you have just heard.**

- |                                 |  |
|---------------------------------|--|
| 3. A) She weighs 130 kilograms. | C) She was brought from Africa.          |
| B) She has had babies before.   | D) She has a big family of six.          |
| 4. A) It took 22 hours.         | B) It was smooth.                        |
| C) It had some complications.   | D) It was monitored by Dr.Sue Tygielski. |

##### Section B (6')

**Directions:** In this section, you will hear two long conversations. At the end of each conversation, you will hear three questions. Both the conversation and the questions will

be spoken only once. After you hear a question, you must choose the best answer from the four choices marked A), B), C) and D). Then mark the corresponding letter on Answer Sheet 1 with a single line through the center.

**Questions 5 to 7 are based on the conversation you have just heard.**

5. A) The number of ducks has declined sharply in recent years.  
B) Climate change has little effect on the lives of wild ducks.  
C) Duck meat is not eaten in Australia, Canada and the U.S.  
D) Duck hunting remains legal in many parts of the world
6. A) Droughts.                      B) Bushfires.                      C) Farming.                      D) Hunting.
7. A) They are not easy to domesticate.                      C) It is not environmentally friendly.  
B) Their meat is not that popular.                      D) It is not considered cost-effective.

**Questions 8 to 10 are based on the conversation you have just heard.**

8. A) Have her house repainted.                      C) Move into a newly-painted house.  
B) Replace some of her old furniture.                      D) Calculate the cost of the paint job.
9. A) How long the work will take.                      C) How the paint job is to be done.  
B) How much the work will cost.                      D) How many workers are needed.
10. A) She could have asked a friend for help with the paint job.  
B) Painting a house involves more trouble than she thought.  
C) She should have repainted her house much earlier.  
D) Moving her furniture is harder than the paint job.

**Section C (12')**

**Directions:** In this section, you will hear two passages. At the end of each passage, you will hear three questions. Both the passage and the questions will be spoken only once. After you hear a question, you must choose the best answer from the four choices marked A), B), C) and D). Then mark the corresponding letter on Answer Sheet 1 with a single line through the center.

**Questions 11 to 13 are based on the passage you have just heard.**

11. A) To cultivate good habits.                      C) To review what is learned in class.  
B) To prepare for secondary school.                      D) To stimulate interest in learning.
12. A) Discuss their academic achievements with them.  
B) Create an ideal study environment for them.

- C) Allow them to learn independently.
- D) Check their homework promptly.
- 13. A) Finish them before they get tired.
- B) Tackle the most difficult task first.
- C) Start with something they enjoy
- D) Focus on the most important ones.

**Questions 14 to 16 are based on the passage you have just heard.**

- 14. A) Workers who meet its body weight standards
- B) Workers who can lose 30 pounds in a year
- C) Workers who try the hardest to lose weight
- D) Workers who are in the top 10% of the slimmest.
- 15. A) Impractical      B) Inconsistent.      C) Unmanageable.      D) Unfair.
- 16. A) Offer them much fatter bonuses.
- B) Improve working environment.
- C) Encourage healthy behaviors.
- D) Provide free lunch and snacks.

#### **Section D (8')**

**Directions:** In this section, you will hear a lecture. At the end of the lecture, you will hear four questions. Both the lecture and the questions will be spoken only once. After you hear a question, you must choose the best answer from the four choices marked A), B), C) and D). Then mark the corresponding letter on Answer Sheet 1 with a single line through the center.

**Questions 17 to 20 are based on the passage you have just heard.**

- 17. A) It has not done enough to help left-handed children.
- B) It has treated left-handed children as being disabled.
- C) It has not built facilities specially for the left-handed.
- D) It has ignored campaigns on behalf of the left-handed.
- 18. A) They are as intelligent as other children.
- B) They have a distinctive style of handwriting
- C) They sometimes have psychological problems
- D) They tend to have more difficulties in learning.

19. A) Punish teachers discriminating against left-handed students.  
B) Lay more emphasis on improving children's mental health.  
C) Encourage students to develop various professional skills  
D) Keep track of left-handed children's school performance.
20. A) How they can be reduced in number.  
B) Why their numbers are so high.  
C) What percentage they account for.  
D) If their percentage keeps increasing.

## **Part II Reading Comprehension**

### **Section A (5')**

**Directions:** In this section, there is a passage with ten blanks. You are required to select one word for each blank from a list of choices given in a word bank following the passage. Read the passage through carefully before making your choices. Each choice in the bank is identified by a letter. Please mark the corresponding letter for each item on Answer Sheet 2 with a single line through the center. You may not use any of the words in the bank more than once.

**Questions 21 to 30 are based on the following passage.**

Many people believe that passion and commitment are the foundations of strong romantic relationships. But a relationship is made of two 21 individuals. And the personality traits these individuals 22 or lack can often make a relationship more- or less- likely to 23. Recent research has found that one trait in particular — humility—is an important indicator of successful relationships.

Humility can sometimes be 24 with a lack of confidence. But researchers have come to realize that being humble generally indicates the 25 of deeply admirable personal qualities. Being humble means you have the ability to accurately 26 your deficiencies without denying your skills and strengths. For example, you might recognize that you are intelligent, but realize that you are not a 27. Thus, humility leads to an honest view of one's own advantages and shortcomings. Humble people do not ignore, avoid, or try to deny their limits or deficiencies. They can 28 mistakes, see value in things that are far from perfect and identify areas for improvement.

Perhaps it is not 29 , then, that humility appears to be a huge asset to relationships. One study found that people tend to rate this quality 30 in their spouse. The study also found that someone who is humble is more likely to initiate a romantic relationship, perhaps because they are less likely to see themselves as "too good" for someone else. Thus, a humble partner might be your ideal partner.

- |                |               |
|----------------|---------------|
| A) acknowledge | I) possess    |
| B) assess      | J) presence   |
| C) confused    | K) puzzled    |
| D) endure      | L) status     |
| E) extremely   | M) surprising |
| F) genius      | N) thoroughly |
| G) highly      | O) unique     |
| H) permanent   |               |

### Section B (10')

**Directions:** In this section, you are going to read a passage with ten statements attached to it. Each statement contains information given in one of the paragraphs. Identify the paragraph from which the information is derived. You may choose a paragraph more than once. Each paragraph is marked with a letter. Answer the questions by marking the corresponding letter on Answer Sheet 2.

#### **There's a stress gap between men and women**

A) "I used to work very hard. I love to create things, grow them and solve problems," said Meng Li, a successful app developer in San Francisco. "I didn't really care about my mind and my body until they decided to go on strike."

B) Ms. Li said her stress led to sleeplessness. When she did sleep, she experienced "problem-solving dreams," which left her feeling unrested when she woke up. "After I became a first-time mother, I quickly realized I was so busy caring for other people and work that I felt like I'd lost myself," she said.

C) It's a common story- one we frequently ridicule and readily dismiss, for example, by claiming that women tend to complain more than men, despite the growing sum of research that underlines the problem. Women are twice as likely to suffer from severe stress

and anxiety as men, according to a 2016 study published in *The Journal of Brain & Behavior*. The American Psychological Association reports a gender gap year after year showing that women consistently report higher stress levels. Clearly, a stress gap exists.

D) "The difference is not really news to me, as a clinical psychologist," said Erin Joyce, a women and couples therapist in Los Angeles. "It's been well documented in extensive research over the years that prevalence rates for the majority of the anxiety disorders are higher in women than men." Some people may argue that this is merely reported data, and they say many men feel the same pressures as women in terms of fulfilling responsibilities at work and home. In other words, we're all really, really stressed.

E) "The difference, however, is in the nature and scope of these responsibilities in the home environment in particular," Dr. Joyce said. For example, the United Nations reported that women do nearly three times as much unpaid domestic work as men. The problem is, housework is often overlooked as work, even though it is often as laborious (or in some cases, more so) as any paid job. As the scholar Silvia Federici put it in 1975, the unpaid nature of domestic work reinforces the assumption that "housework is not work, thus preventing women from struggling against it."

F) It's not just inside the home, though. Research from Nova Southeastern University found that female managers were more likely than male managers to display "surface acting," or forcing emotions that are not wholly felt. "They expressed optimism, calmness and sympathy even when these were not the emotions that they were actually feeling," the study said.

G) Surface acting is a prime example of "emotional labor," a concept that the writer Jess Zimmerman made familiar in a 2015 essay. The essay sparked a massive thread on the internet community blog Meta Filter. Hundreds of women spoke up about their own experience with emotional labor: the duties that are expected of them, but go unnoticed. These invisible duties become apparent only when you don't do them. Like domestic labor, emotional labor is generally dismissed and not labeled work. But research shows it can be just as exhausting as paid work. Emotional labor can lead to difficulty in sleeping and family conflict. Sure, circumstantial stress, like losing a job, may lead to these same issues. But emotional labor is not circumstantial. It's an enduring responsibility based on the socialized gender role of women.

H) Like Ms. Li, many women try to manage the added stress to reach what Dr. Joyce said was an unattainable ideal. "Some professional women aim to do it all. They want to reach the top of the corporate ladder and fly like supermom," she said. When women don't reach this ideal, they feel guilty; and even more stressed. After her own struggle with this, Ms. Li took a step back and used her experience to build Sanity & Self, a self-care app and platform for overworked women. "The realizations I had in that process helped me gain insights and ultimately got me ready to integrate self-care into my daily life," she said.

I) The stress problem extends beyond mental health when you consider the link between stress, anxiety and heart health. Worse, most of what we know about heart disease comes from studies involving men. However, "there are many reasons to think that it's different in women," Harvard Medical School reported. For example, women are more likely to experience disturbed sleep, anxiety and unusual fatigue before a heart attack. Stress is so normalized that it is easy for women to shrug off those symptoms as simply the consequences of stress. Many women also do not experience chest pain before a heart attack the way men do, which leads to fewer women discovering problematic heart issues. Harvard reports that women are "much more likely than men to die within a year of having a heart attack" and "many women say their physicians sometimes don't even recognize the symptoms."

J) The good news is, women are more likely than men to take charge of their stress and manage it, the American Psychological Association reports. The concept of self-care, at its core, is quite simple. "The basics of adequate sleep, healthy diet and exercise are a good place to start," Dr. Joyce said. "Support from trusted relationships is vital. This includes professional support from various health and wellness providers if stress is becoming increasingly overwhelming."

K) Disconnecting from work and home responsibilities is also obviously important. But it's much easier said than done. It is important to understand what causes your stress in the first place. "Get really specific with what's stressing you out," Ms. Li said. "We often chalk up our stress to broad experiences like work. But work stress can take many different forms. Is a colleague being disrespectful of your time? Is a boss undermining your day-to-day control over decision making? These are different causes of stress and can benefit from different kinds of self-care."

L) Ideally, your spouse or partner will be supportive, rather than dismissive, of your stress. It is important to talk through these issues before they come to a head. "Women working outside of the home should make an effort to have a conscious conversation with their partners about more equitable sharing of household and family responsibilities," Dr. Joyce said.

31. Some career women who aim high tend to feel guilty if they fail to achieve their goals.

32. The unpaid housework done by women is triple that done by men.

33. It is reported that women consistently suffer more from severe stress than men.

34. Women are advised to identify the specific causes of their stress so that steps can be taken to deal with it.

35. One study showed that women managers often expressed positive emotions that they didn't really feel.

36. Women tend to mistake signs of heart attacks for symptoms of stress.

37. For a time an app developer in America was so busy attending to work and family that she suffered from sleeplessness.

38. The emotional labor women do is noticed only when it is not done.

39. Dr. Joyce suggests that apart from self-care, women should seek professional support if they experience severe stress.

40. Some people believe that there may not exist a stress gap between men and women.

### **Section C (15')**

**Directions:** There are 2 passages in this section. Each passage is followed by some questions or unfinished statements. For each of them there are four choices marked A), B), C) and D). You should decide on the best choice and mark the corresponding letter on Answer Sheet 2 with a single line through the center.

#### **Passage One**

**Questions 41 to 45 are based on the following passage.**

As many office workers adapt to remote work, cities may undergo fundamental change if offices remain under-utilized. Who will benefit if working from home becomes the norm?

Employers argue they make considerable savings on real estate when workers shift from office to home work. However, these savings result from passing costs on to workers.

Unless employees are fully compensated, this could become a variant of parasitic capitalism, whereby corporate profits increasingly rely on extracting value from the public—and now personal—realm, rather than on generating new value.

Though employers are backed by a chorus of remote work advocates, others note the loneliness, reduced productivity and inefficiencies of extended remote work.

If working from home becomes permanent, employees will have to dedicate part of their private space to work. This requires purchasing desks, chairs and office equipment.

It also means having private space dedicated to work: the space must be heated, cleaned, maintained and paid for. That depends on many things, but for purposes of illustration, I have run some estimates for Montreal. The exercise is simple but important, since it brings these costs out of the realm of speculation into the realm of meaningful discussion.

Rough calculations show that the savings made by employers when their staff works from home are of similar value to the compensation workers should receive for setting up offices at home.

What does this mean for offices in cities? One of two things may happen: Employers pass these costs onto employees. This would be a form of expropriation, with employees absorbing production costs that have traditionally been paid by the employer. This represents a considerable transfer of value from employees to employers.

When employees are properly compensated, employers' real estate savings will be modest. If savings are modest, then the many advantages of working in offices —such as lively atmosphere, rapidity of communication, team-building and acclimatization of new employees — will encourage employers to shelve the idea of remote work and, like Yahoo in 2013, encourage employees to work most of the time from corporate office space.

**41. What does the author say about working from home?**

- A) It will become the norm sooner or later.
- B) It requires employees to adapt promptly.
- C) It benefits employers at the expense of employees.
- D) It will force cities to transform their infrastructure.

**42. Why do some people oppose working from home?**

- A) It discourages team spirit.
- B) It invades employees' privacy.
- C) It undermines traditional values.
- D) It negatively impacts productivity.

**43. Why did the author run the estimates for Montreal?**

- A) To provide convincing data for serious discussion.
- B) To illustrate the ongoing change in working patterns
- C) To show the impact of remote working on productivity.
- D) To exemplify how remote working affects the economy.

**44. What can we conclude from the author's calculations?**

- A) There is no point in transferring office work to working from home.
- B) Employees can benefit as much from remote working as their employers.
- C) Employers' gain from remote working should go to employees as compensation.
- D) Effective measures should be taken to motivate employees to set up offices at home.

**45. What is the author's opinion on working from home?**

- A) It should be avoided if possible.
- B) It is only a temporary measure.
- C) It can reduce companies' real estate costs.
- D) It may affect employees' corporate loyalty.

**Passage Two**

**Questions 46 to 50 are based on the following passage.**

The human thirst for knowledge is the driving force behind our successful development as a species. But curiosity can also be dangerous, leading to setbacks or even downfalls. Given curiosity's complexity, scientists have found it hard to define.

While pinning down a definition has proven tricky, the general consensus is it's some means of information gathering. Psychologists also agree curiosity is intrinsically motivated.

Curiosity covers such a large set of behaviors that there probably isn't any single "curiosity gene" that makes humans wonder about and explore their environment. That said, curiosity does have a genetic component. Genes and the environment interact in many complex ways to shape individuals and guide their behavior, including their curiosity.

Regardless of their genetic makeup, infants have to learn an incredible amount of information in a short time, and curiosity is one of the tools humans have found to accomplish that gigantic task.

Hundreds of studies show that infants prefer novelty. It's what motivates non-human animals, human infants and probably human adults to explore and seek out new things before growing less interested in them after continued exposure.

But curiosity often comes with a cost.

In some situations, the stakes are low and failure is a healthy part of growth. For instance, many babies are perfectly proficient crawlers, but they decide to try walking because there's more to see and do when they stand upright. But this milestone comes at a small cost. A study of 12- to 19-month-olds learning how to walk documented that these children fell down a lot. Seventeen times per hour, to be exact. But walking is faster than crawling, so this motivates expert crawlers to transition to walking.

Sometimes, however, testing out a new idea can lead to disaster. For instance, the Inuit people of the Arctic regions have created incredible modes to deal with the challenges of living in northern climates, but what we forget about are the tens of thousands of people that tried and failed to make it in those challenging landscapes.

**46. What does the author say about curiosity?**

- A) It is too complex for non-scientists to understand.
- B) It is the force that pushes human society forward.
- C) It is a unique trait specific to the human race.
- D) It is often the major cause for human failures.

**47. What is the general understanding of curiosity?**

- A) It motivates people to seek information.
- B) It is destined to transform human genes.
- C) It does people more good than harm.
- D) It underlies all human behaviors.

**48. What do we learn about how genes shape people's behavior?**

- A) They determine people's way of thinking
- B) They account for age differences in learning
- C) They enable people to undertake massive tasks.

D) They work in conjunction with the environment.

**49. What do numerous studies show about infants?**

- A) They are far more curious than adults.
- B) They prefer to go after all that is novel.
- C) They have different interests than adults.
- D) They show non-human animal behaviors.

**50. What does the example of the Inuit people of the Arctic regions illustrate?**

- A) The cost of humans' curiosity to explore.
- B) The incredible harshness of cold weather.
- C) The innovative ideas stemming from curiosity.
- D) The importance of learning from past failures

**Part III Translation (15')**

**Directions:** For this part, you are allowed 30 minutes to translate a passage from Chinese into English. You should write your answer on Answer Sheet 2.

大运河(Grand Canal)是世界上最长的人工河，北起北京，南至杭州。它是中国历史上最宏伟的工程之一。大运河始建于公元前 4 世纪，公元 13 世纪末建成。修建之初是为了运输粮食，后来也用于运输其他商品。大运河沿线区域逐渐发展成为中国的工商业中心。长久以来，大运河对中国的经济发展发挥了重要作用，有力地促进了南北地区之间的人员往来和文化交流。

**Part IV Writing (15')**

**Directions:** Suppose your school is organizing an orientation program to help the freshmen adapt to the new environment and academic studies. You are now to write a proposal, which may include its aim, duration, participants and activities. You will have 30 minutes to write the proposal. You should write at least 120 words but no more than 180 words.

**Part V Speaking (10')**

**Section A (1')**

**Directions:** You are given 1 minute to introduce yourself. Pay attention to your accent, tone and pronunciation.

## Section B (2')

**Directions:** Please read the following passage aloud. Pay attention to your accent, tone and pronunciation.

Teaching children to read well from the start is the most important task of elementary schools. But relying on educators to approach this task correctly can be a great mistake. Many schools continue to employ instructional methods that have been proven ineffective. The staying power of the “look-say” or “whole-word” method of teaching beginning reading is perhaps the most flagrant example of this failure to instruct effectively.

The whole-word approach to reading stresses the meaning of words over the meaning of letters, thinking over decoding, developing a sight vocabulary of familiar words over developing the ability to unlock the pronunciation of unfamiliar words. It fits in with the self-directed, “learning how to learn” activities recommended by advocates of “open” classrooms and with the concept that children have to be developmentally ready to begin reading. Before 1963, no major publisher put out anything but these “run-spot-run” readers.

However, in 1955, Rudolf Flesch touched off what was called “the great debate” in beginning reading. In his best-seller *Why Johnny Can't Read*, Flesch indicted the nation's public schools for miseducating students by using the look-say method. He said—and more scholarly studies by Jeane Chall and Rovert Dykstra later confirmed—that another approach to beginning reading, founded on phonics, is far superior.

Systematic phonics first teaches children to associate letters and letter combinations with sounds; it then teaches them how to blend these sounds together to make words. Rather than building up a relatively limited vocabulary of memorized words, it imparts a code by which the pronunciations of the vast majority of the most common words in the English language can be learned. Phonics does not devalue the importance of thinking about the meaning of words and sentences; it simply recognizes that decoding is the logical and necessary first step.

## Section C (2')

**Directions:** Please answer the following questions based on the passage you have just read. Pay attention to your accent, tone and pronunciation.

- (1) What is the most important task of elementary schools?
- (2) In 1955, what was the reason that Flesch touched off what was called “the great debate” in the beginning reading?

**Section D (2’)**

**Directions:** Please do a personal statement based on the passage you have just read. You can discuss about the main idea of the passage, or you can state your perspective based on your understanding of the passage. Pay attention to your accent, tone and pronunciation.

**Section E (2’)**

**Directions:** Please discuss the following topic with your partner and illustrate your opinions clearly. Pay attention to your accent, tone and pronunciation.

Some people believe it is important for the postgraduates to pursue a job with a higher salary even though it is not related to their major. Other people consider it is a good choice for the postgraduates to work by using the major they study for in the university with a reasonable pay. What’s your opinion? And why?

## Appendix 7 Interview for Teachers in Phase 3



### Interview for Teachers

#### Questions:

1. Do you think you will be able to adapt quickly to the blended learning? What are the main obstacles that affect your adaptation to the blended learning?

2. Do you find the blended learning platform easy to use? What are the most frequent questions or feedback from students?

3. What is your opinion about the degree of your overall satisfaction with the effectiveness of current students'

- (a) blended learning,
- (b) learning efficiency,
- (c) classroom interaction,
- (d) assessment and proficiency?

Did it achieve the results you expected?

4. What other suggestions do you have for blended learning as it is currently being implemented?

5. What Teaching and Learning strategies do you prefer when you implement blended learning? For example, CLT/ MI? Cooperative learning?

6. Which aspects of teaching will you reflect on after the implementation of blended learning? For example, the use of software/technology.

## Appendix 8 Interview for Students in Phase 3



### Interview for Students

#### Questions:

1. Do you prefer the blended learning when you study your academic English course?  
If yes, why? If not, why?
2. Do you think you can adapt quickly to the blended learning? What are the main obstacles affecting your adaptation to the blended learning?
3. What's your opinion about the teacher's teaching strategies, activity design, interaction, and classroom organization and management? Why?
4. Do you feel that current academic English studies are meeting your learning needs?  
If not, how should it be improved?
5. If you were asked to give advice to teachers about the blended learning of academic English course as it was currently practised, which areas would you focus on?
6. Do you think that the current assessment is in line with your level of achievement as well as your purpose of improving English language proficiency? Is there anything that needs to be improved?

## Appendix 9 Interview Transcription for Teachers (Excerpts)



### Questions:

1. Do you think you will be able to adapt quickly to the blended learning?

What are the main obstacles that affect your adaptation to the blended learning?

Positive attitude.

1. Yes, I believed so. I have prepared a lot for the blended learning in order

2. to teach the postgraduate students better in the academic English course.

3. However, I do meet some difficulties and obstacles when adapting to this new

4. model. For instance, at the beginning, I always met some problems related to

5. the information technology. And I think it is very important for the university to

6. offer some typical directions and trainings as well as teaching development

7. lessons for us teachers ahead of the application of the blended learning model.

8. Besides the information technology, I think it is necessary to find out an appropriate

9. strategy or many strategies to facilitate the teaching of academic English course. Of

10. course, I have found them out now, however, at the beginning, I used a lot of time

11. to practice it and managed to exercise it with my students, which wasted so much

12. time and made me exhausted.

A variety of difficulties and obstacles.

Based on a very good preparation.

Including the self-cultivation of IT as well as teaching strategies.

**Difficult to use the online platform.**

**2. Do you find the blended learning platform easy to use? What are the most frequent questions or feedback from students?**

1. No, some platforms could make me and my students angry, even mad.
2. Of course, there do exist some good platforms, such as Pigai Wang we use.
3. For example, my students always complain that the quality of the online
4. learning platform, such as the learning materials and operational procedures,
5. should be developed to facilitate students to use it better. Also, the internet is
6. another factor which should be better constructed. We have met the problem
7. for several times that it broke down during the period my students did online
8. tests. When they logged in again, what they had completed in the test had
9. not been saved. Therefore, what they could do was to do it again, which
10. wasted a lot of time and energy as well as their confidence in the test.

**Many feedbacks related to the unsatisfied feelings.**

**Some practical problems should be avoided.**

**Problems should be solved by the university.**

**3. What is your opinion about the degree of your overall satisfaction with the effectiveness of current students'**

- (a) blended learning,
- (b) learning efficiency,
- (c) classroom interaction,
- (d) assessment and proficiency?

**Did it achieve the results you expected?**

1. Some of these results have achieved my expectations. In my opinion, the
2. effectiveness of these postgraduate students' blended learning is
3. well-satisfying to a great extent. However, they need to improve and
4. increase their learning efficiency as soon as possible because some of them
5. have wasted a lot of time to do some assignments online. The reasons are not
6. because the online assignments are difficult to do, but because they always chat
7. a lot with friends or play some games during the process of completing their
8. assignments. I am satisfied with the current classroom interaction. Because some
9. of these students have previewed the materials online, they can interact with me
10. and other students actively and confidently. Related to the assessment and

**Affirmative results.**

**satisfaction**

**A variety of things to be improved.**

**It is a useful way to improve their English learning.**

**The application of the blended learning mode is effective.**

**English learning proficiency and efficiency are two typical issues.**

11. proficiency, in my opinion, I believe that it can be better improved if they continue .
12. to use the blended learning model in the next semester because I think they need .
13. more time to adapt to the new teaching and learning mode.].

#### 4. What other suggestions do you have for blended learning as it is currently being implemented?

##### Suggestion for students.

1. The first suggestion I can give is that the postgraduate students should keep a
2. good attitude to the blended learning model, though their satisfaction might
3. not be associated with their academic achievement. However, their positive attitude
4. can motivate them to accomplish their study goals. The second suggestion is

Positive attitude is very important.

##### Suggestion about strategies for teachers.

5. teachers should offer the timely support for the postgraduate students, not
6. only during the classroom interaction, but also during the teaching period.
7. For example, we need to design a variety of forms of interaction which can
8. arouse the interests of the postgraduate students to communicate, and
9. design some useful strategies to provide the necessary guidance and

Offering timely support from different perspectives.

##### Suggestion related to self-developments for teachers.

10. facilitate their study autonomy. The third is that, from the perspective of
11. teachers, we should know how to use proper technology and approaches to
12. serve for the proper purposes or goals at the proper time. This is very
13. important for the blended learning model because teachers play a leading

The application of appropriate technology.

14. role in this teaching and learning process.

#### 5. What Teaching and Learning strategies do you prefer when you implement blended learning? For examples CLT/ MI? Cooperative learning?

##### Different strategies.

1. I prefer the communicative language teaching approach. Blended learning environment offers
2. effective combination of ways of communication, so, during my teaching, I manage to design
3. many activities to inspire these postgraduate students to be involved in teaching and learning
4. process, and encourage them to practice English as possible as they can, which has shown a
5. good application of the teaching strategy. Moreover, as the collaborative interaction is an
6. essential element of the blended learning model, I willingly choose the cooperative learning
7. to help the postgraduate students to share their creative learning and talent showing both
8. online and offline, providing more opportunities to encourage them to show their collaborative
9. abilities. By the way, I sometimes used the flipped classroom teaching and Production-oriented
10. Approach, depending on the teaching materials we use.

CLT and CL are chosen to be the preferred ones and other strategies are used based on the teaching materials.

**6. Which aspects of teaching will you reflect on after the implementation of blended learning? For example, the use of software/technology.**

Suggestions  
from  
different  
aspects.

1. **The information technology**, including the use of the software and the application of
2. technology in the implementation process of the blended learning, is very important.
3. The second, it is necessary to develop and **design scientific course content**, so as to plan
4. teaching objectives, progress and ideas of teaching and learning to ensure the smooth
5. implementation of blended learning model. The third, **to make a well-done preparation**
6. **of the course**, is particularly essential, including the teaching materials and planned
7. teaching activities as well as the preview and review of the course by the postgraduate
8. students. The fourth, teachers need to **design a scientific system of the assessment** of
9. the course, which can reflect the whole study process of the postgraduate students.

IT, careful  
design of the  
course, good  
preparation  
and scientific  
assessment.

## Appendix 10 Interview Transcription for Students (Excerpts)



### Questions:

1. Do you prefer the blended learning when you study your academic English course? If yes, why? If not, why?

Positive attitude.

1. Yes, I prefer the model to do so. I think it is more interesting than the traditional classroom teaching, I do love to communicate with my teacher and classmates online because I feel relaxed by using this way. Furthermore, it can save a lot of papers because we can do our assignment online without printing them.

A variety of advantages.

They prefer to use the model to continue their study.

The model was interesting, made students relaxed and saved many papers.

2. Do you think you can adapt quickly to the blended learning? What are the main obstacles affecting your adaptation to the blended learning?

Positive attitude.

1. Yes, I think I can adapt to the blended learning model quickly and it does help me learn English quite well. In my opinion, the main obstacles affecting my adaptation to blended learning is the internet, because it always breaks down during the time we use and this makes me crazy especially when I find what I have done suddenly vanishes in the webpage.
2. The other obstacle is that sometimes, I feel too relaxed when using the online platform to get distracted by other things, such as the talking in my dormitory, the games my classmates played, or other things. Therefore, I feel the study efficiency online is not good.

Many obstacles.

The blended learning model could bring some help to them.

Internet, the distraction of other things would affect the study efficiency.

**3. What's your opinion about the teacher's teaching strategies, activity design, interaction, and classroom organization and management? Why?**

Affirmative results...

1. I do think my teacher has done a great job during the process of her teaching.
2. Furthermore, I am very satisfied with what the teacher taught and I think she
3. is the best English teacher I have met. Even though I did not know what the
4. strategies are called, I do like the way she teaches and these strategies and

The teacher has met the needs of the students.

Satisfaction.

5. activities lead me to be involved in the process of English learning. Moreover,
6. I think my English language proficiency has improved significantly, which makes
7. me feel that this novel teaching model is very effective for my postgraduate
8. English learning and performance improvement.

The teaching strategies are effective and their English language proficiency is improved.

**4. Do you feel that current academic English studies are meeting your learning needs? If not, how should it be improved?**

Things to be improved.

1. Sorry, I feel the current academic English studies are not meeting my learning
2. needs. I hope the teacher can introduce more cultural knowledge related to
3. the western countries because I want to pursue my doctoral degree abroad
4. and desire to know more about the daily life and customs of different countries.
5. Even though my requirements are based on my own needs, I believe there are
6. many postgraduate students who think the same as me.

Introduce more cultural knowledge based on the students' needs.

5. If you were asked to give advice to teachers about the blended learning of the academic English course as it was currently practiced, which areas would you focus on?

Suggestion about the course.

1. The first thing I want to suggest is the internet and the online learning .
2. platforms should be improved. And I think everyone in my class will give .
3. the same suggestion, because these hardware and software as well as .
4. the platforms were the basic facilities and tools when we are taught .
5. by using the blended learning. The second suggestion is that I hope my .
6. teacher can provide more classroom activities to help us communicate .
7. with my classmates and practice our oral English. The last suggestion is .
8. I hope the teacher can provide more online resources of teaching materials, .
9. which can broaden our horizon and enrich our knowledge. .

The facilities of the internet and classroom activities as well as teaching materials are the important suggestions.

6. Do you think that the current assessment is in line with your level of achievement as well as your purpose of improving English language proficiency? Is there anything that needs to be improved?

Positive attitude.

1. Definitely, yes. I think the way my teacher uses in the assessment is very objective, .
2. and fair because she uses many ways and approaches to test our English language .
3. proficiency and abilities. In my mind, if there is something that needs to be improved .
4. in the assessment, I hope my teacher could increase the weight coefficient of the .
5. online learning, because I think it is important to do online assignment and finish .
6. the online tasks. You know, sometimes, we just write down the answer without .
7. checking it right or wrong, which can not do a lot of help for our English learning. .
8. And if the teacher puts more weight on it, then, we can do it more carefully with .
9. heart and soul, then, it will help us learn English better in the long run. .

The assessment is approved by the student.

Suggestions from different aspects.

Increase the weight coefficient of the online learning in the assessment. .

## Appendix 11 Definition of Terms

1. **Teacher:** Someone whose job is to teach in a school, college or university. It also can be replaced by tutors, lecturers, educators and designers owing to different functions they perform during the teaching process.

2. **Student:** Someone who is learning or studying at a college or university. In this empirical study, it also refers a learner, a participant, a subject, a postgraduate student.

3. **Learning, English learning, online learning, offline learning, traditional classroom teaching/learning**

**Learning:** The ability of obtaining knowledge as well as the process of transforming what have been taught into knowledge and skills.

**English learning:** To learn English, mainly about the methods of learning English and the aspects of listening, speaking, reading, writing and related cultures of English language. English learning process is a kind of observation, simulation, recognition, knowledge, thinking, memory and other comprehensive mental activity process.

**Online learning:** According to Allen and Seaman (2007), the typical online learning is no face-to-face meetings between teachers and students or a course where most (at least 80%) or all of the course is delivered online. However, in this blended empirical study, online learning focuses on the delivering context and means of the content of an academic course, indicating that students will study part of the content by using networked computer media, such as from the online platforms or on a web-based internet, for self-studying. For the purposes of this thesis, the terms e-learning, online learning, and distance learning are used interchangeably.

[Allen, I. E., & Seaman, J. (2007). *Online nation: Five years of growth in online learning*. Needham, MA: Sloan Consortium.]

**Offline learning:** Opposed to the online learning, it mainly refers to the traditional classroom teaching and learning. In this empirical study, it also includes the learning process which happens after class, for example, students do some group works together without using the tools of internet or network, or finish some assignments on paper.

**Traditional classroom teaching/learning:** The face-to-face teaching/ learning instructed by a teacher with integrated pedagogies. It is also called classroom teaching/learning. Most of the classroom activities and peer interactions are based on the

textbook or materials used in the classroom. For the purposes of this thesis, the terms traditional classroom teaching/learning and face-to-face teaching/learning are used interchangeably.

4. **Blended learning:** A kind of the thoughtful fusions of learning approaches which combines the online learning experience partly with offline learning experience (at least face-to-face element) to some extent. However, it does not define the percentage for the both learning ways, which depends on the teachers, students, the content and information technology and so on. It can be also called blended learning and teaching as well as blended teaching.

5. **Online learning platforms:** Online learning platforms are internet based, as opposed to traditional classroom instruction in schools or training institutions. In this empirical study, there are some different online learning platforms, such as Rain classroom, Pigai Wang ([www.pigai.org](http://www.pigai.org)), other useful websites for English language studies.

#### 6. **Academic English course, college English course, English as a foreign language**

**Academic English course:** An academic discipline in English and one of the compulsory courses that postgraduates who are non-English majors should take in Chinese higher education, entailing cultivating these students to use English language appropriately for their study and research. Academic English is the same as English for Academic purpose, includes the auditory, oral, written, reading and visual language proficiency which are required to learn effectively. Also, it's the particular language which is used in books, lectures, seminars and journals and the language that postgraduates are expected to learn and achieve fluency in. For the purposes of this thesis, the terms academic English and academic English course are used interchangeably.

**College English:** In a broader sense, it refers to English courses and instruction in higher education in China, which is compulsory for non-English majors and occupies a relatively important position in Chinese higher education. College English in the narrow sense refers specifically to the English courses and teaching at the undergraduate level. In this study, college English in the broad sense is used. For the purposes of this thesis, the terms college English and college English course are used interchangeably.

**English as a foreign language:** A term used to describe the study of English by non-native speakers in countries where English is not the dominant language. For the purposes of this thesis, it indicates the important status in Chinese Education. All the students of

non-English majors in higher education in China should study a foreign language, such as English, Japanese, Russian, French and Germany and so on. And most of them study English as a foreign language, which is the main reason why English teaching, learning and reforms are so important in Chinese higher education.

7. **Unit:** A subsection of a textbook. There are 10 units in the *Integrated Reading* textbook and the *Viewing, Listening and Speaking* textbook of academic English course, respectively.

8. **Semester:** Duration of study during the university year. In other words, semesters are the usual period of study for the postgraduates on Chinese campuses. There are two semesters in each academic year and each semester lasts 18-20 weeks. For the postgraduates, the first week is to do the registration and preparation for the semester, the second to the seventeenth week is the teaching period for them, and the eighteenth to the twentieth week is the examination period, examination result releases and teaching feedback period.

9. **Blended/improved teaching strategies:** A set of multiple types of instructional strategies that integrate elements of traditional teaching methods, discovery, task-based and problem-based learning with elements that rely on teachers' explicit instructions facilitated by information technology for reinforcement, such as purposeful discussion, responsive instruction and guided discovery.

10. **Teacher-centered model and student-centered model:** The teacher-centered model in education focuses on the leading role of the teacher, improves the efficient transfer of knowledge to students, and facilitates the organization and monitoring of the teaching process. Its serious shortcoming is to ignore the main role of students' learning, which is not conducive to the cultivation of students' learning ability, innovative thinking and creativity. It is opposed to the student-centered model. The latter emphasizes the thinking, initiative, exploring and enthusiasm of students in the learning process, providing active learning experiences for students, requiring students to change from the object of knowledge indoctrination to the subject of knowledge information processing and become active constructors of knowledge, and requiring teachers to change from knowledge indoctrinators to helpers and facilitators of students' active learning construction. For the purposes of this thesis, the terms student-centered model and learner-centered model are used interchangeably.

11. **English language proficiency:** It includes students' English language competencies necessary for communication, relevant knowledge and skills as well as communicative circumstances and areas, which means students need to develop their abilities of listening, speaking, reading and writing, including translation and cultural information of English language.

12. **Curriculum:** The course and academic content offered in the study of and/or administration of higher education. The purpose of having a curriculum is to provide teachers with an outline for what should be taught in classrooms (<https://www.ed.gov/k-12reforms/standards>). A curriculum includes the following components: objectives, disposition/mechanisms, duration, needs analysis, students and teachers, exercises and activities, resources, ways of learning, skills to be acquired, vocabulary, language structure, and competency assessment.

13. **Wenjuan Xing:** An online crowdsourcing platform “Wenjuan Xing” powered by “www.wjx.cn” in China, which offers the equivalent functions as “Amazon Mechanical Turk”.

14. **Instant messenger:** A kind of instant messaging software which is through instant messaging technology to achieve online chat and communication, such as WeChat and QQ, which have similar functions as skype and MSN.

15. **Self-studying:** The way of learning which is performed by the students willingly without the instructions of teachers. It can be also called self-learning, autonomous learning as well as self-directed learning.

16. **Higher education:** Any of various types of education given in postsecondary institutions of learning and usually affording, at the end of a course of study, a named degree, diploma, or certificate of higher studies. There are four major categories of degrees available for postsecondary students: associate, bachelor's, master's, and doctoral degrees.

17. **Interaction:** A mutual or reciprocal action or influence. In English language teaching, it refers to the practice that enhances the development of English language skills and critical thinking by sharing and communicate with their peers or teachers. For example, classroom interaction can be divided into several types, student-student interactions, such as group/pair work and peer collaboration; teacher-student interactions, such as closed-ended teaching questioning and teacher's answering questions initiated by students; student-content interactions and so on.

**18. Synchronous interaction/discussion and asynchronous interaction/discussion:**

Synchronic interaction refers to the interaction which occurs at the same time, especially in the traditional classroom. For example, a teacher can communicate or discuss with students continuously and instantly, or students can interact with other peers immediately in the face-to-face context. On the contrast, asynchronous interaction means the interaction which happens at different times or not in real time, especially in online/distance learning courses. It offers a lot of advantages to students and the online learning environment, such as, it gives students flexibility to participant, provides the opportunities for students to think and reflect as well as to finish the assignment comfortably and relaxed without giving answers/response immediately.