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**Teachers' Perceptions and Implementations of Technology in EFL Classroom:
A Case Study of Using E-books for EFL Reading**

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Abstract

Technologies have emerged as a powerful tool for education. Teachers are the catalysts for integrating technology in the classroom. This study, by using the E-book as the most commonly used educational technology, explored EFL teachers' perceptions and implementations of the technology in public and private primary schools in China's first-tier cities. A mixed-method approach underpinned the study by using both questionnaire and interview protocols. An online questionnaire on how teachers define and perceive E-books in their personal and professional lives was distributed, 155 EFL teachers responded. Follow-up interviews were then conducted with ten teachers to gather more in-depth interpretations and the reasons for using or not using E-books in the classroom.

The results showed that EFL teachers have very different personal interpretations of E-books. The findings also revealed that basic knowledge and a positive attitude to CALL does not guarantee eventual CALL implementation in teaching practice. A number of factors that appeared to influence Chinese EFL teachers' technology use were identified. The present study contributes to an understanding of the CALL climate in China, especially in the private EFL education sector. Although CALL integration has been addressed in China's English Curriculum Standards and teachers have given the technology a positive reception, its implementation is still problematic and hindered by the school environment.

Declaration

I confirm that this thesis is all my own work except as acknowledged in the text.
I hereby declare that the work has not been submitted for a higher degree to any other
university or institution. The ethical clearance has been sought from Macquarie
University Ethics Committee (Reference Number: 5201700391).


(sign to confirm)

9 Oct 2007

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Chapter 1 Introduction

Technological innovations have influenced the ways in which people interact, communicate, work and learn. The use of technology in an educational context could be viewed as an important means to enhancing learning outcomes. Computer Assisted Language Learning (CALL) has been implemented for English as a Foreign Language (EFL) learning and teaching for decades. The benefits of CALL integration often have a close relationship with the language teacher's attitude, background and creativity (Ebsworth, Kim & Klein, 2010). How teachers perceive and integrate technology will affect the effectiveness of CALL implementation. In the Chinese EFL classroom, while researchers and academia are increasingly encouraging the use of technology, there are nevertheless many challenges and obstacles, such as technology availability, parental support, class size, professional training etc. for teachers' technology integrations in classroom practices (Li, 2014). The study located English Language Teaching (ELT) in China's more developed areas in the public and private schools since it is relatively lacking in published studies. There is little published data on the state of CALL implementation in Chinese EFL classrooms, especially at primary school level. Recent developments in primary English education have also highlighted the need for researching primary ELT. For these reasons, a study, which explores teachers' technological perceptions and technology implementation in China, may provide an empirical base for future studies on the CALL climate in Chinese EFL education.

1.1 Aims of the Study

This study, by using E-books as the most commonly used educational technology, explored EFL teachers' perceptions and implementations of technology in the context of public and private primary schools in China's first-tier cities. The study specifically aimed to:

1. Investigate how E-books are defined, perceived and used by Chinese EFL teachers in their personal and professional lives.
2. Identify the noteworthy aspects of teachers' self-reported descriptions about how they use technology in teaching an EFL reading class.
3. Identify the factors that contributed to EFL teacher technology integration in the language classroom.
4. Identify the challenges and obstacles that hindered teachers' technology adoptions in ELT.

1.2 Research Questions

This study will respond to the following research questions, including one main question and three sub-questions:

What are Chinese teachers' perceptions and implementations of using technology for EFL teaching?

- 1) How do teachers define an E-book?
- 2) What are teachers' reported personal and professional uses of E-books?
- 3) How do these definitions and the reports of implementation reflect teachers' technical perceptions on EFL teaching?

1.3 Definition of Key Terms

In an endeavour to gain better understandings of this study, some of the key terms are defined and listed here. These terms are defined and used in the way that best suited the research context.

Computer Assisted Language Learning (CALL) is defined as “the search for and study of applications on the computer in language teaching and learning” (Levy, 1997, p.1). The innovation of the information and communications technology has extended the scope of the computer. In the context of this work, the CALL is not limited to the use of computer, other technologies such as E-readers, tablets used for language learning and teaching are included as well.

Perception is defined as “a man's primary form of cognitive contact with the world around him” (Efron, 1969, p. 137). In this study, perceptions refer to teachers' feelings toward the use of technology in the language classroom.

English as a Foreign Language (EFL) is specifically refers to where English is not the official or second language but taught as a school subject.

1.4 Overview of the Research Design

A mixed method approach was used to address the main research questions in this study by using both a questionnaire and an interview protocol. An online questionnaire was distributed to one hundred and fifty-five EFL teachers to understand how teachers define and conceive E-books and their perceived advantages and disadvantages. Follow-up interviews were then conducted with ten teachers from different teaching backgrounds to gather more in-depth interpretations and reasons for using or not-using E-books in the classroom and how they actually use E-books for teaching L2 reading.

1.5 Overview of the Dissertation

The thesis consists of six chapters. Following this introductory chapter, Chapter 2 provides a review of both the non-research and research literature that underpin this project, and examines their contributions to what is known about the teachers' technological perceptions in both ELT and CALL research. It then explains why it is important to integrate technology in teaching EFL reading. The Chinese contexts in relation to ELT and CALL are also given. Research gaps in previous studies and the research question for the present study are identified from the investigations.

Chapter 3 details the methodology used for data collection and analysis in the study with its justifications and states the research focuses. A mixed method approach was adopted to answer the research questions from both quantitative and qualitative perspectives.

Chapter 4 presents the findings of the research from the data analysis. These include the results of the online questionnaire in phase one and the semi-structured interviews in phase two.

Chapter 5 includes the interpretations and discussions of the findings. This chapter details how these findings, which have emerged from the study, helped to answer the research questions by comparing and contrasting the literature presented in Chapter 2.

The thesis concludes with Chapter 6, which summarises the study and discusses its pedagogical and research implications as well as the limitations. Suggestions for future work will be discussed at the end of this chapter.

Chapter 2 Literature Review

The literature review chapter consists of three main sections. The first section introduces the definition of perception and discusses teachers' perceptions in both ELT and CALL research. The second section provides a brief overview of the second language reading process. It then goes on to review relevant studies on the implementation of CALL in learning and teaching L2 reading. The third section examines some of the issues and debates that emerged from the research of using E-books in an educational context. The last section discusses some changes in the Chinese EFL curriculum due to the integration of technology in the classroom and examines the CALL climate in China. Most of the research present in the literature review chapter is mainly from the field of ELT and CALL. However, in some areas, where published studies are limited, literature will be borrowed from other areas such as general education and social studies.

2.1 ELT Teachers' Technological Perceptions

This section discusses the issues with ELT teachers' technological perceptions in current literature. Some basic concepts of the perception are introduced first. Other issues regarding teachers' perceptions in CALL research will be addressed in the second part of this section.

2.1.1 Teachers' Perceptions in Applied Linguistic Research

The study of perception is a major area of interest within the field of philosophy and social science. It is of great importance for the purpose of this study to clarify exactly what is meant by the word "perception". Perception refers to "a man's primary form of cognitive contact with the world around him" (Efron, 1969, p. 137). A fundamental premise of teacher perceptions research has been defined in the field of social behaviour and, according to Ajzen and Fishbein (1980), an individual's behaviour is ultimately a product of his/her perception. Uzunboyulu and Ozdamli (2011, p. 546), in their study of assessing secondary school teachers' technological perception, used the definition of perception coined by a German thinker (Leibniz, 2007). They defined perception as "the subject's act of receiving data from the outer world". These definitions from other areas can also be extended to the field of education. Understanding teachers' perceptions and attitudes are vital for improving educational processes (Meng, Muñoz & Wu, 2016).

Perception has a great influence on the teaching-learning process, thus different researchers have measured perception in a variety of ways. For instance, Sengupta and Falvey (1998) studied Hong Kong English teachers' perceptions of L2 writing. Their subjects were two hundred and forty-three English teachers in Hong Kong. Researchers in this study triangulated the data collection with the use of questionnaires, follow-up interviews, classroom observations and written documentary analysis. Both questionnaire and interview were used in Samimy and Brutt-Griffler's (1999) study to investigate American EFL/ESL university students' self-perceptions and perceptions of their teachers. In Gorder's (2008) research, data were gathered through thirty-five survey items distributed to one hundred and seventy-four K-12 teachers in South Dakota, U.S., in order to examine teachers' perceptions of technology integration and how teachers integrate and use instructional technology in the classroom.

2.1.2 Teacher's Perceptions in CALL Research

The presence of technology changes teachers' perceptions. Positive teacher attitudes towards technology are generally acknowledged as an essential condition for successful implementation in the classroom (Woodrow, 1992). Teachers' technological perceptions influence their CALL integrations (Chik, 2011; Tour, 2015). As teachers can be seen as one of the knowledge input sources in the technology-based learning process, teachers' perceptions and enthusiasm for technology could also facilitate the students' learning process (Lee, 2006; Wang, 2002). The benefits of technology integration often have a close relationship with a language teacher's attitude, background and creativity (Ebsworth, Kim & Klein, 2010).

Teachers nowadays are required to be familiar with CALL theory and practice in terms of language learning (Fotos & Browne, 2013). How teachers perceive the CALL theory could be a strong predictor of their pedagogical practices in the language classroom. Ebsworth, Kim and Klein (2010) used both questionnaires and semi structured in-depth interviews to explore the attitudes, expectations and experiences of ninety ESL, EFL and Bilingual teachers in New York City towards technology enhanced language learning (TELL) during a teacher training course. The findings suggested that it is important to inform language teachers about how language can be acquired through technology and how to use them with their students. Aydin (2013) explored EFL teachers' perceptions in Turkey and found that EFL teachers' computer use was limited even when they have positive attitudes towards using it. Additionally, Tour (2015) conducted a case study with three language teachers from Melbourne, Australia on their personal and professional technology use. The results indicated that how teachers perceived technology may influence how they integrate it in the language classroom. Tour's study also

found a close relationship between the teachers' personal and professional use of the technology and how teachers use the technology in their everyday practices was evident in their technology integration in the classroom.

Liu and Kleinsasser (2015) conducted a study with six full-time EFL teachers at two private schools in Taiwan. They argued that language teachers' CALL literacy, perceptions and technology-use experiences do not necessarily equal the successful technology implementation in a pedagogical context. Shah and Empungan's (2015) quantitative study on Malaysian ESL teachers' attitudes indicated that most of the teachers hold positive attitudes towards CALL, however, this did not mean that the CALL practice is so widespread in the language classroom. Other factors such as the school's technological environment, teachers' training and teaching time management should also be taken into consideration when investigating the CALL integration.

While Aydin's study examined EFL teachers' perceptions and knowledge of computer software, the study made no attempt to consider the other practical factors such as the difficulties in real classroom teaching and curriculum development that may influence EFL teachers' perceptions and implementation of computers. Moreover, the study would have been more useful for teaching practice if it had focused on particular software and its affordance. There is a need for a study which provides a more detailed understanding of which technologies or functions aid or hinder ELT teachers' teachings. Though the use of technology in language teaching can be helpful, Bilbatua and Herrero De Haro's (2014) study addressed the problem that the CALL implementations increase the workload of language teachers. In technology based education, teachers are responsible for planning and delivering contents to students, creating a proper learning environment, facilitating the learning process, as well as motivating students (Mahini, Forushan & Haghani, 2012). With increased workload, some teachers may hold negative attitudes towards the CALL practice in the language classroom.

Researchers have also examined ELT teachers' technical perceptions regarding special domain or language skills. Kessler (2007) evaluated teachers' attitudes towards CALL integration with one hundred and eight graduates in a teacher training programme. The data collected, via a web-based survey, indicated that those pre-service teachers held positive attitudes toward using CALL materials to teach writing, reading and grammar skills in both informal and formal teaching preparation. Ihmeideh (2010) used a questionnaire with a Teachers' Belief Scale and a Teachers' Practices Scale to assess one hundred and fifty-four Arabian pre-school teachers' beliefs and practices in terms of using technology in teaching and

in an English reading and writing class. The result revealed that there is a strong link between teachers' beliefs in technology and the actual classroom practice; teachers believe the use of the computer could promote children's reading and writing skills.

As discussed above, this section has reviewed the relevant studies on teachers' perceptions in applied linguistic and CALL research. It also described some popular research instruments used in measuring the perception in an ELT context. Meanwhile, several issues were also obtained from the studies presented here. First, understanding teachers' perceptions is crucial for successful CALL classroom practice. Secondly, most of the existing research focuses on the general uses of computers in different educational contexts, more specific and in-depth examinations related to specific language skills or domain are needed for better supported classroom teaching. Thirdly, there have been limited studies regarding how many EFL teachers' perceptions and personal habits of using technology may transfer to their classroom teaching practice. As technology continues to change, the ELT teacher in today's language classroom must be familiar with the technology, they must have the awareness of how to integrate technology into existing content. Adding teachers' perceptions and attitudes towards technology will strengthen the power of CALL in the language classroom.

2.2 Teaching Second Language Reading with Technology

Teaching reading in a second language is constantly influenced by the innovative technology that makes the reading process more resourceful and engaging. The following sections review the issues on teaching second language reading with technology. It will first discuss basic perceptions in second language reading, then explain why it is important to investigate the CALL implementation in learning and teaching L2 reading. It will also present some study findings in terms of integrating technology in the L2 classroom.

2.2.1 Second Language Reading

Reading is a complicated cognitive process in which readers need to construct actively the meaning from the text and context. However, when dealing with a second language, this process becomes even more complicated as it may encounter two or even more language systems (Grabe & Stoller, 2011). The second language reading approach can be generally classified as: Top-down (Gough 1972), Bottom-up (Goodman, 1967) and the interactive approach (Smith, 1971). The fundamental differences within these three approaches are whether the reading process is text-driven or reader-driven. In the text-driven process, reading is viewed as a decoding, whereas the reader-driven process emphasises what the reader brings

to the reading text (Barnett, 1988; Hurd & Lewis, 2008). Second language readers are encouraged to use different reading approaches to decode the text. However, in most cases, they are overwhelmed by a reading text full of words in an unfamiliar language, they tend to decode the text with a text-driven approach by looking up every word rather than making interactions with the whole text. A reader needs certain abilities to become successful in second language reading, those abilities do not necessarily align with their reading skills in their first language (Martinez-Lage, 1997). A skilled L2 reader can interact with the text efficiently, searching for the connections between the reading text and other knowledge (e.g. lexical, grammatical, background, etc.) to facilitate the comprehension process. Grabe and Stooler (2013) addressed some differences between L1 and L2 readings, those differences not only exist in the lexical, grammatical knowledge of two languages, but also in the reading motivations, reading abilities, as well as in the backgrounds of readers. The significant uniqueness, complexities and abilities of the L2 reading process informs us that teaching L2 reading needs to be considered more comprehensively.

2.2.2 CALL and Second Language Reading

In the modern EFL classroom, L2 reading has continually been a key area of CALL research (Blake, 2016). The use of computers in the second language learning process has the potential of creating online real-time interaction, thus promoting learners' autonomy, motivation and collaboration (Shetzer & Warschauer, 2000). At the same time, the innovations of today's technology bring many excitements for CALL research. For instance, desktop computers often locked students' physical position when the language learning activity was designed for close communication and interaction between a small group, while, with the more portable devices, such as laptops, tablets and smartphones, the learning processes became even more interactive, collaborative and personalised (Hsu, Hwang & Chang, 2013). A study conducted by Wang and Smith (2013) investigated L2 reading and grammar learning through mobile phones among university students in Japan. The results indicated that Japanese students have an overall positive attitude towards using mobile phones for reading and grammar learning. Compared with PCs, they have a stronger willingness to finish their reading tasks on mobile devices.

The integration of technology in second language reading enables readers to read in a more collaborative way, which could also minimise the learning difficulties for L2 learners (Brantmeier, 2003; Blyth, 2014). However, one vital concern of reading with technology is that electronic text reading involves new literacies, which are different from reading with printed

text. Leu (2002: 313) emphasised the importance of new literacies. He pointed out that “the new literacies include the skills, strategies and insights necessary to successfully exploit the rapidly changing information and communication technologies that continuously emerge in our world”. Thus, teaching L2 reading needs to react accordingly to these new literacies. Park and Kim (2011) conducted a qualitative case study with three ESL/EFL learners in the United States. By careful examination of the reading strategies they used and reactions from online reading texts, the results indicated that L2 readers employ different multimedia resources such as the dictionary and spell-checking for text comprehension. When reading with technology, readers must be selective with the extra functions, links and multi-media contents, therefore, reading is more likely to become a process of making critical decisions. It is also noteworthy that, without particular instructions, L2 readers use almost the same reading strategies to read hypertext as they read with printed text. Thus, it is essential to provide certain specific instructions for L2 readers to help them read with online text or technology. Furthermore, after running a set of experiments with seven second language readers, Park, Yang and Hsieh (2014) found that readers’ line-text reading strategies cannot be fully transferred to an online reading environment. Based on this finding, they addressed the importance of developing new skills for successful online reading. The new literacy skills include: identifying problems and questions; location information; critically evaluating and skilfully synthesising information. These five domains also provide us with a new direction for providing L2 reading instructions in online environments.

CALL research has studied the effectiveness of technology on L2 reading comprehension with different technological tools. For example, a study done by Golonka, Bowles, Frank, Richardson and Freynik (2015) reviewed the existing technologies, such as an electrical dictionary, a game, a social networking website, an iPad etc. for its pedagogical value in language learning. The study confirmed that technology has a significant value in teaching reading, but the integrations of technology still present challenges for teachers and educators. However, some studies suggest a mixed result of using CALL in L2 reading. Tsou, Wang and Tzeng (2006) found that there is no clear link between technology use and the increased reading comprehension scores. Lim and Zhong (2017) also concluded that there is an insignificant difference between the traditional English class and the CALL-based class in terms of students’ reading outcomes. We need to take other factors into consideration when evaluating the effectiveness of CALL integration. The effectiveness of CALL should be more related to pedagogical and instructional design principles rather than the technology itself (Dudeney & Hockly, 2007), technology should not be used simply to display a text, the way teachers incorporate it in teaching practices will add pedagogical values to technology.

2.2.3 Technology Integration in Teaching L2 Reading

Teaching L2 reading with technology-based activities allows the teacher to provide learning tasks in authentic environments, which can also give students much more freedom to explore the reading texts and solve the problems on their own (Brandl, 2008). The usefulness of CALL is largely based on language teachers' appropriate interpretations and integrations of it into classroom activities. Brantmeier's (2003) study explored the perceptions of L2 instructors at university level on using computers for L2 reading instructions by distributing a questionnaire to ten L2 instructors teaching different languages. The results indicated that, ten out of ten instructors have positive attitudes towards teaching reading with a computer as they believe the computer can help them in the L2 teaching process. In addition to this, the answers to open-ended questions further reveal that those teachers integrated technology into both pre-reading, reading and post-reading activities. More specifically, as the instructors reported in this study, they often use technologies for activating students' prior knowledge, teaching vocabulary and checking students' comprehension. Mynard (2012) suggested that the power of technology will be enhanced when teachers use it as part of a normal classroom activity. There is a need to explore EFL teachers' professional uses of technology and how they use the technologies in their teaching routines.

Reviewed literature highlighted the importance for researching reading with technology. As it requires different teaching skills and instructions, readers may also encounter different difficulties compared with reading paper text. Meanwhile, most of the existing studies focus on the L2 readers online reading strategies, fairly limited studies have been conducted regarding EFL teachers' perceptions and implementation of using technology for L2 reading instruction.

2.3 E-Books in Classroom

An E-book can now be seen as the most commonly used technology in the classroom. Although E-books are not a new concept, due to the technological innovations, there are still many discussions on its definition. An E-book is defined by Armstrong, Edwards and Lonsdale (2002, p. 217) as "any piece of electronic text regardless of size or composition (a digital object), but excluding journal publications, made available electronically (or optically) for any device (handheld or desk-bound) that includes a screen." Vassiliou and Rowley (2008, p.363), reviewed many existing definitions of E-books and proposed a two-part definition. They define the E-book as:

(1) An e-book is a digital object with textual and/or other content, which arises as a result of integrating the familiar concept of a book with features that can be provided in an electronic environment.

(2) E-books, typically have in-use features such as search and cross reference functions, hypertext links, bookmarks, annotations, highlights, multimedia objects and interactive tools.

This definition takes into account both the essential components of an E-book and its dynamic updating features owing to the technology development.

Early studies have largely examined the E-books in a single file type with basic multimedia features and low level of interactivity, which now becomes less relevant. For example, one major issue in early E-books research concerned that, instead of using the technical features to facilitate the reading experience, current E-books are more likely simply to be used as a digitalised copy of the printed books (Coyle, 2008).

With the innovation of new technology, E-books experienced the revolution from the plain, linear onscreen text to hypertext and then to the multimedia reading text with interactivity. Yoon (2012) concluded several obvious advantages of the E-book based on his review, including the functionality such as being able to interact with the text and to search for specific information, the expediency as the E-book could be incorporated with other web sources, the budget-friendly, portability, rapidity, storage, interaction and printability. However, it is still questionable whether the E-books that are used in the actual classrooms are functional and interactive enough to promote the learning experience to a new level. Bozkurt and Bozkaya (2015) made comparisons between the printed book, the E-book and the interactive E-book. They stated that the interactive E-book is a new digital book format in which the reader, the book and the environments can interact. The distinctive factor to define and categorise these three book types depends on its level of interactivity. Thus, teachers need to be very cautious and selective in terms of using E-books in language teaching. A clearer understanding is needed on what type of E-book instructors use for the language classroom in terms of its level of interactivity.

Several studies have identified the effectiveness of using E-books in a general educational context. One study by Larson (2015) found that the Kindle reader enables students to customise their reading experience and concentrate on reading for a longer period of time.

Reading with technology does provide readers with a multi-source reading environment. One of a successful integration of E-books in an ELF classroom refers to an E-book experiment with sixty-two Korean elementary school students within ten weeks. In this project, the E-books reading with the glossary and interesting vocabulary test allowed students to acquire more vocabulary. Meanwhile, the study also found that E-book reading could increase L2 students' confidence and motivation for learning English thus minimise the affective factors which may hinder their L2 reading performances (Yoon, 2012). While there may be a significant amount of research on using E-books for learning and teaching in both L1 and L2, there is little empirical evidence about what L2 teachers think of the E-books and their actual practices of using E-books for real classroom teaching. There is still a gap between the research experiments and the actual teaching practices in using E-books in the EFL classroom.

By now, the reviewed literature illustrated two points: firstly, the teachers' perceptions, attitudes that have become a vital factor for successful technology integration. Secondly, the popularity of E-books has emerged as a powerful and most commonly used tool for teaching and learning. However, there seems to be a lack of studies focusing on the EFL context and language teachers. Thus, a closer investigation is necessary when given this specific condition.

2.4 The Chinese Context

English is the key to academic advancement in China. ELT in China, in its earlier stages, was dominated by audio-lingual and grammar-translation methods when it was first introduced into the official educational system, which overemphasised the importance of sentence pattern and grammar knowledge (Zheng, 2015). After entering the twenty-first century, the complexity of English education in China has changed dramatically. However, the reform is still impeded by many other factors. Pan and Block (2011) addressed the fact that EFL learning and teaching in China is very examination-oriented, which is not helpful for communicative competence. Ma (2012) also claimed that the Chinese examination system resulted in the emphasis on memorisation and learning language rules instead of the communicative aspects of language learning. This section focuses on the discussion of the research context in this study by examining both the national curriculum and the current CALL implementations in the Chinese EFL classroom.

2.4.1 Chinese EFL Curriculum

In 2011, the Chinese Ministry of Education (MOE) announced new English Curriculum Standards for Full-time Compulsory Education and Senior High Schools, which highlighted the

need to change the EFL teaching mode into a student-centred and communication-driven curriculum. Before that, there was no national standard for teaching English as a foreign language in primary schools. English language education in China at primary level is quite problematic (Lam, 2005). According to the new curriculum standards, Chinese students in public schools officially start learning English as a foreign language from Primary Three (MOE, 2011). The new trend in Chinese EFL learning is “the lowering age of English learning”, thus resulting in the promotion and popularity of EFL education in primary schools (Zhang, 2012: 80), many private schools include an English class in their Primary one. However, as the national curriculum only sets standards for Primary Three and above, the lack of specific guidelines for the lower stages still limits the teaching practices (Zhang, 2012). Additionally, the regional educational department and schools have the right to decide when to introduce English lessons (Qi, 2016). There is a big disparity between cities, regions and schools regarding the starting grade of EFL learning and the textbooks they use for teaching. Even the schools may use different syllabuses for EFL teaching, all the students are required to pass English in the national examinations before advancing to higher education.

2.4.2 CALL in China

In the Curricula for English Teaching (2011), the Chinese Ministry of Education formally emphasised the importance of L2 literacy development, reading acquisition and using informational technology to create a good reading environment. The communicative and intercultural competence were also highlighted in the new curriculum. However, the implementation of these new policies is not easy. As Zhang (2012) stated, the limited availability and accessibility of print in China hinders Chinese learners L2 literacy, thus introducing computers and educational technologies could somehow supplement the learners L2 input. Li and Ni (2012) stated that the technology integration in the Chinese EFL classroom is still problematic. They argued that most of the teachers use the technology as a presentation tool with Microsoft PowerPoint rather than as a learning tool with multiple software and resources. Computers and other technologies are more likely to be used for teaching; students barely get a chance to use computers during their learning processes in the classroom. A similar result was found in Fang and Warschauer’s (2004) investigation with Chinese university students. Li (2014) examined Chinese EFL teachers’ technology integration with eight secondary school teachers in Beijing. After analysing their classroom video-recordings and interview transcripts, Li suggested that Chinese teachers’ technology integrations were largely based on using PowerPoint and the Internet to present and search contents. However, Li’s study was limited as it only focused on a well-developed city in China with a fairly small sample size.

A recent study done within several Chinese primary schools in Nanjing, after the year of carrying out the new curricula, reveals that even the communicative teaching approach and CALL are encouraged in the real classrooms, Chinese students still believe that English is one of the most important subjects for school tests; Parental demands and expectations for English learning are fairly high; EFL teaching is still examination-orientated (Qi, 2016). It is also noteworthy that the popularity of CALL is heavily concentrated in the economically developed areas such as the First-Tier cities. According to the ranking from China Daily in 2017, the first-tier cities in China now include four major first-tier cities (Beijing, Shanghai, Guangzhou and Shenzhen) and fifteen newly minted first-tier cities (Chengdu, Hangzhou, Wuhan, Tianjin, Nanjing etc.). Teachers in these cities are encouraged to use digitalised teaching materials as those new technologies represent a great potential for facilitating second language learning and providing more cutting-edged resources for language input. China's First Tier cities are the most competitive and ambitious in the field of education and how their EFL teachers perceive the use of technology will illuminate relevant issues in the Chinese EFL context.

However, to date, little is known about the state of integrating technology in the EFL classrooms across these Chinese First Tier cities. There is also a serious lack of research on how the city policies, economic and regional differences may influence the CALL implementation in China. More data are needed to help researchers to understand general technological contexts and current educational practices of technology integration in ELT in China.

2.5 Chapter Summary

Overall, the studies presented thus far highlight the need for understanding EFL teachers' perceptions, attitudes and implementations of technology in the second language reading classroom. It should also be noted that both internal and external factors are equally important in successful CALL implementation. Additionally, certain research preferences have been given to CALL in higher education, thus limiting the discussion on the earlier language learning stage such as primary school teaching. Therefore, the purpose of this study is, not only to uncover the role of teachers' 'technological perception' on the CALL implementation, but also to evaluate other possible factors that may influence the efficient CALL integration in the Chinese primary EFL classroom.

Built on previous research, this study addresses the following research question with three sub-questions:

What are Chinese teachers' perceptions and implementations of using technology for EFL teaching?

- 1) How do teachers define an E-book?
- 2) What are teachers reported personal and professional uses of the E-book?
- 3) How do these definitions and the reports of implementation reflect teachers' technical perceptions on EFL teaching?

The methods that are used to seek the answers to these research questions are presented in the next chapter.

Chapter 3 Methodology

This study uses the E-book as the most commonly used educational technology to explore teachers' perceptions and implementations of technology in EFL classrooms. The main purpose of this chapter is to provide a description of the research design and context, introduce the data collection instruments, namely an online survey and a semi-structured interview. It also explains why these instruments have been chosen. An illustration of data analysis methods and procedures are demonstrated in the chapter. Additionally, the ethical considerations are addressed as well.

3.1 Research Design

This study was designed to explore EFL teachers' perceptions and implementation of the technology. The perception is more related to the affective factors. Researching on affective factors in applied linguistics and second language research is complex by nature, Gardner (1980: 269) has stated that "If...the demonstrated relations between affective variables and second language achievement were discounted, the result would be a considerable loss to our understanding of second language learning and the role played by social factors". The present study, in particular, examined two different dimensions including teachers' technological perceptions and the technology implementation in personal and classroom practices. Hashemi and Babaii (2013) have addressed the needs of using innovative mixed research design as best suited to the research purpose and context. Basically, one of the main purposes for quantitative research is to identify whether a relationship exists between the variables, and "how closely two variables are related in a given population" (Mackey & Gass, 2005: 137). Qualitative research, on the other hand, gives special attention to contextual factors, it aims to investigate individuals in their natural settings (Tetnowski & Damico, 2001). As Mackey and Gass (2005) noted, the two research methods in the second language studies should be viewed as complementary roles of examining a complex phenomenon, hence the two methods can be combined for certain research purposes. However, the combination of two research methods must be built on the understanding of their definition and rationale. Johnson et al. (2007: 123) has defined the mixed method research as a "type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g. use of qualitative and quantitative viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration" This definition was coined according to the analysis of nineteen definitions of mixed method research in different fields and, thus, should provide us with an overview of the mixed method research.

It is also vital for mixed method researchers to demonstrate a clear reason before tackling a mixed method research project (Richards, Ross & Seedhouse, 2012). Normally, triangulation is the dominant purpose of conducting mixed method research in the field of applied linguistics (Hashemi, 2012; Riazi & Candlin, 2014). Triangulation involves the use of more than one data source, data collection and data analysis methods in the study of a single phenomenon (Freeman, 1998). Additionally, mixed method research can be undertaken for complementary purposes as well, in which different methods are employed to interpret different levels of a phenomenon (Riazi & Candlin, 2014), different data sources are used to answer different research questions. The quantitative data which have been collected in the first phase could help to develop and inform the qualitative instrument. At the same time, the qualitative data are used to gain a more in-depth understanding of the quantitative results. Therefore, the mixed method research is an ideal method for this research topic due to the complex issues discussed above.

Another important issue in the design of mixed method research is whether it is sequential or concurrent (Creswell & Plano Clark, 2007). According to their definitions, the mixed method research project can be designed as four categories: Triangulation, Embedded, Explanatory and Exploratory. The present study, for instance, can be classified as an explanatory design model, which involves two phases of data collection. More specifically, it begins with a quantitative study followed by a qualitative one to investigate some of the findings in greater depth. Using a questionnaire as a quantitative method in second language research can help researchers to gather information from participants who are able to report their personal feelings and beliefs or reactions to certain activities (Dörnyei & Taguchi, 2010). However, the use of the questionnaire as a single method may lead to the superficiality of data (Dörnyei, 2003). Therefore, in this study, the questionnaire was used to capture a general view of how teachers define E-books and what they think of using E-books for teaching, regarding its advantages and disadvantages. Then, a semi-structured interview was employed as a qualitative method to gain sub-surface, in-depth and personalised understanding of individual contexts and further clarify some of the questionnaire responses, which could allow us to become more aware of the reasons behind the implementation of technology in the Chinese ELT classroom. In order to address the research questions, the procedure for this study is outlined in Figure 1 below. The pilot study was done prior to the data collection to ensure the reliability and validity of the questionnaire design. Details about the procedures will be discussed in the following sections.

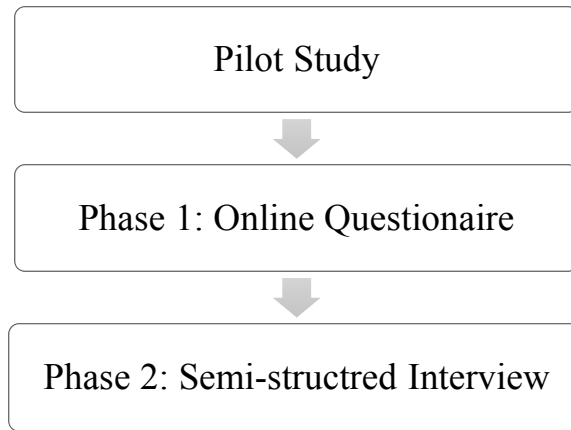


Figure 1 Research Design Procedures

3.2 Data Collection

This section will describe the participants and research instruments and explain the reasons for designing those instruments. The issues related to the data reliability and validity will also be discussed. Meanwhile, the data collection steps will be further elaborated.

3.2.1 Participants

The study focused on EFL teachers who teach in public and private primary schools in China's five First Tier cities. All the participants in the study are self-selected. During phase one, one hundred and fifty-five EFL teachers in China participated (65 males, 90 females) in the online questionnaire.

In Phase two, ten interview participants were selected from those who responded to an invitation to participate in the interview. A question was posted at the end of the online questionnaire about the interview, participants could provide their contact information voluntarily. Ten teachers (two teachers from each city, one from a private school and one from a public school) in Beijing, Shanghai, Guangzhou, Tianjin and Chongqing were interviewed to maximise the school and the geographical variation. The background information of the ten participants are listed below in Table 1.

Participant ID	Name	Gender	City	Private school/public school	Use E-books or not
1	Junjun	F	Shanghai	Both	Yes
2	Ella	F	Shanghai	Public	No
3	Scarlett	F	Beijing	Private	Yes
4	Clare	F	Beijing	Private	Yes
5	Chang	F	Tianjin	Public	No
6	Doris	F	Tianjin	Private	Yes
7	Duan	F	Chongqing	Public	No
8	Becky	F	Chongqing	Private	Yes
9	Xia	F	Guangzhou	Public	No
10	Mavis	F	Guangzhou	Private	Yes

Table 1 Participant Information

3.2.2 Instruments

A mixed method design (quantitative and qualitative) was used in this study. This study used different data collection instruments as a triangulation for increasing the reliability; two different forms of data were collected in an effort to answer the research questions. Patton (2001:247) stated that “triangulation strengthens a study by combining methods. This can mean using several kinds of methods or data, including using both quantitative and qualitative approaches”. Brown (2001) also pointed out the advantages of using both of the two instruments sequentially for the richness of data sources. This method combines the potencies of both quantitative survey data and qualitative interview data, therefore offering a more comprehensive analysis of the research questions.

Online Questionnaire

The study used two different instruments in two data collection phases. In phase one, an online questionnaire (see Appendix 1) was chosen as the instrument to collect quantitative data. As Mackey and Gass (2005) have pointed out, by using a survey, researchers will be able to collect data on perceptions and attitudes from a large group of participants. Brown (2001) has suggested using a questionnaire for the large-scale study and the study over wide geographic areas. Given special attention to the costs and efficiency, the questionnaire used in this study was distributed online via a web-based survey tool and posted on the several online Chinese ELT forums. The online questionnaire involved lower costs and has the advantage of collecting

responses immediately (Wagner, 2010) although, the online distributions may have an impact on the age of the participants.

The questionnaire in this study was written in English as all the participants in this study were qualified EFL teachers with advanced or superior English language proficiency and they were able to respond to the questionnaire in English. The questionnaire contained both closed and open-ended questions, which gathered both objective data and subjective data, such as participants' background information and comments or suggestions on the use of E-books in EFL teaching. It also included two of the Likert scale items to assess teachers' perceptions and attitudes for each of the statements regarding integrating E-books for EFL reading. Closed-ended questions in questionnaire design are considered favourable, since the questions are very reader-friendly and the coding process for these questions is quite straightforward as well as being suited to statistical analyses (Dornyei, 2003). The open-ended questions are not encouraged in a professional questionnaire design due to its limitations of a low response rate and coding difficulties (Dornyei, 2003). However, the open-ended questions may still enrich the quantitative data by giving opportunities for participants to leave their thoughts and comments.

Pilot Study

Prior to the distribution of the questionnaire, a pilot study was done at the end of May 2017, with EFL teachers, for the purpose of reliability and validity in the design process of the questionnaire. A link to the questionnaire was sent out via email to ten English teachers in China, who represented both public and private teachers from different cities. In order to identify possible problems with the data collection instrument, these teachers were asked to comment on the questionnaire items. Several wording issues were identified based on the comments. Two of the teachers said they had some difficulties in defining E-books on their own, the question regarding the definition of the E-book was then deleted from the questionnaire. One teacher suggested adding more eBook formats with short descriptions for Question 11 "What are the formats of eBooks you frequently use? (Check all that apply)". After the modifications, the revised version was sent to fifteen Chinese EFL teachers. Twelve of the teachers responded to the questionnaire. One teacher gave some suggestions in terms of questionnaire structure, one more question was then added to inform participants before obtaining the interview participants' names and email addresses. One week after the revision, these twelve teachers were asked if they were willing to help with the retest before the questionnaire distribution for measuring the reliability. Ten teachers retook the questionnaire, giving a response rate of 83%. Based on the

small sample size, the test and retest indicated strong correlations, which means the questionnaire was efficient to provide reliable data for this study. The data in the pilot test were used for modifying the instrument only, thus were not included in the data analysis and results.

Semi-structured Interview

In the second phase, a semi-structured interview (see Appendix 2) was conducted where participants were able to discuss their individual situations based on the guiding questions as to what was their personal experience of using or not using the E-books in teaching. The interview is particularly useful in investigating self-reported thoughts and perceptions. Due to its advantage of flexibility, it can also allow the researchers to elicit additional data from the participants (Mackey & Gass, 2005). The interview guiding questions were designed as two different sets of questions; one for teachers who used E-books for teaching, another one for those who did not use E-books in class.

3.2.3 Data Collection Steps

In phase one, the link to the online questionnaire was posted in English on several Chinese EFL teaching forums. The consent form with a brief description of the study was included at the beginning of the questionnaire. There were twenty-three items on background, schools' location, school type, teaching experiences, personal habits of using E-books and perceptions about using E-books for teaching EFL reading, etc. in the questionnaire.

At the end of the questionnaire, one question asked if the respondent wanted to be contacted for the follow-up interview. The ten participants were selected with a purposeful sampling technique. This sampling technique could enhance the richness and depth of qualitative data on small samples (Patton, 1990). Ten teachers were recruited from fourteen participants in total who responded to the study invitation by providing their names and email addresses. In order to maximise variation in the small sample, ten teachers were chosen after careful investigations of their background information given in their questionnaire responses. Thus, two teachers from each city, one from a private school and one from a public school, were invited to the interview. The interview was conducted online via Skype voice call. Each interview took approximately twenty minutes. Permission was sought from each participant to use the voice recorder to record the interview for transcription purposes. In order to encourage more useful answers, all the participants who consented to be interviewed were given the opportunity to view the basic interview schedule and questions via email before the interview

so that they could consider and organise their responses. Some necessary instructions for conducting the online interview were also given prior to the interview. The interviews were carried out in a more conversational style. Two specific sets of questions were generated to focus on some of the pertinent factors influencing EFL teachers' perceptions and contextual factors promoting or hindering the implementation of the E-book or technology in an ELT classroom.

3.3 Data Analysis

The data collected during the two phases of this research project were analysed in both quantitative and qualitative methods.

Phase One

The data were collected in June 2017. A total of one hundred and sixty-six questionnaires were collected at the end of the data collection period, including one hundred and fifty-five completed responses and eleven incomplete responses. After the completed questionnaires were collected, the data were entered and coded into an SPSS (Statistical Package for the Social Sciences) spreadsheet. A data cleaning procedure was conducted before the data analysis, eleven of the uncompleted responses were deleted during this process. After that, the total number of one hundred and fifty-five responses were entered into an SPSS spreadsheet for further analysis. The questionnaire data were categorised into four different types, namely: nominal data, ordinal data, interval data (Dornyei, 2003) and the textual data for the open-ended question. The data analysis started with a correlation analysis to help decide which questions from the questionnaire were correlated to the various predictor variables: schools, gender, personal habits, using or not using the E-books for teaching. In this study, school types, gender and personal habit were considered as three independent variables, which were used to test the effect on the dependent variable. In this study, using or not-using E-books for teaching was considered as the dependent variable. According to Borg and Gall (1989), the Chi-square test should be used "when the research data are in the form of a frequency count" (p. 559). In order to understand the relationship between school type, gender, personal habits and using E-books for teaching, the Chi-square test was chosen to perform on SPSS for exploring the relationship between these categorical variables. A Chi-square test of independence was performed to examine whether the relationship between these variables was significant or not.

Phase Two

A total of two hundred minutes of interview recording was collected during the interviews. Each interview was recorded by a voice recorder. The recording file was sent to a professional transcription company and transcribed in a written text for further analysis. All the transcriptions were double-checked for accuracy correction. A qualitative inductive approach (Strauss and Corbin, 1998) was adopted in this phase. Through this approach, researchers look for patterns and common themes in the collected data, then develop a theory that could explain those patterns. Firstly, the interview transcriptions were labelled with descriptions and then those descriptions were categorised by identifying their common themes. These categories were processed with a further coding to seek the main themes and sub-themes as well as the differences emerging from the ten transcripts, which could be further generalised to answer the research questions. Pseudonyms are used here for privacy consideration.

Instrument	Participants	Analysis	Research Question Answered
Online Questionnaire	155 EFL teachers from public primary and secondary schools and private language institutions in China	Quantitative analysis using SPSS (Larson-Hall, 2010)	How do teachers define E-books? What are teachers' reported personal and professional uses of E-books?
Semi-Structured Interview	Ten teachers were selected from those who replied to an invitation to participate the interview voluntarily	Qualitative Inductive approach (Strauss & Corbin, 1998)	What are teachers' reported personal and professional use of E-books? How do these definitions and the reports of implementation reflect teachers' technical perceptions on EFL teaching?

Table 2 Data Analysis Procedures

3.4 Ethical Considerations

The study was designed with the full awareness of the ethical issues. Prior to the data collection, ethical clearance was sought from Macquarie University ethics committee. All participations were voluntary in all research phases and the participants were free to withdraw at any time during the research without prejudice. The participants were informed of the aims and procedures of this study for gathering their full consent before the data collection. All the responses and data were purely for research use in order to protect the anonymity and

confidentiality. The whole process and the outcomes of this study followed the ethical requirements of the Macquarie University Faculty of Human Sciences Human Research Ethics Sub-Committee.

In conclusion, the study adopted a mixed-method design in order to collect and examine both quantitative and qualitative data. Three sub-questions on the use of E-books in teaching EFL reading were formed to seek the answers on the teachers' perceptions and implementations of using technology in ELT. The questionnaire in the first phase of the study helped answer the first two of the sub-questions:

- 1) How do teachers define E-books?
- 2) What are teachers' reported personal and professional use of E-books?

The interview helped address the third question for this study:

- 3) How do these definitions and the reports of implementation reflect teachers' technical perceptions on EFL teaching?

Meanwhile, more personal data regarding Questions One and Two were also collected. The findings of the study will be presented in the next chapter.

Chapter 4 Findings

This chapter focuses on the two phases of data analysis, results and participants' responses to the research questions. An analysis of research data gathered during the online questionnaire (phase one) and the semi-structured interviews (phase two) is presented in this chapter. Data derived from the questionnaire were processed on the basis of quantitative analysis. Qualitative results collected by means of interview were examined and presented as well.

4.1 Phase One: Questionnaire Results

The online questionnaire consisted of four sections, including twenty-three questions. The first section in the questionnaire with eleven questions gathered the background information of the respondents, their personal habits of using E-books and the most-frequently used E-book files based on their experience of using them. A total number of one hundred and fifty-five EFL teachers from different first-tier cities completed the questionnaire. Among them, forty were from Beijing, fourteen were from Tianjin, seven were from Chongqing, twenty-five were from Shanghai, twenty-eight were from Guangzhou, forty-one were from the other first tier cities in China. Seventy-five of them were EFL teachers from public primary schools, seventy-four of them were teaching in public schools, six of them described themselves as self-employed teachers. According to the responses, the majority had taught English in China for one to three years, forty-four of them had four to six years of teaching experience. Their ages ranged from 20 to 59 years old. Table 3 below illustrates participants' geographical distribution in the sample of this study, the distribution of participants by gender, age and school are displayed in this table as well. Five cities that were mentioned most are listed separately, the data of the other fourteen cities are combined.

Variable	Category	Frequency	Percent
City	Beijing	40	25.8
	Guangzhou	28	18.1
	Shanghai	25	16.1
	Tianjin	14	9.0
	Chongqing	7	4.5
	Other first-tier cities	41	26.5
Gender	Female	90	58.1
	Male	65	41.9
Age	20-39 years old	145	93.5
	40-59 years old	10	6.5
School type	Public school	75	48.4
	Private school	74	47.7
	Self-employed	6	3.9
N=155			

Table 3 Distribution of Participants by City, Gender, Age and School Type

Based on the responses, over 90% of participants in our sample own an E-book reader. Next, participants were questioned about the most frequently used format of E-book files based on their personal experiences, participants were allowed to choose all the answers that applied for this question. The results are listed in Table 4, PDF file, Microsoft Word document and the scanned file of a printed book are the most frequently-used E-book files in our sample. Over half of the participants (51.6%) used E-books on a weekly basis, only 3.9% of the participants never use E-books. Respondents were also asked to suggest the purpose of using E-books; among the participants in our study, E-books were used primarily for study purposes (33.1%), leisure reading (24.7%) and researching or teaching preparation (22.3%), while less frequently for classroom teaching (17.5%). Additionally, over 74% of participants indicated that they can spend thirty minutes to one hour reading on screen when they use E-books.

E-books Format	Responses	
	N	Percent
PDF file	110	23.6
Doc. files	75	16.1
Scanned file of printed books	55	11.8
EPUB file	52	11.2
Mobi files for Kindle	51	10.9
Plain Text (txt.files)	48	10.3
iBooks file	21	4.5
Online story	19	4.1
Electronic textbooks	13	2.8
Storybooks on software	13	2.8
Other downloadable electronic contents	9	1.9
N=466		

Table 4 Different Formats of E-books files used by participants

In the second section of the questionnaire, participants were asked a variety of questions on their perceptions and attitudes towards using E-books in teaching EFL reading. There were seven questions in this section including whether the participant was using E-books in teaching a reading class, how likely would they be to encourage their students to read E-books, the reasons for using or not using E-books in class, and the perceived advantages and disadvantages of using E-books. More than half (56.1%) of the participants were likely to encourage their students to read on an E-book rather than a printed copy; 20.6% of them stated that the choice of using or not using the E-books depended on the topic; 11.6% of the participants held negative attitudes towards using E-books for second language reading. Of the one hundred and fifty-five teachers who completed the questionnaire, 42% (N=65) of those were currently using E-books for teaching; 58% (N=90) of the teachers reported that they were not using E-books in their classrooms. Respondents were also asked to comment on the reasons separately for using or not using E-books by selecting all the possible reasons that were given in the questions (See

Table 5). Of the ninety responses, “E-books were not fully utilised in my classroom”, “Students may use E-books for other purposes” and “I am not sure how to conduct lessons with E-books” were the three main reasons for not using E-books in class.

Reasons for Not-using	Frequency	Percent
E-books are not fully utilised in my classroom.	49	26.9
My students may use E-books for other purposes, for instance, playing games or browsing websites.	41	22.5
I am not sure how to conduct lessons with E-books.	38	20.9
I think it is difficult to assess or monitor a student’s learning process by using E-books.	25	13.7
E-book readers cannot be used as a traditional book; students cannot write or make notes on it.	19	10.4
Reading onscreen is bad for students’ eyes.	10	5.5
N=90		

Table 5 Reasons for not-using the E-books in teaching

Meanwhile, according to the responses, the multimedia functions, interactive features and search functions are the three main reasons for using E-books in L2 teaching. The total number of responses for this question was sixty-five.

Reasons for using E-books	Frequency	Percent
Interactive features: Text-to-speech, build-in dictionary, games, connect with other social networking websites, etc.	42	20.7
Read beyond the text, eBooks can link any types of multimedia materials.	40	19.7
Searchable content.	34	16.7
Portability	28	13.8
24/7 access from home, school or office.	17	8.4
Cheaper than the hardcopy.	17	8.4
Additional features e.g. Notes, bookmarks, highlighting.	14	6.9
Customized features: size, font and the background colour of text can be altered.	11	5.4
N=65		

Table 6 Reasons for Using the E-books for teaching

The questionnaire also asked teachers to comment on the disadvantages of using E-books. For this question, teachers were able to select all of the statements that correctly described their experience. Of the one hundred and fifty-five respondents, the majority of them indicated that the “online access problem” and the “difficulty in reading from screen” are the biggest disadvantages when using E-books for teaching. Only a small number of respondents had some concerns regarding the security of equipment.

Disadvantages for using E-books	Frequency	Percent
Online access problem	81	23.9
Difficulty in reading from screen	77	22.8
Cost of printing pages	52	15.4
Limited selection of E-books	51	15.1
Not familiar with relevant technology	40	11.8
Not user friendly	28	8.3
Security of equipment	9	2.7
N=338		

Table 7 Disadvantages of Using E-books

A six-item Likert scale was used when asked about the general perception of using E-books for EFL reading. Each item is rated on a 5-point Likert scale (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, 1 = strongly disagree). The measures of central tendency were computed to summarise the data for the most frequent options in the Likert scale items. The results of the data analysis showed that the mean scores were between 3.43 and 3.91 for all the items, which indicates that the majority of those who responded to these items had positive attitudes towards using E-books for EFL reading.

Item	Mean	SD
My students are more likely to be motivated and engaged when I use technologies to teach.	3.91	1.024
The selection of eBook materials for second language teaching and learning is wider than the hardcopies.	3.78	1.058
If available, I would prefer to use eBooks as materials/resources than print books for the courses I teach.	3.63	1.114
I think most of my students (will) enjoy the experience of reading eBooks in their second language.	3.63	1.051
eBooks are as good as print books.	3.48	1.124
In general, if reading and learning in a second language, eBooks are more helpful than print ones.	3.43	1.117
N=155; 1=strongly disagree, 2=disagree, 3=neutral, 4=agree, 5=strongly agree		

Table 8 Teachers' General Perceptions of Using E-books for EFL Reading

Participants who use E-books in teaching were asked to rate the value of the E-book features. Each item is rated on a 5-point Likert scale (1=not valuable at all, 2=not very valuable, 3=somewhat valuable, 4=valuable, 5= very valuable). The measures of central tendency were computed to summarise the data for the most valuable in the Likert scale items. The results showed that the mean scores were between 3.60 and 3.97 with the standard deviation ranging from .937 to 1.256 for all the items. However, the portability (M=3.92), multimedia functions (M=3.92), interactive features (M=4.02), additional functions such as note-taking and customised features (M=3.97), are the four most distinguished values of E-books chosen by EFL teachers.

Item	Mean	SD
Interactive features: text-to-speech, build-in dictionary, games, connect with other social networking websites, etc.	4.02	1.256
Additional features e.g. Notes, bookmarks, highlighting.	3.97	1.089
Portability	3.92	0.937
Read beyond the text, eBooks can link any types of multimedia materials	3.92	1.150
Cheaper than the hardcopy.	3.72	1.083
Searchable content	3.68	1.077
24/7 access from home, school or office.	3.65	1.007
Customised features: size, font and the background colour of text can be altered.	3.60	1.101
N=65; 1=not valuable at all, 2=not very valuable, 3=somewhat valuable, 4=valuable, 5=very valuable		

Table 9 Perceived values of E-books' Features

A set of Chi-square tests of independence were performed to examine the relationship between three categorical variables (gender/school type/ personal habit) and using or not using E-books for teaching. The results of the tests are presented in Table 10 below. Firstly, a Chi-square test of independence was calculated comparing the frequency of using or not using E-books for teaching in female and male teachers. A significance level of $p < .05$ was required. The relationship was found between gender and the use of E-books for teaching, $\chi^2 (1, N = 155) = 7.4, p=0.006$. In our sample, female teachers are more likely to use E-books for teaching than male teachers.

	Variable	Chi-square Value	df	p
1	Gender	7.421	1	0.006
2	School Type	23.809	1	0.000
3	Personal Habit	6.797	4	0.147
	N=155			

Table 10 Results of Chi-square Tests

In terms of the relationship between school type and using or not-using E-books for teaching, according to the Chi-square test results, the relationship between these variables was significant, $\chi^2(1, N = 149) = 23.809, p < 0.001$. Thus, teachers from private schools were more likely to use E-books for teaching than those from public schools. By interpreting the p value, we can be more than 99% confident that the relationship observed in the sample also exists in the population. Cramer's V is also calculated here for the measure of association. The value above .4 indicated a strong relationship between the two variables.

Next, a Chi-square test of independence was performed to determine whether there is a relationship between the frequency of using E-books personally and using or not-using E-books

for teaching. The relationship between these variables was insignificant, $\chi^2(4, N = 155) = 6.797$, $p = 0.147$. There was no observed relationship between using E-books personally and using E-books in the classroom.

In the last section of the questionnaire, respondents were asked to suggest additional thoughts or comments about using E-books for teaching EFL reading. The overall responses to this open-ended question were poor, only thirteen individuals commented on this question. However, some valuable options still emerged from those responses. One respondent who was not using E-books in teaching stated that: "From my perspective, whether eBooks are suitable for the student depends on his/her English level and teaching content as well. Hard copies may be more functional and convenient when the learner is a beginner or intermediate as it is necessary for him/her to write down some important notes for review. Though, many students are programmed to use hard copies rather than eBooks in my school." Another two respondents also pointed out the inconvenience for note-taking. Another reported problem was eye strain, for example, one participant thought: "we had a digital classroom so students can read on computer, but some of the parents are not quite happy with that, they thought the digital screen is bad for the eye sight." The availability of technology in the classroom was mentioned in the comments, as one respondent said: "Personally, I am an E-Book user but when it comes to teaching, whether to use eBooks or not, normally depends on different schools and their teaching methods. My school uses more traditional teaching methods to teach primary school English. Most of the teaching contents are delivered via paper-based materials." And another participant stated that: "We cannot make sure that all the students have eBooks at home, and we do not have desktop computers or e-readers in every classroom. Teachers may just use it for teaching preparation or references."

4.2 Phase Two: Interview Results

The second phase of this study expanded on the findings from the first phase through semi-structured interviews of ten EFL teachers in both public and private schools from five different cities. Their information is listed in Table 11; pseudonyms are used here for privacy considerations. The interview questions asked about how those EFL teachers use E-books in the teaching process. They were able to indicate the reasons for using or not using E-books based on their own situations.

Participant ID	Name	Gender	City	Private school/public school	Use E-books or not
1	Junjun	F	Shanghai	Both	Yes
2	Ella	F	Shanghai	Public	No
3	Scarlett	F	Beijing	Private	Yes
4	Clare	F	Beijing	Private	Yes
5	Chang	F	Tianjin	Public	No
6	Doris	F	Tianjin	Private	Yes
7	Duan	F	Chongqing	Public	No
8	Becky	F	Chongqing	Private	Yes
9	Xia	F	Guangzhou	Public	No
10	Mavis	F	Guangzhou	Private	Yes

Table 11 Interview Participants Information

Self-reported data on the implementations of E-books in the EFL reading classroom were collected during this phase. The thematic analysis from the qualitative phase revealed five main themes focusing on various factors impacting the technology integration in the Chinese EFL classroom. The interview data coding and thematic analysis resulted in four main themes as listed in Table 12 below.

Main Theme	Description
Teachers' Definitions of E-book	The most frequently used types of E-books that EFL teachers used in their classroom and personal lives.
Teachers' Personal Use of E-book	How E-books were used in teachers' personal lives.
Benefits	The various benefits and advantages associated with E-books and technology integration perceived by EFL teachers.
Implementations	How do EFL teachers report using E-books in their reading classes.
Contextual factors	Possible contextual factors that affect teachers' decisions on technology integration.

Table 12 Five Main Themes Emerged from Interviews

4.2.1 Teachers' definitions of E-books

Several different types of E-books were mentioned among six of the teachers who had experience of teaching with E-books in their classrooms. Clare, who worked at a private language school, talked about the PDF book and reading software she used to teach her reading class. She also stated that the PDF books were just a PDF file without any interactive features, the reading software came with interactive functions such as “click to pronouns”, however she

mostly used a pdf file as an E-book. Junjun, who taught at both a public school and a private school in Shanghai, said she used Word documents as E-books to teach. She used some web-based reading materials as a post-reading activity for her students. Scarlett also mentioned the web-based materials when talking about the E-books she was using in her class. Scarlett also explained that she often downloaded some scanned files of printed books shared by other EFL teachers on the teachers' forums. Doris had five years' teaching experience at a private school and she had an interactive whiteboard in her classroom, most of her teaching contents were delivered via interactive whiteboard. Becky was asked to comment on the same question, like Doris, she used an interactive whiteboard to teach but she also mentioned the PDF documents as well. Mavis used both Kindle and PDF books in her class when she worked at a private language school. She also suggested that most of her students had their own tablets at home, so they were able to read the E-books after class.

When asked about the same questions with teachers who had no experience of using E-book in teaching, they also mentioned some of the E-books they have used personally. For instance, Ella expressed that she did not use E-books in teaching, however she used Kindle personally. Another three participants, Chang, Duan and Xia reported a similar situation to Ella. They were both E-book users personally but never used it for their English classes at school. Additionally, Xia also indicated that she put some reading texts in PowerPoint and presented them via the projector, but she was not quite sure if that could be counted as an E-book.

4.2.2 Teachers' Personal Use of E-books

All teachers in our interviews said that they have used E-books personally on an everyday basis. They mainly used E-books for leisure reading or learning other subjects. For instance, Duan illustrated: "I read novels on my Kindle when I am on the subway. I think it is light weight and portable compared with a hard copy" (Duan, public school teacher).

Xia's main reason for using E-readers was its ultimate access to the books in different languages from different countries. She mentioned:

I like to read English novels and Japanese comic books on my Kindle or mobile phone, downloading E-books is much cheaper and faster than purchasing a real book. (Xia, public school teacher)

For Scarlett, she found the E-books gave her a fluent reading experience when reading a book in English. She explained: “I do not have to switch between different devices or books if I want to check something when I read with E-books, especially when I read in English. Switching is annoying” (Scarlett, private school teacher).

Evidently, EFL teachers used different types of E-book in their everyday practice. However, E-books were used mostly as a digitalised copy of a printed book in EFL teachers’ personal lives. Being able to read multiple books anytime and anywhere offered teachers the convenience which they could not enjoy with hard copies.

4.2.3 Perceived Benefits of Using E-books for ELT

When talking about the benefits of using E-books in L2 reading, portability emerged as the first sub-theme within the various benefits associated with E-books integration. Junjun commented: “I think e-book is more convenient and easy to bring, easy to print, and you can take whatever pages you want.” (Junjun, private and public school teacher).

Scarlett also stated that, compared with some printed books in small font size, she often printed E-books in bigger size. She believed it is easier for students to read. The student engagement is another important area that emerged as a theme to perceived benefits of using E-books. As Becky put it:

... because we use this kind of e-books, students can listen and touch by themselves, in this kind of course, students will be interested in this kind of book compared to the books they have in hands. (Becky, private school teacher)

Doris also indicated that her students were more active and engaged in her class when she used technology to teach. The instant auto-corrections were another important benefit that teachers mentioned during the interview. For example, both Junjun and Doris felt that the auto-correction was very helpful when they were teaching with E-books. A small number of those interviewed suggested that E-books are more suitable for personalised learning. As Doris said, the E-books she had were specially designed according to the learner’s language proficiency, so students could choose the level of difficulty when they read. Scarlett reported that E-books are more resourceful, because some of the English books she wanted to use with her students do not have physical copies for sale in China and she might only need it once, then she just searched online to either download the E-books for free or purchase them for a better price.

Meanwhile, Scarlett also believed that the digital files are easy to share and exchange not just with students but also with all the EFL teachers worldwide. Mavis was the only teacher who expressed the importance of 21st Century Skills, she said that the skills of using digital devices and online sources were essential for all the students who are born in this digital age. The integration of technology in learning and teaching strengthened students' future academic performance and competitiveness.

4.2.4 Implementations of E-books in EFL Reading Class

The implementation of E-books into the EFL reading class were discussed with the teachers who were using E-books to teach. The interviews also asked the relevant technology integrations if the teachers had no experience of using E-books in an EFL reading class. For teachers who were using the E-books in teaching, the majority mentioned that they used E-books in pre-reading activities and vocabulary teaching. For example, Clare said:

I will introduce the topic of the reading text and background information. Like...show them videos or pictures and other web-based information. ... Then since most of my students are beginners, they need to learn and practice vocabulary involved in the reading material before they read. Normally, they will use online dictionary or animations in the E-books to understand the words. (Clare, private school teacher)

Scarlett thought E-books were useful when introducing background information, especially teaching the reading material about history. Mavis reported that she sent the digital material to students before they had a reading class, so that they could preview the books at home, search for some interesting information and take it to class for sharing with other students. She encouraged students to contribute their knowledge to the class. Both Mavis and Doris talked about how their students used the E-books to read and correct their pronunciations. For instance, Doris encouraged her students to listen to the standard vocabulary pronunciations in E-books. Mavis let her students listen to the story and used the recorders in the E-books to record their voice, she found it helpful for their pronunciation and intonation.

Xia mentioned, during the interview, that her school did not have technology available in the classroom, but there were several multi-media classrooms with desktop computers for students to use. However, she only used the computers to show PowerPoints to her students. In her EFL reading class, she normally started with teaching vocabulary then followed by teaching sentence structure. Duan, who had two-years teaching experience at a public school, said that

her school tried to introduce a management website for teachers to upload the assignments online, but it failed after a few months because many older teachers at her school were more comfortable using paper-based material. Chang, who taught at a public school in Tianjin, reported that they did not have computers or E-readers in every classroom. However, teachers at her school used a learning management system to upload their teaching contents electronically so that their students could download them at home. She thought she used technology more for preparing her class but she did not use it in class with her students. Meanwhile Scarlett, who used E-books in her teaching, also believed E-books were more efficient in terms of teaching preparation. She commented: “I can have many open sources shared by other teachers on the forums and I can get the things I want just by one click” (Scarlett, private school).

4.2.5 Contextual Factors that Impact EFL Teachers’ Technology Integration

Both the reasons for using or not-using E-books in the classroom were discussed during the interviews. These reasons emerged as possible contextual factors that affect teachers’ decisions about technology integration. It is noteworthy that all of our ten participants in the interview expressed their positive attitudes towards technology integration, even when they had certain reservations about using technology in class. However, the actual implementation was influenced by many external factors. First of all, some of them described the CALL as “a new teaching trend”, Mavis believed we should have technology equipment in the classroom because our students use them in their daily lives and they live in this digital age. Another interviewee, Junjun, believed that the use of technology in ELT changed the teaching method in Chinese EFL market. She put it:

It has become a common practice and new teaching trend to employ e-books or technology for teaching in China now. My school purchased different technology devices for teachers and students to meet the market demand. I think the teaching method nowadays is driven forward by market demand. (Junjun, private and public school teacher)

Teachers who worked at public schools all mentioned that their schools used a more traditional way of teaching and they were not encouraged to use E-books to teach. Parental support is another important factor for both teachers and schools when making decisions on whether to integrate the technology or not. For instance, Doris found her parents are well

educated and they like to have their child using technology in class. However, Ella, who taught in a public school, stated that,

Some of my parents do not want their kid use technology very often, and some of them are not familiar with how to use it themselves... I found it going to be hard if I use E-books with my students in class. (Ella, public school teacher)

When asked about class size, Mavis reported that she had a class with sixteen students, while Xia, who taught in a public school, mentioned that she had a class with fifty students, so she found using traditional textbooks was more convenient for her. The larger the class size, the less likely a teacher was to use E-books in class. Conversely, smaller class size led to more frequent E-book usage. In terms of professional training, there were both positive and negative opinions on teachers' development training for technology implementation. It was reported during the interviews that some teachers, who were required to use technology at their schools, received minimal guidelines or training, whereas some teachers had had very comprehensive training and support from their workplaces on how to conduct lessons via technology devices in the past few years. However, as technology is constantly changing, some EFL teachers felt the training they had previously was somewhat irrelevant to their class. These reported that contextual factors contributed to the inconsistencies between EFL teachers' technological perception and its actual practice in the second language classroom.

4.3 Summary of Qualitative and Quantitative Results

This chapter presented the results from both the questionnaire data analysis in phase one and the thematic analysis in phase two. First of all, the qualitative analysis to the online questionnaire provided demographic information for this study as well as the answers to the first two research questions on how EFL teachers define E-books and what they think of the strengths and weaknesses of implementing E-books for ELT. Relevant information on how EFL teachers perceived and defined E-books were collected. In addition, based on the qualitative analysis, the variables such as gender and school type were identified as possible factors that impact on E-book integration in the ELT classroom. The results from the Chi-square tests showed the school type (public school or private school) had the greatest influence on using or not-using E-books for teaching. Gender also plays a role in E-book usage in our study sample. However, teachers' personal habits of using E-books did not contribute to its actual implementation in classroom practices.

The self-reported quantitative results in the second phase offered a more in-depth understanding to the first two research questions, uncovered the answers to the third research question on implementing E-books in an ELT reading class. Ten participants, who worked at different types of schools from five different first-tier cities in China, talked about their technological perceptions and implementations according to their own experience. Contextual factors, that appeared to affect EFL teachers' technology integration in actual classroom teaching, were the school environment including the technology support and classroom size, the different requirements of different teaching methods, parental support as well as the teacher's professional training. Based on the results provided in this chapter, the discussions of the findings are presented in the next chapter.

Chapter 5 Discussion

This chapter first provides a summary of the research aim, the context as well as the research method. This is followed by a detailed analysis and discussion of the main research findings based on the three research questions for this study. A comparison with previous published studies and implications of present research findings are discussed as well. Finally, the limitations of the study and the recommendations for future research are examined.

5.1 Summary of the Study

The study used E-books as a tool to explore Chinese EFL teachers' perceptions and implementation of technology in the context of public and private primary schools. It also aimed to identify the possible factors that may affect teachers' decisions about integrating technology in teaching. In order to understand fully this complex issue, the study adopted a mixed-method approach by using both an online questionnaire and a semi-structured interview. The online questionnaire was designed to explore teachers' perceptions about technology. The link to the questionnaire was posted on different ELT forums in China. A total of one hundred and fifty-five EFL teachers from the first-tier cities in China, including four major first-tier cities (Beijing, Shanghai, Guangzhou and Shenzhen) and fifteen newly minted first-tier cities (Chengdu, Hangzhou, Wuhan, Tianjin, Nanjing etc.) responded to the questionnaire representing both private and public schools. After the collection of the questionnaire responses, ten EFL teachers from five different cities (Beijing, Tianjin, Chongqing, Shanghai, Guangzhou) were chosen for the one-to-one interviews. Interviews were conducted for the purpose of collecting the self-reported data on the teachers' technological perceptions, the technology implementation in classroom practice and the factors affecting teachers' technology integration. Therefore, both qualitative and quantitative data were collected during the data collection stage.

5.2 Discussion of Findings

The findings and implications of this research are addressed through the answers to the three research questions. The discussion of the findings and the contributions to the field of CALL and ELT are discussed in the following sections.

5.2.1 Findings for Research Question 1

The first research question investigated how EFL teachers define E-books based on their personal and professional experience. Responses to the questionnaire indicated that the basic E-books formats such as a Pdf file, Microsoft Word Doc file and the scanned file of a printed

book are the most frequently used E-book formats in our study sample. This result may explain the fact that EFL teachers are more likely simply to use a digitalised copy of a print copy as an E-book. Teachers also did not mention the advantages of using E-books for interactive reading purposes. The same results emerged during the interviews as well. Compared with the academic definition of E-books previously cited in the literature review chapter by Vassiliou and Rowley (2008, p. 363):

- (1) An e-book is a digital object with textual and/or other content, which arises as a result of integrating the familiar concept of a book with features that can be provided in an electronic environment.
- (2) E-books, typically have in-use features such as search and cross reference functions, hypertext links, bookmarks, annotations, highlights, multimedia objects and interactive tools.

It seemed that most EFL teachers in our sample defined the E-book as a digital object with simple textual content, a minority of them noticed its additional features that can only be provided in an electronic environment, such as annotations, personalised contents, multi-media functions and interactive features. It can thus be suggested that EFL teachers had very different interpretations and definitions of E-books. The interactivity level of the E-books that are frequently used in the Chinese ELT classroom tended to be lower than expected. Most teachers use E-books as a presentation tool rather than a learning tool to facilitate a second language reading process. This also aligns with earlier observations in Li's (2014) study, which showed that the advantages of technology were not fully exploited in Chinese educational contexts. EFL teachers in China are still in their first steps of integrating technology into the classroom.

The study paid particular attention to the teachers' definitions of E-books since the teachers' view and knowledge of technology may predict their actual technology use in the language classroom. In the current study, the teachers who mentioned more advanced and diversified formats of e-books in interviews implemented E-books into more teaching activities than the teachers who only used the Pdf files or Word documents. Mavis, who used both Kindle, Pdf files and Applications on iPad in her teaching process, demonstrated that her implementations of E-books were not just limited to pre-reading activity or vocabulary teaching, she encouraged her students to use them at home to preview or review the teaching contents. Mavis recognised more uses of E-books and accepted them as the advantages and opportunities for second language learning. On the other hand, Scarlett only used the Pdf files she downloaded from webpages and she only integrated E-books as a supplementary material in

the pre-reading activity. These results are in agreement with Tour's (2015) findings, which found the different features and uses of technology that teachers recognised could impact on their teaching practices in a significant way. The study found teachers, who were more aware of the interactive functions of E-books, were more likely to consider using them in the teaching process.

Furthermore, having considered the obvious discrepancy of E-book definitions between those who research the E-book and those who use it in actual teaching, previous studies on the effectiveness of using E-books or other technology in general in an ELT context may therefore need to be interpreted with caution. For future research, it is important to bear in mind that, the effectiveness of certain technology with fancy features and functions might be effective based on the research data in a certain period of time. However, its long-term effectiveness is still vague in pedagogical practices and will be influenced or restricted by many other factors in the real classroom. More detailed investigations on how teachers use the technology to achieve the learning objectives over a longer period of time is strongly recommended.

5.2.2 Findings for Research Question2

The second research question discusses teachers' reported personal and professional use of E-books. The study found that most Chinese EFL teachers used E-books in their personal lives, their positive aspects of personal experience for using E-books could somehow influence their technological perceptions in ELT. However, they might not bring the same experience to their classrooms. In contrast to Tour's (2015) study, no strong relationship was detected between the teachers' personal and professional technology use.

The online questionnaire asked about teachers' perceptions on both the advantages and disadvantages of using E-books for teaching reading. According to responses, the portability, multimedia functions, interactive features, additional functions such as note-taking and customised features, are the most distinguished valuable uses and advantages of E-books chosen by the one hundred and fifty-five EFL teachers in our study. Several disadvantages were identified in the responses such as "online access problem" and the "difficulty in reading from screen". Additional comments on the disadvantages of using E-books were mentioned in the open-ended comment section in the questionnaire. For instance, one participant indicated that E-books are less flexible in note-taking especially for beginners. Another participant suggested the considerations of eye strain and the discomfort of reading from the screen. Those reported advantages and disadvantages of using E-books for a reading class were also mentioned in Yoon's (2012) research on using E-books with Korean EFL learners. Most of the EFL teachers

reported in their interviews that E-books were helpful during the pre-reading stage for teaching background information and vocabulary. Since they believed the multi-media functions of the E-book are helpful to activate students' prior knowledge before they read. This result repeats Brantmeier's (2003) claim that pre-reading activity and vocabulary teaching were the most widely used way to integrate technology in a second language reading class. Moreover, in our study, teachers found their students were more engaged when they read on E-books with interactive features. In contrast, some teachers who found the E-books are portable and cheaper than hardcopies, had not actually used them for a reading class. These findings suggested that EFL teachers' decisions about E-book integration were partly based on their perceived advantages of using it, how teachers perceived the benefits of technology greatly influenced their implementation in the classroom.

It is also noteworthy that the teachers, who integrated E-books for EFL reading in our study sample, used either an interactive approach (Smith, 1997) or Top-down (Gough, 1972) approach in their reading class. Their students were encouraged to use different online resources and technology to decode the reading text and share information with the others in the class. Consistent with Blyth's (2014) claims, integrating technology in learning and teaching second language reading could enable students to read in a more collaborative way and minimise the difficulties in the reading process. The use of technology could make the reading class more student-centred. In contrast, those teachers who used traditional paper-based material taught their reading class with the Bottom-up (Goodman, 1967) approach. This study also found that teachers with more traditional teaching approaches to teaching second language reading or a more teacher-centred classroom were less likely to integrate technology because it did not support their teaching methods. It can therefore be assumed that the use of technology in teaching EFL reading empowered teachers to rethink their teaching methods and pedagogical beliefs.

Additionally, all the teachers who worked at private schools had experience of using E-books for teaching, only a few of the teachers realised the difference between reading with electronic and printed text. Those teachers who understood the importance of teaching new digital literacy were able to change their instructions accordingly. Many teachers did not recognise the different literacies (Leu, 2002) required for online reading and simply treated the E-book as a digitalised version of a printed book, which actually hindered the effectiveness of technology integration.

5.2.3 Findings for Research Question 3

The third question asks about how these definitions and the reports of implementation reflect teachers' technical perceptions on EFL teaching? The findings on teachers' definitions and reports of implementation of E-books extended our understanding on EFL teachers' technological perceptions and reflected the CALL implementation in the Chinese context. In other words, how teachers perceived and implemented E-books might shape their CALL perceptions in some ways. Several factors emerged during the discussions that may impact on teachers' CALL perceptions and implementation and this will be presented below.

Gender differences have always been a main concern within CALL research. Previous studies showed a mixed result regarding the impact of gender in technology integration. The statistical test found an observed relationship between gender and using E-books for teaching. Female teachers were more likely to use technology in EFL teaching. This result may be explained by the fact that there were more female participants (N=90) than male participants (N=65) in our study sample. Technology was considered as a male-domain area at its early stages. However, as the technology has been popularised in everyday life, the gender effect has become weaker than it was before. This finding is in line with Yuen and Ma (2002) where they found no significant difference between genders in terms of the attitudes toward technologies.

The quantitative analysis revealed an insignificant relationship between teacher's personal habits of using an E-book and using or not-using an E-book for teaching. This inconsistency might be explained by the reported disparity on teachers' personal and professional use of E-books during the follow-up interviews. All the interview participants with no experience of using E-books for teaching were all E-book users in their personal lives and had their own E-reader such as a Kindle or iPad even though they never used them in class. This seems to support Chik's (2011) claim that teachers' personal experiences with technology do not necessarily transfer to the pedagogical use. There is still a discrepancy between how teachers use the technology personally and how they implement it in teaching practices.

Additionally, data from the questionnaire and the interview suggested a general positive attitude and perception among the participants toward using E-books for teaching. In contrast to the findings of the prior study (Bilbatua & Herrero De Haro, 2014), teachers in our study sample did not feel stressed or anxious about integrating technology into EFL teaching. However, over half of the teachers in this study did not use E-books in their classrooms. There seems to be no strong link between positive CALL perception and successful implementation.

These findings differ from Ihemeideh's (2010) estimate of the EFL teacher's technological perception and implementation, but they are broadly consistent with Shah and Empingan's study (2015) with Malaysian ESL teachers. EFL teachers' technological perceptions are vital in the decision-making processes of technology integration, but the actual implementation of technology is determined by more complicated factors (Li, 2014). Several external factors emerged in the study from the collected data as possible contextual factors that affect teachers' decisions about technology integration.

Both quantitative and qualitative data revealed a strong relationship between the school type and using or not-using E-books for teaching. In this study, private schools were more likely to use E-books in teaching compared to the public ones, and all the interview participants with no experience of using E-books for teaching worked at public schools. A possible explanation of this result may be the lack of technological support and English education in public primary schools. Junjun commented in her interview that, as she worked at both private and public schools in Shanghai, she found the technologies she used in the private school were more advanced than those in the public school. In our study, teachers who worked at private schools mentioned different technical devices they used for teaching, including computers, projectors, tablets (iPad), Kindle and the interactive whiteboard, while those teachers who taught at public school only have a computer and projector in their classroom. Private school teachers tended to have more exposure to technical devices, therefore increasing the technology implementation in teaching practices. Private schools and institutions have become a new force in the Chinese educational market. Jin and Cortazzi (2002) claimed, earlier childhood English education and employing native English speakers are the two major selling points for private primary schools in China. At the same time, the increased nation-wide policy attention to CALL implementation led to the development of technology enhanced language learning. (Zhong & Shen, 2002). Private schools increased their investment in technology related facilities in order to attract more parents and students.

The differences between teaching methods were also identified as a factor related to the school environment which may predict the different level of technology integration. Teaching methods in a Chinese EFL classroom were broken down into a scale indicating a more traditional teacher-centred approach at one end to a more student-centred approach at the other end. Normally, the teaching methods adopted at private schools were more communication-driven, yet more examination-orientated at public schools in the Chinese context. This result is likely to be related to the conclusion in some previous studies (Fang & Wrschauer, 2004; Qi, 2016), which indicated that, although the communicative teaching approach and technology

integration were introduced, Chinese EFL teaching is still examination-orientated. However, not much information was given on the Chinese private education and the comparisons between private and public sectors. There are still many unanswered questions about the climate of Chinese private English education.

The research findings overwhelmingly identified a need for a comprehensive professional training for teachers, parental support and technical device availability for CALL implementation. The qualitative data collected showed teachers in the study reported that, according to their contexts, a barrier to the use of E-books or other technology in the classroom, was lack of parental support. As our participants indicated, well-educated parents were generally happy about the technology integration, while some of the other parents showed negative attitudes towards it. In addition, teachers' professional training and technical support may also make EFL teachers feel frustrated about the integration process. The importance of providing proper training for EFL teachers on CALL for better implementation was addressed in many published studies (e.g. Aydin, 2013; Bilbatua & Herrero De Haro, 2014). Understanding how EFL teachers perceived and implemented E-books in teaching provided meaningful answers about the general CALL perceptions and implementation in ELT in China.

To sum up, the present study found that Chinese EFL teachers' perceptions about CALL implementation are mainly influenced by three aspects: their perceptions of technology, the perceived advantages and disadvantages of using technology and the overall teaching environment at their workplaces. Many other factors such as; class size, time management, parental and school support within these three aspects are also needed to be considered when teachers are integrating the technology into classrooms.

Chapter 6 Conclusion

The final chapter includes a summary of the key findings, an evaluation of the study's contribution to research development and pedagogical application. The limitations are discussed subsequently in a later section

6.1 Summary of the Key Findings

This study set out to investigate EFL teachers' perceptions and implementation of technology in the EFL classroom. A mixed-method approach was adopted in order to collect data with different instruments, including an online questionnaire and a semi-structured interview. The E-book integration in the Chinese EFL classroom provided a glimpse into the CALL climate in practice. As a result, four key findings were drawn from this study.

First of all, the study has confirmed the findings of previous research (Aydin, 2013) which found that, EFL teachers generally expressed a positive perception about technology use in their personal and professional lives. However, as they reported, EFL teachers have normalized technology in their personal lives but not professional lives yet. Secondly, teachers have not recognised all of the affordance of technology and the unique benefits it may bring to EFL learning. Many teachers simply treated them as digitalised contents, which hindered the effectiveness of technology integration. The same result was identified in their personal technology uses as well. Third, the study provided additional evidence of the significant discrepancy between public schools and private schools in terms of technology integration. Private school teachers were required to use technology with their students, and most of them had access to different technical devices at their schools. The technology integration became a big selling point for private English schools in the Chinese educational market. Fourth, even the CALL implementation is addressed in the national English curriculum, the technology integration in Chinese primary schools was not as positive due to the lack of technical infrastructure and support. Public school teachers' professional technology use is limited to searching on the Internet, downloading material from web pages, making PowerPoint slides, preparing lesson plans, etc. However, their students barely get a chance to use technology during class. The pedagogical approach used in Chinese EFL classrooms at public schools was still more teacher-centred, the technology integration seems irrelevant to the teaching objectives. The support and training provided by schools and institutions were inadequate in terms of CALL implementation.

6.2 Contributions

The use of E-books in an EFL reading class, from the perspective of primary school teachers in this study, suggested some valuable insights into the CALL climate in China. The investigation of using E-books for teaching EFL reading revealed how teachers perceived and implemented technology in the language classroom. In general, the findings of this study contribute to the extant study in the context of Chinese EFL teachers' perceptions and implementation of CALL.

It is suggested, in the findings, that one aim should be to increase teachers' digital literacy awareness. The importance of teaching digital literacy was not fully recognised among EFL teachers in China in terms of both personal use and professional use. Providing essential professional training with regard to the new digital literacy thus becomes extremely urgent for schools and other training providers. Chinese EFL teachers need more content specific training in CALL which can match the curricular development and technology innovation. Meanwhile, it is also vital to help teachers to build their own evaluation system to evaluate the effectiveness of technology integration and identify the usefulness of technology. Teachers need to shift their teaching process and teaching approach in order to incorporate technology as part of their instructions.

The results of the present study also indicated that EFL teachers in China generally have a positive attitude towards technology integration in the language classroom. Teachers did not feel stressed or anxious about using technology. They perceived CALL as a new teaching trend, which is helpful in the learning and teaching process. The mainly positive perceptions of CALL among Chinese EFL teachers and their positive aspects of everyday technology practices can provide a strong basis for further implementation. There was a large group of EFL teachers who had a strong belief in CALL integration, but faced many challenges and obstacles for using technology in their class. Interestingly, the study revealed that Chinese EFL teachers' professional technology uses were largely based on teaching preparation. Technology benefits teachers more in the office than students in the classroom. The study also identified a variety of factors impacting on teachers' decisions about using technology in the teaching process, for instance, the lack of hardware and internet access, parental support and professional training could abate the teachers' enthusiasm for technology integration. Therefore, to enhance the technology integration, schools and administrations should create a technology friendly environment for teachers to help them to minimise the difficulties in the CALL implementation. It is also noteworthy that all sorts of technical support should match the purpose of teaching, the role of technology in ELT should be understood and accommodated purposefully.

The study found a significant discrepancy between public schools and private schools in terms of technology implementation. ELT in China takes place not just within formal school systems, different models of private schools or language tutorial institutions reinforce the status of ELT outside the formal education system. The different school environments result in differences in the pedagogical beliefs and assessment needs. The current technology enhanced learning in some Chinese public schools is still in its infancy. The pedagogical approach and assessment method needs to shift from the emphasis on teaching linguistic knowledge to developing communicative competence. Public schools need more investment in relevant hardware and software to put the curriculum requirement of CALL integration into practice.

Additionally, the investigations of this study were based on the context of China's first-tier cities. Even though these cities are the most competitive and ambitious in the field of education, the CALL implementation is still not satisfactory. It could be further concluded that the uneven economic development among different regions may have led to the different status of CALL integration in teaching practice.

6.3 Limitations

The study was limited in several ways. First, the study results were limited by the instruments. In particular, the online instrument was distributed via web-links, all participants were self-selected, which may have affected the variations of the participants in this study in terms of gender and age. The majority of our sample were 20 to 39 years old. Very few older teachers responded to our questionnaire. Most of the teachers who actively participated at the data collection stages were female teachers. Thus, these results may not be applicable to other age groups or male teachers. Second, it is unfortunate that the interview was unable to include male participants to ensure the gender balance. There were a few male teachers who agreed to participate in our interview, but did not reply to the follow-up email. Since the study was conducted within a relatively short period of time, it was not possible to wait for the responses from male teachers.

6.4 Suggestions for further research

The research project has opened up many questions in need of further investigation. For instance, one of the possible directions could be involving a larger and more diverse selection of participants. For instance, further research could examine the different cities of different tiers. Another important issue that emerges from these findings is the disparity of private and public EFL education in China, a further study with more focus on the differences and their impacts is therefore suggested. Moreover, the study did not make a clear distinction between private all-

day schools and private language schools (institutions) in the study context since there are too many models of private education. As the private sector do have an important role in the Chinese educational system, especially for English education, further studies regarding the role of private education would be worthwhile. In addition, the study identified a relationship between gender and incorporating E-books in teaching, females are more likely to use E-books in their classroom compared with males. Further investigation into the relationship between gender and CALL integration is strongly recommended.

Although the data collected during the interviews illustrated how teachers implement E-books in teaching EFL reading, all the data were self-reported, further investigation needs to be done to provide more evidence on how technology is used in the classroom.

The context of this study was narrowed down to China's first tier cities, the variations were still found in terms of CALL implementation, even greater variation could be expected among other regions in China. Another area of research could focus on the disparity of the developed and less-developed areas in China in terms of CALL integration. It would be interesting to compare the technology implementation within the same national standards. The socio-cultural context needs to be examined in depth for a better understanding of the CALL implementation in China.

6.5 Concluding Remarks

The primary purpose of the present study was to investigate Chinese EFL teachers' perceptions and implementations of using technology for EFL teaching. The E-book was used as a tool in this study to reflect how teachers perceived and implemented technology in their teaching processes, in particular for teaching EFL reading. It is also aimed to take a look at current CALL integration and implementation in China. One hundred and fifty-five primary school EFL teachers from both public and private schools in China's first tier cities participated in this study. Both online questionnaires and semi-structured interviews were used for data collection. This mixed method approach was useful in enhancing and expanding our understanding of the Chinese EFL teachers' CALL perceptions and implementations.

The study has shown that Chinese EFL teachers' technological perceptions were mainly positive. However, this positive perception made no significant contribution to the technology integration in their teaching practices. Meanwhile, teachers' personal experiences of using technologies might shape how they perceived using them for pedagogical instructions, but this kind of perception once again did not influence teachers' decisions of CALL integration.

Resource accessibility, pedagogical approach and professional development training emerged as some of the factors that may impact on the CALL implementation in the study context. This study has also raised important questions about the discrepancy between public schools and private schools in terms of the level of technology integration. Therefore, the school context is influential in the technology integration process.

Taken together, these findings suggest that EFL teachers should raise their awareness of the digital literacy and the usefulness of technology. Teachers need to shift their teaching approach in order to incorporate technology as a part of their instruction. A more technology-friendly teaching environment should be expected to help teachers take practical steps to integrate technology in class.

More broadly, research is also needed to understand how technology is used in class within different contexts. Further investigation of other factors, that could influence teachers' technological perceptions and implementation, is strongly recommended.

References

- Adkins, S. S. (2015). The 2015-2020 China digital English language learning market. *Ambient Insight Research*. Retrieved from http://www.ambientinsight.com/Resources/Documents/AmbientInsight_2015-2020_China_Digital_English_Market_Abstract.pdf
- Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Englewood-Cliffs, NJ: Prentice-Hall.
- Armstrong, C., Edwards, L., & Lonsdale, R. (2002). Virtually there? E-books in UK academic libraries. *Program*, 36(4), 216-227.
- Aydin, S. (2013). Teachers' perceptions about the use of computers in EFL teaching and learning: the case of Turkey. *Computer Assisted Language Learning*, 26(3), 214-233. <https://doi.org/10.1080/09588221.2012.654495>
- Barnett, M. A. (1988). Teaching reading strategies: how methodology affects language course articulation. *Foreign Language Annals*, 21(2), 109-119.
- Bilbatua, L., & Herrero De Haro, A. (2014). Teachers' attitudes towards computer-assisted language learning in Australia and Spain teachers' attitudes towards computer-assisted language learning in. *Circulo de Linguistica Aplicada a La Comunicacion*, (57), 3-44. http://dx.doi.org/10.5209/rev_CLAC.2014.v57.44513
- Blake, R. (2016). Technology and the four skills. *Language Learning & Technology*, 20(202), 129-142. Retrieved from <http://llt.msu.edu/issues/june2016/blake.pdf>
- Bland, D. (2016). China's cities classification. *South China Morning Post*. Retrieved from <http://multimedia.scmp.com/2016/cities/>
- Blyth, C. (2014). Exploring the affordances of digital social 201 reading for L2 literacy: The case of eComma. In J. Guikema & L. Williams (Eds.), *Digital Literacies in Foreign and Second Language Education* (pp. 201-226). San Marcos, TX: CALICO.
- Bozkurt, A., & Bozkaya, M. (2015). Evaluation criteria for interactive e-books for open and distance learning. *The International Review of Research in Open and Distributed Learning*, 16(5). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/2218/3409>
- Brandl, K. (2008). *Communicative language teaching in action: putting principles to work*. Pearson Prentice Hall.
- Brantmeier, C. (2003). Technology and second language reading at the university level: Informed instructors' perceptions. *The Reading Matrix*, 3(3), 50-74. Retrieved from <http://www.readingmatrix.com/articles/brantmeier/article2.pdf>
- Brown, J. (2001). *Using surveys in language programs / James Dean Brown*. (Cambridge language teaching library). Cambridge: Cambridge University Press.
- Chik, A. (2011). Digital gaming and social networking: English teachers' perceptions, attitudes and experiences. *Pedagogies: An International Journal*, 6(2), 154-166.
- Chinadaily.com.cn. (2017). *Top 15 'new first-tier' cities in China [1]*- Chinadaily.com.cn. Retrieved 25 August 2017, from http://www.chinadaily.com.cn/business/2017top10/2017-05/15/content_29343927.htm

- Chinese Ministry of Education. (2011). 义务教育英语课程标准 (2011 版) [*English curriculum standards for compulsory education (2011 version)*]. Beijing: Beijing Normal University Press.
- Coyle, K. (2008). E-Reading. *The Journal of Academic Librarianship*, 34(2), 160-162.
- Creswell, J. W., & Plano Clark, V. L. (2007). *Designing and conducting mixed methods research*. Thousand Oaks, CA: Sage Publications.
- Dörnyei, Z., & Taguchi, T. (2010). *Questionnaires in second language research* (1st ed.). London: Routledge.
- Dudeney, G., & Hockly, N. (2007). *How to teach English with technology?* Harlow: Pearson Education.
- Ebsworth, M. E., Kim, A. J., & Klein, T. J. (2010). Projections: From a graduate TELL class to the Practical World of L2 Teachers. *CALICO Journal*, 27(2), 349–375.
- Efron, R. (1969). What is perception? In R. S. Cohen & M. W. Wartofsky (Eds.), *Proceedings of the Boston Colloquium for the Philosophy of Science 1966/1968* (pp. 137–173). Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-010-3378-7_4
- Egbert, J., Huff, L., Mcneil, L., Preuss, C., & Sellen, J. (2009). Pedagogy, process, and classroom context: Integrating teacher voice and experience into research on technology-enhanced language learning. *Modern Language Journal*, 93(SUPPL. 1), 754–768. <https://doi.org/10.1111/j.1540-4781.2009.00971.x>
- Fang, X., & Warschauer, M. (2004). Technology and curricular reform in China: A case study. *TESOL Quarterly*, 38 (2), 301–323.
- Foltz, P.W. (1996) Comprehension, coherence and strategies in hypertext and linear text. In Rouet, J.-F., Levonen, J.J., Dillon, A.P. & Spiro, R.J. (Eds.) *Hypertext and Cognition*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Fotos, S., & Browne, C. (2013). *New perspectives on CALL for second language classrooms / edited by Sandra Fotos, Charles Browne*. New York: Routledge
- Freeman, D. (1998). *Doing teacher research: from inquiry to understanding*. Boston, MA: Heinle & Heinle.
- Gardner, R.C. (1980). On the validity of affective variables in second language acquisition: Conceptual, contextual, and statistical considerations. *Language Learning*, 30(2), 255-270. <http://doi.org/10.1111/j.1467-1770.1980.tb00318.x>
- Golonka, E., Bowles, A., Frank, V., Richardson, D., & Freynik, S. (2015). Technologies for foreign language learning: a review of technology types and their effectiveness. *Computer Assisted Language Learning*, 27(1), 70-105. <http://dx.doi.org/10.1080/09588221.2012.700315>
- Goodman, K. (1967). Reading: A psycholinguistic guessing game. *Journal of The Reading Specialist*, 6(4), 126-135.
- Gorder, L. M. (2008). A study of teacher perceptions of instructional technology integration in the classroom. *Delta Pi Epsilon, L* (No.2 Spring/Summer), 63–76.

- Gough, P. (1972). One second of reading. In J. Kavanagh & I. Mattingly, *Language by ear and by eye: The relationship between speech and reading* (1st ed., pp. 331-358). Cambridge: MA: MIT Press.
- Grabe, W. P., & Stoller, F. L. (2013). *Teaching and researching: Reading*. Routledge.
- Hashemi, M. R. (2012). Forum: reflections on mixing methods in applied linguistics research. *Applied Linguistics*, 33(2), 206–212.
- Hashemi, M. R., & Babaii, E. (2013). Mixed methods research: Toward new research designs in applied linguistics. *The Modern Language Journal*, 97(4), 828–852.
<https://doi.org/10.1111/j.1540-4781.2013.12049.x>
- Hong, K. (2010). CALL teacher education as an impetus for L2 teachers in integrating technology. *ReCALL*, 22(1), 53-69. doi:10.1017/S095834400999019X
- Hsu, Ching-Kun, Hwang, Gwo-Jen, & Chang, Chih-Kai. (2013). A personalized recommendation-based mobile learning approach to improving the reading performance of EFL students. *Computers & Education*, 63, 327-336.
- Hubbard, P. (2008). CALL and the future of language teacher education. *CALICO journal*, 25(2), 175-188.
- Hurd, S. & Lewis, T. (2008). *Language Learning Strategies in Independent Settings* (1st ed.). Clevedon: Multilingual Matters.
- Ihmeideh, F. (2009). The role of computer etchnology in teaching reading and writing: preschool teachers' beliefs and practices. *Journal of Research in Childhood Education*, 24(1), 60–79. <https://doi.org/10.1080/02568540903439409>
- Jin, L., & Cortazzi, M. (2002). English language teaching in China: a bridge to the future. *Asia Pacific Journal of Education*, 22(2), 53–64.
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research*, 1(2), 112–133.
<https://doi.org/10.1177/1558689806298224>
- Kessler, G. (2007). Formal and informal CALL preparation and teacher attitude toward technology. *Computer Assisted Language Learning*, 20(2), 173–188.
<https://doi.org/10.1080/09588220701331394>
- Kim, H. (2002). Teachers as a barrier to technology-integrated language teaching. *English Teaching*, 57(2), 35-64.
- Lam, A. S. L. (2005). *Language education in China: policy and experience from 1949*. Hong Kong: Hong Kong University Press.
- Lam, Y. (2000). Technophilia vs technophobia: a preliminary look at why second-language teachers do or do not use technology in their classrooms. *The Canadian Modern Language Review*, 56(3), 389.
- Larson-Hall, J. (2010). *A guide to doing statistics in second language research using SPSS / Jenifer Larson-Hall*. (Second language acquisition research). New York; London: Routledge.

- Larson, L. C. (2015). E-books and audiobooks: extending the digital reading experience. *Reading Teacher*, 69(2), 169–177. <https://doi.org/10.1002/trtr.1371>
- Lee, J. S. (2006). Exploring the relationship between electronic literacy and heritage language maintenance. *Language Learning & Technology*, 10(2), 93–113. Retrieved from <http://llt.msu.edu/vol10num2/lee/>
- Leu, D. J., Jr. (2002). The new literacies: research on reading instruction with the Internet. In A. E. Farstrup & S. J. Samuels (Eds.), *What research has to say about reading instruction* (3rd ed.) (pp. 310-336). Newark: DE: International Reading Association.
- Levy, M. (1997). *Computer-assisted language learning: Context and conceptualization* / Michael Levy. Oxford: New York: Clarendon Press; Oxford University Press.
- Li, G., & Ni, X. (2012). Use of technology to support the learning and teaching of English in China. In J. Ruan & C. B. Leung (Eds.), *Perspectives on Teaching and Learning English Literacy in China* (pp. 145–160). Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-007-4994-8_5.
- Li, L. (2014). Understanding language teachers' practice with educational technology: A case from China. *System*, 46, 105–119. <https://doi.org/10.1016/j.system.2014.07.016>
- Lim, K., & Zhong Shen, H. (2006). Integration of computers into an EFL reading classroom. *ReCALL*, 18(2), 212-229.
- Liu, M., & Kleinsasser, R. C. (2015). Exploring EFL teachers' CALL knowledge and competencies: in-service program perspectives. *Language Learning & Technology*, 19(1), 119–138. Retrieved from <http://llt.msu.edu/issues/february2015/liukleinsasser.pdf>
- Ma, Q. (2012). Upholding standards of academic writing of Chinese students in China English. *Changing English: Studies in Culture and Education*, 19(3), 349–357. <https://doi.org/10.1080/1358684X.2012.704585>
- Mackey, A., & Gass, Susan M. (2005). *Second language research: Methodology and design* / Alison Mackey, Susan M. Gass. Mahwah, NJ: Lawrence Erlbaum.
- Mahini, F., Forushan, Z. J.-A., & Haghani, F. (2012). The importance of teacher's role in technology-based education. *Procedia - Social and Behavioral Sciences*, 46, 1614–1618. <https://doi.org/10.1016/j.sbspro.2012.05.348>
- Martinez-Lage, A. (1997). Hypermedia technology for teaching reading. In M.D. Bush & R. M. Terry (Eds.), *Technology-enhanced language learning*. Lincolnwood: National Textbook Company.
- Meng, L., Muñoz, M. A., & Wu, D. (2016). Teachers' perceptions of effective teaching: a theory-based exploratory study of teachers from China. *Educational Psychology*, 3410(April 2017), 1–20. <https://doi.org/10.1080/01443410.2015.1008402>
- Mynard, J. (2012). Raising awareness of learning processes with technology tools. *The Asian Conference on Technology in the Classroom*, Osaka, Japan 2012, pp. 1-9.
- Noels, K. (2003). Learning Spanish as a second language: learners' orientations and perceptions of their teachers' communication style. *Language Learning*, 53(S1), 97-136.

- Pan, L., & Block, D. (2011). English as a “global language” in China: An investigation into learners’ and teachers’ language beliefs. *System*, 39(3), 391–402.
<https://doi.org/10.1016/j.system.2011.07.011>
- Park, H., & Kim, D. (2011). Computers and education: reading-strategy use by English as a second language learners in online reading tasks. *Computers & Education*, 57(3), 2156–2166. <https://doi.org/10.1016/j.compedu.2011.05.014>
- Park, J., Yang, J.-S., & Hsieh, Y. C. (2014). University level second language readers’ online reading and comprehension strategies. *Language Learning & Technology*, 18(3), 148–172.
- Patton, M. Q. (1990). *Qualitative evaluation and research methods*. Thousand Oaks, CA: Sage.
- Qi, G. Y. (2016). The importance of English in primary school education in China: perceptions of students. *Multilingual Education*, 6(1). <https://doi.org/10.1186/s13616-016-0026-0>
- Rao, S. S. (2003). Library hi tech electronic books: a review and evaluation. *Library Hi Tech*, 21(4), 85–93. <http://dx.doi.org/10.1108/07378830310467427>
- Riazi, A. M., & Candlin, C. N. (2014). Mixed-methods research in language teaching and learning: Opportunities, issues and challenges. *Language Teaching*, 47(2), 135–173.
<https://doi.org/10.1017/S0261444813000505>.
- Richards, K., Ross, S., & Seedhouse, P. (2012). *Research methods for applied language studies (1st ed.)*. Milton Park, Abingdon, Oxon: Routledge.
- Rumelhart, E. (1977). Toward an interactive model of reading. In S. Dornic, *Attention and Performance* (pp. 573-603). New York: Academic Press.
- Samimy, K. & Brutt-Griffler, J. (1999). To be a native or non-native speaker: Perceptions of 'non-native' students in a graduate TESOL program. In G. Braine (Ed.), *Non-native educators in English language teaching*. Mahwah, NJ: Lawrence Erlbaum. 127-14
- Sengupta, S., & Falvey, P. (1998). The role of the teaching context in Hong Kong English teachers’ perceptions of L2 writing pedagogy. *Evaluation & Research in Education*, 12(2), 72–95. <https://doi.org/10.1080/09500799808666933>
- Shah, P. M., & Empungan, J. L. (2015). ESL teachers’ attitudes towards using ICT in literature lessons. *International Journal of English Language Education*, 3(1), 201-218.
<http://dx.doi.org/10.5296/ijele.v3i1.7158>
- Shetzer, H., & Warschauer, M. (2000). An electronic literacy approach to network-based language teaching. In M. Warschauer & R. Kern (Eds.), *Network-based language teaching: Concepts and practices* (pp. 171-185). New York: Cambridge University Press
- Stanley, G. (2013). Integrating technology into secondary English language teaching. In G. Motteram, *Innovations in learning technologies for English language teaching* (pp. 43-66). London: British Council.
- Strauss, A. & Corbin, J. (1998). *Basics of qualitative research*. Thousand Oaks: Sage Publications.
- Smith, F. (1971). *Understanding Reading: A Psycholinguistic Analysis of Reading and Learning to Read. Third Edition* (1st ed.). New York: Holt, Rinehart and Winston.

- Smyth, S. & Carlin, A. (2012). Use and perception of e-books in the University of Ulster: a case study. *New Review of Academic Librarianship*, 18(2), 176-205.
<http://dx.doi.org/10.1080/13614533.2012.719851>
- Tetnowski, J. A., & Damico, J. S. (2001). A demonstration of the advantages of qualitative methodologies in stuttering research. *Journal of Fluency Disorders*, 26(1), 17-42.
[https://doi.org/https://doi.org/10.1016/S0094-730X\(01\)00094-8](https://doi.org/https://doi.org/10.1016/S0094-730X(01)00094-8)
- Tour, E. (2015). Digital mindsets: teachers' technology use in personal life and teaching. *Language Learning & Technology*, 19(193), 124-139. Retrieved from
<http://llt.msu.edu/issues/october2015/tour.pdf>
- Tsou, W., Wang, W., & Tzeng, Y. (2006). Applying a multimedia storytelling website in foreign language learning. *Computers and Education*, 47, 17-28.
- Uzunboylu, H., & Ozdamli, F. (2011). Teacher perception for m-learning: scale development and teachers' perceptions, 544-556. <https://doi.org/10.1111/j.1365-2729.2011.00415.x>
- Vassiliou, M., & Rowley, J. (2008). Progressing the definition of "e-book." *Library Hi Tech*, 26(3), 355-368. <https://doi.org/10.1108/07378830810903292>
- Wang, Y.-M. (2002). Journal of research on technology in education when technology meets beliefs. *Journal of Research on Technology in Education*, 351(10), 150-161.
<https://doi.org/10.1080/15391523.2002.1078237>
- Wang, S., & Smith, S. (2013). Reading and grammar learning through mobile phones. *Language Learning & Technology*, 17(3), 117-134.
- Warschauer, M., & Healey, D. (1998). Computers and language learning: An overview. *Language teaching*, 31(02), 57-71.
- Wertsch, J. (1997). *Vygotsky and the social formation of mind (1st ed.)*. Cambridge Mass: Harvard University Press.
- Woodrow, J. (1992). The influence of programming training on the computer literacy and attitudes of pre-service teachers. *Journal of Research on Computing in Education*, 25(2), 200-218.
- Yoon, T. (2012). Beyond the traditional reading class: the application of an e-book in EFL English classroom. *International Journal of Research Studies in Language Learning*, 2(1), 17-26. <https://doi.org/10.5861/ijrsl.2012.93>
- Yuen, A. H., & Ma, W. W. (2002). Gender differences in teacher computer acceptance. *Journal of technology and Teacher Education*, 10(3), 365-382.
- Zhang, D. (2012). Chinese primary school English curriculum reform. In J. Ruan & C. B. Leung (Eds.), *Perspectives on Teaching and Learning English Literacy in China* (pp. 67-83). Dordrecht: Springer Netherlands. https://doi.org/10.1007/978-94-007-4994-8_5
- Zheng, H. (2015). *English language education: teacher beliefs as a complex system: English language teachers in China*. Cham: Springer International Publishing.
- Zhong, Y., & Shen, H. (2002). Snapshots from two multimedia EFL classrooms. *British Journal of Educational Technology*, 33(1), 39-52.

Appendix 1

Questionnaire

The questionnaire asks you about your perceptions on the use of E-books as second language reading material. All your responses will be anonymous and will never be linked to you personally. Your participation is entirely voluntary. Thank you for your cooperation.

The following questions are about your personal habits.

1. What best describes your current position?

- ☐ English teacher
- ☐ Teacher in other subjects
- ☐ Other

2. Which city are you from?

- ☐ Beijing
- ☐ Tianjin
- ☐ Chongqing
- ☐ Shanghai
- ☐ Guangzhou
- ☐ Others _____

3. How long have you been teaching?

- ☐ Less than 1 year
- ☐ 1-3year
- ☐ 4-6years
- ☐ More than 6 years

4. I teach at

- ☐ Public school
- ☐ Private school
- ☐ Language institution
- ☐ Self-employed

5. I am

- ☐ Female
- ☐ Male

6. I am in the following age group:

- ☐ Less than 20 years old
- ☐ 20-29 years old
- ☐ 30-39 years old
- ☐ 40-49 years old
- ☐ 50-59 years old
- ☐ 60 years or older

7. Do you currently own an e-reader? (check all that apply)

- ☐ Kindle by Amazon
- ☐ Touch-screen tablet (e.g. iPad, Samsung Galaxy Tablet. Etc.)
- ☐ I have installed Kindle or other e-reader software on my phone
- ☐ I have installed Kindle or other e-reader software on my computer/laptop
- ☐ No, but I'm planning on purchasing one
- ☐ I do not have one and have no plan to use e-reader

8. What are the formats of eBooks you frequently use? (Check all that apply)

- ☐ PDF files
- ☐ EPUB files
- ☐ Microsoft Word Doc. Files
- ☐ Plain Text (txt. files)
- ☐ Mobi files for Amazon Kindle
- ☐ iBooks by Apple
- ☐ Storybooks on software
- ☐ Scanned files of printed books
- ☐ Online stories
- ☐ Electronic textbooks
- ☐ Other downloadable electronic contents

9. On average, how often do you use eBooks?

- ☐ Daily
☐ Weekly
☐ Monthly
☐ Less often
☐ Never

10. For what purposes do you usually use eBooks?

- ☐ Leisure Reading
- ☐ Teaching
- ☐ Study
- ☐ Research
- ☐ Never use eBooks for any purposes

11. When I use eBooks I can comfortably spend the following amount of time reading from the screen:

- ☐ 10 minutes
- ☐ 30 minutes
- ☐ 1 hours
- ☐ 2 hours
- ☐ More than 2 hours
- ☐ Not at all

The following questions are about your eBooks usage in teaching.

12. How likely are you to encourage your students to use an e-book rather than a printed copy of the same content to read and learn?

- ☐ Very likely
- ☐ Somewhat likely
- ☐ Hard to say/depends on topic
- ☐ Somewhat unlikely
- ☐ Very unlikely

Using the following grading scheme, please circle your response to the statements
Strongly disagree 2. Disagree 3. Neutral 4. Agree 5. Strongly agree

13. My students are more likely to be motivated and engaged when I use technologies to teach.

14. eBooks are as good as print books

1 2 3 4 5

15. If available, I would prefer to use eBooks as materials/resources than print books for the courses I teach.

1 2 3 4 5

16. In general, if reading and learning in second language, eBooks are more helpful than print ones.

1 2 3 4 5

17. I think most of my students (will) enjoy the experience of reading eBooks in their second language.

1 2 3 4 5

18. The selection of eBook materials for second language teaching and learning is wider than the hardcopies.

1 2 3 4 5

19. I am currently using eBook(s) as my teaching materials or course readings

☐ Yes

☐ No

If you answered “Yes” to the statement 19, please proceed to the question 21.

If you answered “No” to the statement 19, please proceed to the question 20.

20. Chose the reason(s) why you are not using eBooks for your teaching.

☐ eBooks were not fully utilized in my classroom.

☐ My students may use eBooks for other purposes, for instance, playing games or browsing websites.

☐ I am not sure how to conduct lessons with eBooks.

☐ I think it is difficult to assess or monitor student’s learning process by using eBooks.

☐ eBook reader can not be used as a traditional book; students can not write or make notes on it.

☐ Reading onscreen is bad for students’ eyes.

☐ Others _____

Please proceed to the question 23.

21. I would like to use eBooks for teaching because: (Please mark each box that applies)

☐ 24/7 access from home, school or office.

☐ Searchable content

☐ Portability

☐ Read beyond the text, eBooks can link any types of multi-media materials.

☐ Interactive features: Text-to-speech, build-in dictionary, games, connect with other social networking websites, etc.

☐ Additional features e.g. Notes, bookmarks, highlighting.

☐ Customized features: size, font and the background colour of text can be altered.

☐ Cheaper than the hardcopy

☐ Others

Please proceed to the question 22.

22. In the context of teaching and learning a second language specifically, how valuable are the following eBooks features?

Using the following grading scheme, please circle your response to the statements

	1. Not valuable at all	2. Not very valuable	3. Somewhat valuable	
		4. Valuable	5. Very valuable	
24/7 access from home, school or office.				
1	2	3	4	5
Searchable content				
1	2	3	4	5
Portability				
1	2	3	4	5
Read beyond the text, eBooks can link any types of multi-media materials.				
1	2	3	4	5
Interactive features: Text-to-speech, build-in dictionary, games, connect with other social networking websites, etc.				
1	2	3	4	5
Additional features e.g. Notes, bookmarks, highlighting.				
1	2	3	4	5
Customized features: size, font and the background colour of text can be altered				
1	2	3	4	5
Cheaper than the hardcopy				
1	2	3	4	5

Please proceed to the question 23.

23. What do you think as the disadvantages of ebooks?

- ☐ Online access problems
- ☐ Cost of printing pages
- ☐ Difficulty in reading from the screen
- ☐ Limited selection of e-books
- ☐ Not familiar with relevant technology
- ☐ Not user friendly
- ☐ Security of equipment
- ☐ No disadvantages
- ☐

Please proceed to the question 23.

24. Please write down any additional thoughts or comments about using eBooks for second language learning.

Thank you for completing the survey.

As an excellent and passionate EFL teacher, you are invited to an online interview. The interview aims at exploring the use of E-books and technologies in EFL classroom based on individual context. The interview will be about 45 minutes long and conducted online via Skype or any other voice chatting software of your choice. You will receive a 50 AUD (about 250 CNY) Amazon gift card for your participation.

We may wish to interview you based on your responses. Please provide your email detail if you would like to be considered for an interview. Again, all your answers and participations

are completely anonymous and only used for research purposes. Thank you in advance for your help!

Name: _____
E-mail address: _____

Appendix 2

Semi-Structured Interview: Guiding Questions

1. Can you tell us something about yourself? How long have you been teaching English?
2. Do you use E-book for teaching? Why or why not?

If the answer is “YES”

3. What type of E-book? Can you name some E-books you have used in your teaching?
4. Why you decide to use this (these) certain type(s) of E-book(s)?
5. How did you integrate the E-book into your classroom?
6. In what ways do you think using e-books for teaching reading than physical books might change how you do teaching?
7. Did you ever receive any trainings in terms of using technology for teaching?
8. What else would you like to tell us about e-books or using technology for teaching?

If the answer is “NO”

3. Can you talk about the reasons why not using the E-book for teaching?
4. Have you ever used E-books personally?
5. What were the advantages and drawbacks of using E-books?
6. Did you ever receive any trainings or guidelines in terms of using technology for teaching?
7. How do you anticipate your teaching method or process would change, if you use e-books in your classroom?
8. What else would you like to tell us about e-books or using technology for teaching?

Appendix 3

Department of Educational Studies
Faculty of Human Sciences
MACQUARIE UNIVERSITY NSW 2109



Phone: +61 (0) 2 9850 8766
FAX: +61 (0) 2 9850 8766
Email: alice.chik@mq.edu.au .

Chief Investigator's / Supervisor's Name & Title: Dr. Alice Chik

Participant Information and Consent Form

Name of Project: Teachers' Perceptions and Implementation of Technology in EFL Classroom: A Case Study of Using E-books for EFL Reading

You are invited to participate in a study of EFL teachers' perception, attitude and implementation of technologies in Classroom. The purpose of the study is to use teachers' definition, perception and use of E-books to explore the greater issues of technology use in EFL teaching.

The study is being conducted by Yijun YIN (Department of Educational Studies , yijun.yin@students.mq.edu.au, 0415900528) to meet the requirements of Master of Research degree under the supervision of Dr Alice Chik (Department of Educational Studies, alice.chik@mq.edu.au, 9850 8766).

If you decide to participate, you will be asked to participate in an online survey on teachers' perception, attitude and implementation of technologies in classroom. All the data will be anonymized to be non-identifiable.

Any information or personal details gathered in the course of the study are confidential, except as required by law. No individual will be identified in any publication of the results. During the project, only the research team (including faculty staff and student researcher) will have access to the interview and research data, which will be stored safely. A summary of the results of the data can be made available to you on request.

Participation in this study is entirely voluntary: you are not obliged to participate and if you decide to participate, you are free to withdraw at any time without having to give a reason and without consequence. You can withdraw by sending an E-mail to alice.chik@mq.edu.au .

I, *(participant's name)* have read *(or, where appropriate, have had read to me)* and understand the information above and any questions I have asked have been answered to my satisfaction. I agree to participate in this research, knowing that I can withdraw from further participation in the research at any time without consequence. I have been given a copy of this form to keep.

Participant's Name: _____
(Block letters)

Participant's Signature: _____ Date: _____

Investigator's Name: _____
(Block letters)

Investigator's Signature: _____ Date: _____

The ethical aspects of this study have been approved by the Macquarie University Human Research Ethics Committee. If you have any complaints or reservations about any ethical aspect of your participation in this research, you may contact the Committee through the Director, Research Ethics & Integrity (telephone (02) 9850 7854; email ethics@mq.edu.au). Any complaint you make will be treated in confidence and investigated, and you will be informed of the outcome.

(INVESTIGATOR'S COPY)

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FAX: +61 (0) 2 9850 8766
Email: alice.chik@mq.edu.au .

Chief Investigator's / Supervisor's Name & Title: Dr. Alice Chik

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(Block letters)

Participant's Signature: _____ Date: _____

Investigator's Name: _____
(Block letters)

Investigator's Signature: _____ Date: _____

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(PARTICIPANT'S COPY)



RE: HS Ethics Application - Approved (5201700391)(Con/Met)

4 messages

FHS Ethics <fhs.ethics@mq.edu.au>
To: Alice Chik <alice.chik@mq.edu.au>
Cc: Miss Yijun Yin <yijun.yin@students.mq.edu.au>

Wed, May 3, 2017 at 3:24 PM

Dear Dr Chik,

Re: "Teachers' Perception, Attitude and Implementation of Technologies in EFL Classroom: A Case Study of Using E-books for EFL Reading" (5201700391)

Thank you very much for your response. Your response has addressed the issues raised by the Faculty of Human Sciences Human Research Ethics Sub-Committee and approval has been granted, effective 3rd May 2017. This email constitutes ethical approval only.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

<https://www.nhmrc.gov.au/book/national-statement-ethical-conduct-human-research>

The following personnel are authorised to conduct this research:

Dr Alice Chik

Miss Yijun Yin

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 3rd May 2018

Progress Report 2 Due: 3rd May 2019

Progress Report 3 Due: 3rd May 2020

Progress Report 4 Due: 3rd May 2021

Final Report Due: 3rd May 2022

Progress reports and Final Reports are available at the following website:

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Sub-Committee to fully re-review research in an environment where legislation, guidelines and requirements are continually changing, for example, new child protection and privacy laws).

http://www.research.mq.edu.au/current_research_staff/human_research_ethics/managing_approved_research_projects

5. Please notify the Sub-Committee immediately in the event of any adverse effects on participants or of any unforeseen events that affect the continued ethical acceptability of the project.

6. At all times you are responsible for the ethical conduct of your research in accordance with the guidelines established by the University. This information is available at the following websites:

<http://www.mq.edu.au/policy>

http://www.research.mq.edu.au/current_research_staff/human_research_ethics/managing_approved_research_projects

If you will be applying for or have applied for internal or external funding for the above project it is your responsibility to provide the Macquarie University's Research Grants Management Assistant with a copy of this email as soon as possible. Internal and External funding agencies will not be informed that you have approval for your project and funds will not be released until the Research Grants Management Assistant has received a copy of this email.

If you need to provide a hard copy letter of approval to an external organisation as evidence that you have approval, please do not hesitate to contact the Ethics Secretariat at the address below.

Please retain a copy of this email as this is your official notification of ethics approval.

Yours sincerely,

Dr Naomi Sweller

Chair

Faculty of Human Sciences

Human Research Ethics Sub-Committee

