

**SPEAKING PERFORMANCE AND ANXIETY LEVELS
OF CHINESE EFL LEARNERS IN FACE-TO-FACE AND
SYNCHRONOUS VOICE-BASED CHAT**

CHEN YANQIU

**FACULTY OF LANGUAGES AND LINGUISTICS
UNIVERSITY OF MALAYA
KUALA LUMPUR**

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FACE AND SYNCRHONOUS VOICE-BASED CHAT**

CHEN YANQIU

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SPEAKING PERFORMANCE AND ANXIETY LEVELS OF CHINESE EFL LEARNERS IN FACE-TO-FACE AND SYNCHRONOUS VOICE-BASED CHAT

ABSTRACT

With the advanced development of mobile technology, there is a need for exploration of the potential of synchronous voice chats (SVC) operated within a mobile-assisted environment using mobile instant messaging apps, (e.g WhatsApp, WeChat, Messenger), within the language learning area (Cruz-Martinez, 2017). This is especially true in China, where language researchers and teachers have long been facing the challenge of finding effective approaches to develop language learners' speaking performance. With an aim to address this problem, this study investigated the effectiveness of SVC in improving Chinese EFL (English as Foreign Language) learners' speaking performance, as well as the impact of utilizing the mobile WeChat on anxiety levels. A mixed-mode research design was applied to provide a more complete picture. Forty second-year students in a public Chinese university participated in the experiment. Over a four week period, students participated in four chat sessions while completing four tasks using both face-to-face (F2F) and synchronous voice chat (SVC) modes. The quantitative data was collected by compiling the oral scores of participants' performance of the tasks, as well as their responses to anxiety questionnaires. The qualitative data was then collected from a focused group interview. The data revealed a significant difference in learners' speaking performance, with oral performances in SVC outperforming F2F chats. There was also a significant difference in anxiety levels in both chat modes: learners were found to experience higher levels of anxiety in F2F chat than in SVC.

Keywords: Speaking performance, anxiety, synchronous voice-based chat.

**PRESTASI LISAN DAN TAHAP KEBIMBANGAN PELAJAR EFL DARI
CHINA DALAM PERBUALAN BERDASARKAN PERBUALAN SUARA
SERENTAK (SYNCHRONOUS VOICE CHAT) DAN**

ABSTRAK

"Prestasi lisan dan tahap kebimbangan Pelajar EFL dari China dalam perbualan berdasarkan Perbualan Suara Serentak (Synchronous Voice Chat) dan bersemuka"

Dalam perkembangan teknologi mudah alih yang makin membangun, terdapat keperluan untuk meneroka potensi Perbualan Suara Serentak (PSS) yang dikendalikan menggunakan aplikasi pemesejan mudah alih (Whatsapp, WeChat, Messenger) dalam bidang pembelajaran bahasa (Cruz- Martinez, 2017). Sementara itu di China, penyelidik dan guru bahasa sentiasa menghadapi cabaran dalam mencari pendekatan yang berkesan untuk memperbaiki bahasa pelajar terutamanya dalam kemahiran lisan. Dengan matlamat untuk menyelesaikan masalah yang disebutkan di atas, penyelidikan ini mengkaji keberkesanan PSS terhadap prestasi dan tahap kebimbangan pelajar-pelajar EFL (English as a Foreign Language, English sebagai Bahasa Asing) dari negara China dengan bantuan teknologi mudah alih (aplikasi WeChat). Reka bentuk penyelidikan mod campuran telah digunakan untuk memberikan gambaran yang lebih jelas dalam penyelidikan ini. 40 pelajar tahun kedua universiti awam China telah dipilih sebagai subjek kajian penyelidikan. Sepanjang tempoh 4 minggu, pelajar-pelajar tersebut telah mengambil bahagian dalam 4 sesi perbualan yang terbahagi kepada dua mod berbeza: PSS dan secara bersemuka. Data kuantitatif dikumpul melalui skor lisan prestasi peserta dalam 4 tugas dan soal selidik tahap kebimbangan mereka. Data kualitatif pula dikumpul dari temuduga kumpulan fokus. Penemuan menunjukkan perbezaan yang jelas antara sesi perbualan PSS dan bersemuka. Prestasi perbualan pelajar didapati lebih baik dalam sesi PSS berbanding sesi bersemuka. Selain itu, terdapat juga perbezaan yang signifikan dalam tahap kebimbangan mereka dalam kedua-dua mod perbualan. Kadar kebimbangan

para pelajar didapati lebih tinggi dalam perbualan bersemuka. Terdapat korelasi negatif antara prestasi pembelajaran dan tahap kebimbangan pelajar dalam kedua-dua mod perbualan. Walau bagaimanapun, ketinggian korelasi dalam mod PSS adalah lebih rendah berbanding mod bersemuka. Jika diambil kira penggunaan Bahasa Inggeris dari sudut praktikal, kebanyakan pelajar lebih suka perbualan bersemuka daripada perbualan PSS.

Kata Kunci: Prestasi pertuturan, kebimbangan, perbualan suara serentak

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LIST OF SYMBOLS AND ABBREVIATIONS

EFL	:	English as a Foreign Language
SVC	:	Synchronous Voice-based Chat
F2F	:	Face-to-Face
MALL	:	Mobile Assistant Language Learning
ELT	:	English Language Teaching
SLA	:	Second Language Acquisition
MMC	:	Mobile-Mediated Communication
STC	:	Synchronous Text Communication
SVC	:	Synchronous Voice Communication
FLA	:	Foreign Language Anxiety
QUAN	:	Quantitative
QUALI	:	Qualitative

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CHAPTER 1: INTRODUCTION

1.1 Introduction

This initial chapter introduces the background and purpose of this study. Issues concerning research problems and the questions examined in relation to foreign language learning and teaching are discussed. The significance and limitations of the research are also explained.

1.2 Background and Rationale for the Study

It is well known that Chinese EFL students are learning English in a context where the target language is seldom used in society. Moreover, the traditional English classes are mainly teacher-controlled, exam-oriented and time-limited. As a result, learners' oral performance is usually overlooked. Language researchers and teachers thus face the challenge of finding effective approaches to develop the language learners' speaking performance (Ruixue et al, 2012). The lack of language interaction and oral practice in the classroom has generated low self-confidence and high anxiety towards speaking. Therefore, the main task for Chinese language researchers and teachers is to discover the most effective means to develop their students' speaking skills within an anxiety-free environment.

According to Bueno (2013), it has been found that synchronous voice chat (SVC) would be an ideal approach for promoting oral production since, compared to text chat, its negotiation mode is quite close to face-to-face interaction (Bueno, 2013). Furthermore, it would seem that SVC may enable learners to use the target language for oral interactions within a more authentic and less anxious context (Chérrez, 2007; Satar, & Özdener, 2008).

With the advent of new technology, there is a need to explore the potential of SVC in mobile-assisted environments, using such mobile instant messaging apps as WhatsApp,

WeChat, and Messenger, within the language learning arena (Andújar-Vaca & Cruz-Martinez, 2017). This study, therefore, investigated the effectiveness of synchronous voice chat on EFL learners' oral English performance and anxiety levels while utilizing the WeChat application.

In this study, we compared learners' speaking performance on WeChat-based synchronous voice chat to that of using traditional face-to-face (F2F) chat in order to determine the differences in student performance with the two modes.

1.2.1 English as a Foreign Language in China

As previously noted, English is studied as a foreign language (EFL) in China, and students are taught through a variety of activities that are mainly conducted in a classroom context. After China's switch to an open-door policy to facilitate economic growth, English became an important tool, given the expansion of communication between China and the outside world. Because of this, Chinese education authorities started to pay more attention to English language education (Rao, 2013).

As Rao (2006) notes, the learning materials and learners' audio input for Chinese EFL learners do not resemble native speakers' language as used in authentic or daily communication. Moreover, Chinese learners have very limited opportunities or need to practice their language in real-life situations. Most only study English as an exam-oriented subject, but fail to use it as a living language for real-life communication. To facilitate students' real language use, English teachers need to utilize a communications pedagogy that enables learners to become authentic users of English. To ensure this, it is crucial that students be exposed to other opportunities for practical interaction.

Currently, Chinese educational authorities are wanting to encourage English language learning that enhances real-use language skills. For this reason, a speaking test has been added as a new segment of the Chinese nationwide university entrance examinations. We also find that English language proficiency has become a key requirement for many governmental agencies and private companies. Moreover, Chinese people increasingly realize that a high level of oral English is a crucial component for acceptance into advanced education institutions overseas, as well as for better job opportunities and rapid promotion. Despite this, Chinese EFL learners still resemble many other learners within EFL settings: they lack sufficient practice primarily because there are limited opportunities to practice in environments that are conducive to developing oral proficiency. Only a very few EFL students can afford to immerse themselves in the target language by participating in international exchange programs or self-financed university education abroad.

Educators face many challenges if they are to encourage their students to develop language skills within a more authentic language environment. Effective approaches and strategies are needed that allow learners to be directly involved with real-life language use. This in turn will enable them to develop the ability to freely interact in English without feeling deeply uncomfortable, or stammering and struggling for words.

1.2.2 The Importance of Speaking

Speaking is a crucial social act which enables someone to communicate, exchange information, and build, as well as maintain longitudinal relationships with others (Spratt et al, 2005). Likewise, Luoma (2004) states that the speaking ability should be the core aspect of language learning, since speaking is the most direct reflection of real language use. Furthermore, Goh (2006) emphasizes that speech functions as an important tool

which facilitates language acquisition and development. Thus it should not be devalued but should be "developed in its own right" (Goh, 2006, p. 105).

According to the Chinese perspective, one's speaking performance is considered a reflection of one's personal character and image. It affects how others judge a person's critical thinking ability and opinions (Tavakoli, 2015). Since personal or individual speech is a critical part of language use, it is crucial to study ways to improve speaking performance.

For language learning and teaching, Celce-Murcia and Olshtain (2000) identified speaking or oral interaction as the most challenging and complex skill compared to listening, reading and writing skills. Speaking is a complex meaning construction process; it involves simultaneous observation and utterance preparation. This process requires that learners must decide the communication time, place and content while also considering their diverse cultural and social backgrounds (Burns & Seidlhofer, 2002).

Speaking itself contributes to the creation of a shared social community (Luoma, 2004). For this reason, a good mastery of foreign language speech would benefit learners' social engagement and academic achievement (Andrade, 2006). However, learners often face foreign-language anxiety, especially when they are required to speak English in public (Hortwitz, 1986; 2001). Therefore, learners' anxiety levels should be given serious consideration when developing learning strategies.

1.2.3 Foreign Language Anxiety among Chinese Students

In 1986, Horwitz et al. described foreign-language anxiety (FLA) as a distinct form of anxiety and they separated FLA from other forms of anxiety. Hortwitz (2001) claimed that FLA caused learners to have fear and negative emotional feelings in language

learning. He further described FLA as a multidimensional phenomenon that possessed "a distinct complex of self-perceptions, beliefs, feelings, and learning processes" (Horwitz et al., 1986 p.128). Research has indicated the importance of FLA regarding foreign language outcomes and students' performance (Csizér & Dörnyei, 2005; Gardner 1985; Kessler, 2010; Ushioda, 2008).

Studying English as a foreign language is an anxiety-inducing experience for most Chinese students, regardless of their age, proficiency levels or language background. In Liu and Jackson (2008)'s FLA survey among Chinese undergraduate students, more than one-third stated that they felt anxious in their language classroom and more than half of were scared of public speaking. As a result of anxiety, most learners often chose to stay silent, refusing to participate in oral activities during language classes. This unwillingness to speak and the tendency to keep silent only further increased their anxiety levels. According to Landström (2015), a majority of Chinese senior high school students suffer from language anxiety. In his study, the students felt most anxious when they had to speak English with language teachers present in the classroom.

As suggested above, a large number of Chinese undergraduate students experience FLA in their language learning process, especially while speaking in public. Thus, it is necessary to consider the effect of anxiety levels on their learning achievement. It is possible that a secure and comfortable communication environment may alleviate learners' FLA and accelerate their development in speaking English.

1.2.4 Face-to-Face Chat and Synchronous Voice Chat

Face-to-Face (F2F) chat is generally used as the main platform for Chinese EFL learners to practice English. It is considered beneficial because F2F chat creates authentic

communication for the learners while supplying abundant paralinguistic cues like facial expression and body language. Currently in China, the opportunities to engage in face-to-face communication are limited to learners who study English as a foreign language within a classroom setting. However, synchronous voice chat (SVC) has the potential to enable all learners to have affordable access to oral interactions through voice messaging within a short period of time lag.

Similar to F2F chat, SVC can create a real communication environment by allowing learners to have oral interaction in real-time. SVC conversations, however, allow for slower response time than F2F, as the voice messages are mediated by internet connection and relayed with minimal time lag. Also, this SVC feature allows learners to plan and repair their conversations which facilitates greater participation (Beauvois, 1992).

In looking at the similarities and differences between F2F and SVC chat, it is possible to investigate learners' speaking performance and levels of anxiety through a comparison between the two chat modes.

1.3 Statement of Problem

Many Chinese English learners are eager to communicate with others freely and confidently with less anxiety, but find it very challenging to achieve this goal. As Wang (2014) claimed, Chinese EFL learners' are relatively incompetent in their oral skills, even though they have undertaken long-term English training. Probably, one of the main obstacles impeding Chinese learners' oral performance is the exam-oriented education system, and the fact that oral competence is not the focus of these exams. Instead, English courses overwhelmingly emphasize vocabulary, grammar, writing and reading skills while failing to provide students with the opportunity for oral interaction (Yang et al.,

2012). This lack of opportunity to speak and interact in turn generates low self-confidence and high anxiety about speaking English (Tercan et al., 2015; Yang et al., 2012). Thus, it is not surprising that many Chinese students feel stressed and uncertain when forced to speak English inside or outside of the classroom (Liu & Jackson, 2008). In fact, Woodrow (2006, as cited in Wang & Roopchund, 2015) found Chinese learners to be more anxious than any other Asian students when conversing.

In the light of the above, helping Chinese learners to improve their speaking performance by overcoming their speaking anxiety is very important. In face-to-face (F2F) environments, learners speak English in front of their classmates and teachers, but speaking in class has been found to be one of the most anxiety-provoking activities (e.g. Horwitz et al., 1986; Liu & Jackson, 2008). To alleviate this intimidating situation, synchronous voice chat (SVC) could be an effective alternative channel for learners to practice their speaking skills.

According to Wang and Woo (2007), in SVC chat, students with lower language proficiency can have more chances to speak and the dominating phenomenon of active students with higher language proficiency in the class can be reduced. Thus SVC may well have the potential to enhance learners' speaking skills, since SVC interaction provides learners greater equality of opportunity for speaking and voicing opinions compared to F2F interaction (Wang & Woo, 2007 as cited in Yang et al., 2012). Additionally, studies have shown that SVC could be a conducive environment for the improvement of learners' speaking ability (e.g. Chérrez, 2007; Jepson, 2005; Satar and Özdener). Therefore SVC is believed to be able to create a relatively stress-free environment for learners, enabling them to use target language for oral interaction within an authentic and less anxious context.

Though several studies have proven the benefits of computer-mediated SVC in terms of vocabulary acquisition, negotiation of meaning, repair moves and learner experience, the quantity of published research on the effects of SVC in foreign language learning is still meager (Bueno, 2013; Bueno, 2011; Jepson, 2005; Lee, 2009). Additionally, there is almost no research that investigates the use of the WeChat instant messaging application tool and its effectiveness in improving speaking performance or in lowering anxiety levels within the Chinese context. Thus, the present study aims to explore the potential of the SVC environment in terms of the reduction of speaking anxiety and increased speaking performance of Chinese EFL learners.

1.4 Purpose of the Study

This research aims to explore the potential of SVC as an environment that is conducive to enhanced learning. This researcher specifically investigated the benefits of the WeChat SVC application platform in improving Chinese EFL learners' speaking performance in comparison with the effectiveness of the F2F communication mode.

This study also intends to identify the effectiveness of SVC in reducing learners' anxiety level. Further, the relationship between learners' speaking performance and anxiety levels in the context of the chat environment is also explored.

1.5 Research Questions

The research questions pursued in this study are as follows:

RQ1: To what extent do learners' speaking performances in face-to-face chat differ from synchronous voice chat experiences?

RQ2: To what extent do learners' anxiety levels in face-to-face chat differ from synchronous voice chat experiences?

RQ3: What is the relationship between learners' speaking performance and their anxiety levels in both face-to-face and synchronous voice chat?

1.6 Significance of the Study

English speaking skills have long been ignored in English language classes in China (Ruixue et al., 2012). It is therefore important for more research to be undertaken in this area, especially one that focuses on Chinese EFL learners' oral performances in different chat environments (F2F, SVC). The findings of this study will inform researchers and language practitioners about the potential of SVC in reducing learners' anxiety and improving their speaking performance.

Through this study, EFL teachers and researchers can have a better understanding of the effectiveness of F2F and SVC interaction modes on EFL learners' speaking performance. They can also learn if there are differences in EFL learners' anxiety levels in the F2F and SVC chat modes. The findings could be used to assist language instructors in designing both formal and informal interactive and authentic SVC activities, enabling them to take learners' anxiety level in the different discussion platforms into consideration. This study provides instructors with an additional approach, linking language acquisition with SVC, enabling them to choose more effective methods of oral instruction.

In exploring the use of alternative platforms to fulfill the need for oral practice, this study specifically chose WeChat, the most popular instant messaging application in China. According to Long's (1983) interaction hypothesis, communication using the

target language is important. However, in China, there are few such opportunities. Thus, this study intends to explore the potential of the widely-used WeChat application in allowing Chinese EFL learners to interact in English. The learners may benefit from this interaction mode in improving their oral ability and reducing their anxiety levels in oral interactions.

The use of WeChat-based synchronous voice messaging to facilitate Chinese EFL learners' language development, specifically in speaking skills, has not been widely researched. There are insufficient studies conducting speech-related activities with the assistance of mobile technology. Therefore, it is hoped that the findings of this study will further our understanding of mobile language learning.

1.7 Limitations

This study was conducted at only one public university with the participation of 40 students in total. Due to the relatively small sample size (Creswell, 2014), it might not be appropriate to generalize the research findings to the larger population.

In addition, it should be noted that the quality of the voice recording was slightly affected by the quality and volume capacity of the students' different mobile devices. However, the recordings were still audible to myself and my fellow assessors. Nevertheless, it could be that when encountering less satisfactory record quality, the assessors' evaluations of the students' oral proficiency levels might have been affected.

1.8 Conclusion

This chapter has provided the background and purpose of the study. It discussed the current challenges faced by EFL teachers and learners in China and highlighted the importance of conducting research to explore the effectiveness of SVC on oral language improvement by comparing it with traditional F2F communication practice. It is hoped that the present study can make a contribution to the field of language learning.

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CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

The present study aims to investigate Chinese EFL learners' anxiety and speaking performance in both face-to-face and synchronous voice chat environments. In line with this, this chapter presents an overview of the related literature. Firstly, the researcher discuss what has been written about face-to-face communication. Next, the researcher review the information about mobile-assisted language learning and mobile-mediated communication (asynchronous communication, synchronous text, and voice-based communication). Thirdly, the researcher look at the literature on the interplay between anxiety and speaking, and in this regard, Krashen's (1982) affective filter hypothesis is presented as a framework for further discussion about the link between speaking and anxiety. Lastly, relevant past studies on learners' anxiety and performance are reviewed.

2.2 Face-to-Face (F2F) Communication

Since the early 20th century, the concept of F2F communication has elicited scholarly interest. Face-to-Face communication, also known as F2F interaction, is a concept widely applied in the areas of sociology, linguistics and communication studies. In this form of communication, social interaction is only illustrated in direct F2F contexts, without the use of any mediating technology (Baym et al., 2004).

To present a comprehensive understanding of F2F communication and to differentiate it from other forms of communications, Sternberg (2012) identified F2F communication as an interaction process that is embedded in both verbal and non-verbal information. In the F2F communication environment, speakers not only exchange information through words, but also influence each other as their communication is mediated through their physical presence. Indeed, F2F communication involves not only the linguistic aspect but also the psychological, affective and social aspects of interaction (Dohen et al., 2010). In

this way, as a fundamental element of the social communication system, F2F communication plays a crucial role in the formation of an individual's socialization and the personal development that is achieved over their lifetime (Kendon et al., 1975). Moreover, it is crucial for individuals to be engaged in a variety of social groups and organizations so that their social relationship with others can be consistently maintained.

The studies on F2F communication and its role in language learning mainly deal with the problems relating to oral communicating routines, organization and strategies (Kendon et al., 1975). Such studies frequently focus on the interactive environment or setting. For example, Dohen et al., (2010) indicated that the real challenge for speakers engaged in F2F communication was to catch and integrate information from other speakers while also considering the whole physical interactive environment. According to such studies, the interactive setting, the conversation task in which the speakers are engaged, their personal roles and the context of the conversation all have a great influence on the operation and interpretation of the conversations (Dohen et al., 2010).

Though many new information and communication technologies have been developed, F2F interaction still holds its own unique place. According to Nardi and Whittaker (2002), F2F communication engages more human senses than both computer and mobile mediated communication tools. Despite its specific usefulness for developing better interpersonal relationships, F2F communication is regarded as an effective pedagogical approach that can be widely utilized by educators within many different academic fields (Nardi & Whittaker, 2002).

2.3 Mobile-assisted Language Learning (MALL)

Currently, there is no fixed definition of MALL. Instead, the literature uses the term in three distinct ways. MALL can be used to mean: 1) the devices or technology, 2) the

mobility of the learners, and 3) the learners' experience. Further explanations are presented in the following sub-sections.

2.3.1 The Definition of Mobile-assisted Language Learning (MALL)

As a new research domain, mobile-assisted language learning (MALL) or mobile-learning (m-learning) is still not a fixed concept, since research scholars define m-learning from different perspectives based on their research contexts. Even now, the attributes to be introduced in the definition of m-learning are still debated.

Initially, m-learning stood on its own and became a recognized term when Kukulska-Hulme and Traxler (2005) used the phrase in their first handbook. For them, m-learning referred to learners' mobility in this age of newly invented portable and lightweight devices. The smartphone was a typical example of the devices involved in m-learning, and the scholars were excited about the possibilities for learners to engage in learning activities without the restrictions of a fixed physical location.

Kukulska-Hulme and Traxler's (2005) description is similar to the definition given by O'Mally et al. (2003). According to them, m-learning takes place when learners take advantage of mobile technology, enabling them to make use of many more opportunities since they are not tied to a predetermined place. Kukulska-Hulme and Traxler (2005) also discussed a range of attributes which were closely related to m-learning. The attributes included spontaneous, personal, informal, pervasive, portable, and ubiquitous. These attributes developed a clearer understanding of the definition of m-learning.

Then in 2007, Traxler (2007) concluded, after a review of related literature, that m-learning was mainly identified with three different angles: 1) the devices or technology; 2) the mobility of learners; 3) and the learners' experience.

Firstly, when the device or technology itself is the focus, m-learning refers to the use of mobile technologies such as mobile phones, media players, PDAs, smartphones, and tablet computers to facilitate language learning and teaching. One example would be the study by Wang et al. in 2013. This study investigated students' expectations and perceptions of m-learning and focused on a range of mobile social networking apps like Facebook, Line, and WeChat. Their study highlighted the crucial role of mobile technology in m-learning.

Secondly, when the mobility of learners is the focus, m-learning refers to the learners' access to educational resources and activities at any time and place. For example, Pollard's (2015) study highlighted mobility as a crucial aspect of m-learning in aiding learners' language acquisition. He tried to motivate his students to speak outside of the traditional classroom by using smartphones. He found that as m-learning was encouraged and students were able to carry on their study beyond the classroom setting, learner autonomy emerged or increased. Thus, m-learning can occur either outside or inside of the traditional classroom, and even entire courses could be undertaken with the use of a mobile device.

Thirdly, when the learners' experience is the focus, m-learning emphasizes the learner's own goals. According to Crompton (2013), in m-learning, learners' experience can be self-directed and they are allowed to design their own approach to achieve their learning goal. In this discussion of the role of m-learning in learner-centered education he emphasized that the learners' experience should not be neglected.

Based on Traxler (2007)'s definitions, the researcher has taken the effects of devices (Wechat application), learning mobility as well as learners' anxiety experiences into consideration during this research.

2.3.2 The Research Trend of Mobile-Assisted Language Learning (MALL)

Recently, many conferences, seminars and workshops have given increasing attention to the importance of m-learning. As this is still a relatively novel approach, there is need for more study and research.

At present, MALL research primarily focuses on the effectiveness of various mobile devices or technologies in creating contextually meaningful and authentic learning settings for language acquisition. Specifically, different types of apps have become vital platforms for learners to communicate and exchange information at any time or place. Thus, recent MALL studies such as Ngaleka et al., (2013) and Susilo (2014) examine the role of different mobile apps.

Wang et al., (2013) utilized a range of mobile apps, (Facebook, Line, and the short-message service called WeChat), to investigate students' reactions to using these apps in their language learning. It was found that, given the growing interest, mobile apps such as Line and Kakao Talk actively promoted learner interaction and cooperative learning. Although the use of apps has grown, it will take more intensive research to determine the effectiveness of these apps on learners' actual achievement.

Instead of looking at numerous apps, Wu (2015) engaged Chinese English learners in EFL learning through a mobile WeChat project. He chose WeChat because it employs all the multiple functions such as the messaging and video-calling features which are embedded in Facebook, Twitter, Skype, WhatsApp, and Blogger. Wu also chose WeChat because it has received little research, especially within the Chinese EFL-learners' context. In her study, she found WeChat had a positive effect on students' motivation, as well as their levels of engagement and attitudes to learning.

Shi, et al., (2017) also investigated the use of WeChat in improving Chinese EFL learners' language immersion and motivation. They found that students had more opportunities to communicate when using WeChat. In addition, they found that WeChat has the potential benefit of reinforcing the learners' view of independent learning. After their research, they called for further experiments to be conducted to explore the role of m-learning in enhancing students' skills in both writing and speaking.

In a study of mobile applications and their impact on language learning, Hwang and Wu (2014) conducted an overview of the literature published between 2008 and 2012 with references to MALL. They found that m-learning plays a promising role in improving students' learning motivation and interest. Additionally, they discovered that mobile phones and tablet PCs have been widely applied in m-learning. However, new research should pay more attention to the effects of m-learning on learners' language performance and not just on the learners' experience and motivation. Such investigations would be of interest to language teachers who still doubt the benefits of mobile technology in the classroom.

Duman, Orhon, and Gedik (2015) also reviewed MALL literature and analyzed 69 studies published from 2000 to 2012. They found that the majority of studies explored the effectiveness of mobile technology using text-based chat platforms. Furthermore, most studies focused on learners' acquisition of vocabulary and reported that m-learning was indeed effective in enhancing language abilities, specifically in expanding vocabulary knowledge and use. Similarly, they found that the literature investigated the use of MALL in developing reading and writing abilities. However, it became clear that there was a lack of research concerning the use or effectiveness of mobile technology in the improvement of speaking skills. Yet this aspect is especially important given that speaking is regarded as the most complex aspect of all language skills (Tranxler, 2007).

Thus, there is great need for academic research concerning learners' speaking performance in MALL.

As indicated above, MALL studies generally focused on mobile technology and its relation to learners' experience. There is a need to explore the potential benefits of mobile apps in improving learners' speaking performance.

2.3.3 Mobile-mediated Communication (MMC)

With the rapid advances in mobile technology, mobile-mediated communication has been frequently used to transmit people's every-day information (Amry, 2014). Other than computer-mediated communication (CMC), mobile-mediated communication (MMC) is the main style of mediated communication. Not only has cell-phone use become a normal mode of communication, but according to Jin & Peña, 2010; Morey et al., (2013), it can be compared to traditional face-to-face communication. Mobile communication is “a characteristically personal medium with the technological affordance of individual addressability in ways that fixed and even portable media cannot offer,” (Campbell, 2013, p.21). In the MMC environment, communication via cell phone can be completed using text messaging, voice messaging, emailing and video calling (Tong & Walther, 2011).

Compared with CMC which is commonly used at a fixed place, MMC is portable, and can therefore be carried out at different places without time concerns. Moreover, MMC allows speakers to have great flexibility in information exchange. This enables them to continue conversing while they are moving around or are even involved in other activities or personal affairs (Campbell, 2013). MMC allows speakers to communicate without being limited by time or location. In this way, MMC eliminates the barriers that would otherwise exist for speakers who are living far apart (Ling, 2008; Ling, 2016).

The advent of mobile communication to some extent seems to have reduced the popularity of F2F communication. Indeed, MMC communication was even preferred over F2F in some situations, particularly where time and geographical distance are the main concerns (Nardi & Whittaker, 2002). When it comes to maintaining a long-distance friendship, F2F communication is not the first choice in maintaining ties compared to the use of mobile phones, emails and instant messaging (Wright & Webb, 2011).

Almekhlafy & Alzubi (2016) claim that mobile-use not only mediates communication but can also build up both formal and informal learning when it is used for language exposure. Their assertion agrees with Chen's (2007) statement that advancement of MMC is assisting in the development of English language learning. MMC can play a crucial role in enabling all learners to express themselves, exchange information and collect feedback in a way that not only enriches but advances their language performance (Yeboah & Ewur, 2014). Furthermore, college classrooms and other traditional face-to-face settings are no longer the only places where language learning can be acquired. The new modes of communication, using technological devices such as mobile phones, are believed to be very promising for the establishment of significant English learning environments outside of the traditional classroom.

China has become a mobile communications giant, with its widespread use of mobile devices and applications like WeChat. This has shifted people's understanding of possible directions in mobile communication (Hjorth & Arnold, 2013). MMC such as the WeChat messaging application has emerged as an important platform for online language learning, (e.g. Wu, 2015); library services, (e.g. Xu et al., 2015), and social relations, (e.g. Yuan, 2012). As Yuan (2012) stated, even though mobile communications such as voice chat and text messaging were rather new, they were frequently used by the majority of Chinese to maintain their social relationships. This frequent usage of voice chat among Chinese

EFL learners provides a unique opportunity for researchers in China to produce landmark studies about the effectiveness of voice chat with language learning, with a specific focus on language skills such as speaking and listening.

As reviewed, MMC is still a relatively new topic in the current research. The relevant studies generally focus on the development of communication technology, with MMC being increasingly investigated as an effective tool to enhance learners' engagement and facilitate fruitful learner achievement (Bouhnik & Deshen, 2014; Kabilan & Abidin, 2010; Mahdi & Elnaim, 2012). This advantage can be exploited in any EFL context where the need for a learning setting outside the traditional one is desirable.

2.3.3.1 Asynchronous Communication

Asynchronous communication is commonly used in off-line interactions where learners have plenty of time to read, compose and deliver messages (Chérrez, 2007). In this situation, the learners do not communicate instantly, rather the information can be delivered, stored and accessed at any time and any place.

E-mail is the most common type of asynchronous communication that has been studied (Harasim et al., 1995; Gonzalez-Bueno, 1998). These investigations suggest that e-mail could promote a different and new type of literacy (Harasim et al., 1995; Gonzalez-Bueno, 1998). Likewise, Harasim et al. (1995) claim that written-based communication is simpler than voice-based communication and that it is thus processed differently. For example, greetings and closings are often omitted, emoticons rather than voice tones are frequently used to express feelings, and contractions and abbreviations are common. In addition, email allows people to utilize some speech-like communication aspects in a written format. For instance, capital letters are used to emphasize key points, and question

marks are used to express feelings of surprise and confusion. However, taking turns, and the clarifications and repetitions of normal dialogue are lacking in written-based asynchronous interactions. With emails, people must wait an unspecified amount of time for a response before they can then reply.

Gonzalez-Bueno (1998) suggests that e-mail is a beneficial tool to increase learners' engagement. It helps to enhance learners' language quality and content with proper time-space management. Learners tend to use more accurate and oral-like sentences in their communications with others. Also, the application of the email tool may promote language use out of the classroom setting, and enable students to practice language skills with native or non-native speakers in various contexts.

2.3.3.2 Synchronous Text Communication or Chat (STC)

Unlike asynchronous communication, synchronous communication takes place in real time. "Synchronous" means doing the work together at the same time. Synchronous chat, (both text and voice chat), happens in real time where participants share ideas, finish tasks, answer messages, and relay other information (Chérrez, 2007). In STC, learners use text chat messaging to communicate with each other.

Lately, researchers have conducted several studies on synchronous, text-based chat. These studies investigated the conversational skills displayed in synchronous chat rooms. For example, Payne and Whitney (2002) explored the development of L2 learners' oral cognitive mechanisms by analyzing the production elicited from text chat. They found that learners' oral proficiency increased due to the development of their cognitive mechanisms in spontaneous text-based chat conversations.

Tudini (2003) investigated the opportunities of Italian L2 learners to practice the language with native speakers in a live text chat. The study suggested that text chat conditions enabled learners to notice their mismatches with the target language. STC creates a proper platform for learners in meaning negotiation and modification. These studies support Chun's (2008) claims that STC provides effective opportunities for learners to improve their discourse skills and oral competence.

2.3.3.3 Synchronous Voice Communication or Chat (SVC)

As mentioned above, text chat has often been studied in terms of its value in promoting learners' language learning. However, compared to text chat, Synchronous Voice Communication is believed to more closely resemble F2F communication in involving learners' articulation (Jepson, 2005). Jasim and Abuseileek (2015) defined SVC as a type of chat system that allows people to communicate with others in real time using online voice messages. Recent studies are exploring the use of voice chat (SVC) in language acquisition.

As we have seen, WeChat has become the most popular application in China, - probably because other social apps like Messenger and WhatsApp are blocked by the Chinese government. Thus, WeChat has become the dominant multi-media platform for mobile-mediated communication (Qu et al., 2015). WeChat provides a new way for learners to have free communications using the multiple modes of text messaging, voice messaging and moment sharing (Wu, 2015). As recorded in Qu et al.'s (2015) study, WeChat has over 600 million users from 200 countries with more than 20 languages. This provides an amazing opportunity for learners to access communication with many native speakers of other languages. Given its popularity, there is a great need for more studies on the usefulness of WeChat in the improvement of learners' speaking performance.

Since it is claimed that SVC is more similar to F2F communication than other forms of communication (Jepson, 2005), this present study investigates the learners' speaking and anxiety performance in both SVC and F2F chat environments. The SVC chat was conducted based on the WeChat application platform.

2.4 Speaking in Second Language Acquisition

This section develops ideas about the crucial role of speaking in second language acquisition. In addition, research literature concerning oral performance, (specifically with a focus on the effectiveness of SVC on oral improvement), is reviewed.

2.4.1 The Role of Speaking in Second Language Acquisition

Among the four language skills, oral communication is considered to be an important component of language learning (Ellis, 2013). Yule (1989) emphasizes that spoken language differs from written language in both form and structure. For example, unlike the well-formed sentences and highly structured paragraphs of written language, spoken language is made up of short, fragmentary utterances.

Formerly, speaking was viewed as merely the implementation of language knowledge, and was excluded from specific linguistic study or teaching. Clark (1980, as cited in Nunan, 1991) stated that speaking is basically an instrumental act. However, as the field developed Nunan (1991) would later claim that people's conversational ability determines whether they can be successful in speaking. As noted, speaking is the most fundamental act of communication, affecting the listeners and eliciting reactions. Brown (2001) argues that people's speaking ability reflects and impacts their conversational competence. He further argues that the ultimate goal of speaking is to enable speakers to have interactive,

meaningful discourse. Similarly, Richards and Renandya (2002) highlight meaningful spoken language. They think that spoken language involves the ability to properly use language in social interactions that engender mutual understanding.

Speaking requires learners to process information in a multi-task fashion (Wang, 2014). In the educational context, it is normally evaluated using criteria such as fluency, accuracy of grammar structures, vocabulary and pronunciation (Chérrez, 2007; Leong & Ahmadi 2017). Thus, speaking performance generally refers to learners' performance in their pronunciation, grammar, fluency, vocabulary, and comprehension (Simin & Tyakoli, 2014). However, the lack of accuracy has been a long-standing problem in language testing system (Hughes, 2003). To increase the language testing accuracy, Hughes (2003) developed an oral assessment scale which consists of the above-mentioned speaking aspects to measure learners' speaking performance. In order to achieve the above-mentioned language assessment standard and to obtain testing accuracy, the researcher selected Hughes (2003)'s oral assessment scale for this study.

As suggested above, it is clear that speaking has its own characteristics, though it cannot be isolated from the other language skills. Students' conversation skills are a core aspect of language acquisition, and become an essential aspect of successful language learning (Dörnyei & Thurrell, 1994). Therefore, the role of speaking is very important in both second language instruction and acquisition.

2.4.2 Relevant Studies on Speaking

As identified by teaching and testing experts, speaking is a highly crucial skill among the other three language skills which need to be mastered (Simin & Tavakoli, 2014). In the literature concerning the oral, interactional features of the synchronous

communication environment, some researchers tend to examine only one dimension of speaking, whether it be fluency, pronunciation or repair moves, (e.g. Chérrez, 2007; Jepson, 2005).

In his study, Jepson (2005) compared learners' repair moves in text and voice chat sessions. He found that participating learners in an SVC environment generated a higher number of pronunciation-related repair moves in their oral interactions. This study also predicted the potential usefulness of SVC in improving learners' speaking performance, specifically in pronunciation. However, no empirical data was supplied to confirm the speaking achievements.

Chérrez (2007) also explored learners' speaking performance in SVC by examining their speaking fluency, (speech rate, articulate rate, and pause phenomena), as well as vocabulary acquisition. His study found a positive result in learners' speaking fluency and vocabulary gains in SVC interactions. However, since he only examined the speaking fluency of two participants, his results concerning the positive effects of SVC on progress cannot be generalized.

There were also studies investigating the differences in students' speaking skills when using either the text-based or voice-based chatting synchronous communication (Sleesongsom & Suppasetsee, 2009; Seferoglu, 2007); as well as research comparing the results in learners' speaking performance in both synchronous and asynchronous environments (Razagifard, 2013; Andújar-Vaca and Cruz-Martínez, 2017; Abrams, 2003).

Sleesongsom and Suppasetsee (2009) investigated students' speaking skills before and after they experienced online text-based synchronous chat in a Thai context. Within ten weeks, there were improvements in participants' mean scores on oral tests, as well as

the number of sentences spoken and the number of sentences that were correct. Questionnaires revealed that the participating learners also believed that their speaking skills had improved. This study indicated that online synchronous chat can be conducive to enhancing both student motivation and speaking skills. However, the researchers in this case only focused on text-based chat. It would have been interesting to also explore the effects of voice-based chat on students' speaking ability.

In a further exploration of Slesongsom and Suppasetserree's 2009 study, Razagifard (2013) provided a comparative view of learners' oral fluency improvement in both synchronous and asynchronous text-based communication. In this regard, learners' average length of pauses, the articulation rate, the fluency-run, the phonation-time ratio and the speaking rate were measured. A significant improvement in fluency was found only in the synchronous, and not the asynchronous, text-based group. It should be noted that voice-based interactions, which more closely resemble real life communication, were still not included in the scope of this study.

Andújar-Vaca and Cruz-Martínez (2017) initiated the idea of using mobile instant messaging to develop language learners' oral skills. In their study, participants were allowed to choose among synchronous or asynchronous, text-based or voice-based communication methods on the WhatsApp platform. Learners' speaking performance was marked according to Hughes' (2003) general proficiency speaking scale. Significant improvements in speaking proficiency were obtained in both synchronous text-chat and voice-chat groups. Unfortunately, the form of communication which contributed most to their speaking achievements was not clearly identified in this study.

Abrams (2003) compared learners' oral performance in the synchronous and asynchronous communication environments. He analyzed learners' speaking performance by the number of idea units, the lexical richness and syntactic complexity during the

completion of three oral tasks. According to the results, the students in the synchronous group increased the number of oral productions. However, there were no significant differences in lexical richness and syntactical complexity among the synchronous, asynchronous, and control groups.

Seferoglu (2007) also sought to improve learners' oral proficiency and examined their speech samples from online synchronous communication. Similar to the findings of Abrams' (2003) study, there was no significant difference between the oral scores of the synchronous audio communication group and the control group ($p < .05$). Thus, in this study there was no positive result from the use of synchronous communication in improving learners' oral proficiency.

Bueno, in his 2011 study concerning the effects of SVC on speaking performance, asserted that there were drawbacks to using SVC. Firstly, technological problems such as faulty connections and sound quality were noted. Furthermore, he remarked on the length of time it took to produce voice messages, and the problems that partners could experience in their interactions. These drawbacks could all affect learners' performance negatively.

To date, numerous studies have found advantages in using synchronous voice-based communication to improve learners' oral performance such as learners pronunciation-related repair moves (Jepson, 2005), speaking fluency and vocabulary acquisition (Chérrez, 2007) and speaking proficiency (Satar & Özdener, 2008). However, a few studies (Abrams, 2003; Seferoglu, 2007) found no significant improvement in learners' speaking ability, and also highlighted difficulties with the technology in its insufficient memory and low voice quality, (e.g. Bueno, 2011; Seferoglu, 2007). Given the rapid improvement of mobile technology, the potential of SVC is worth exploring.

This present study aims to fill the gap in current literature by examining a relatively large number of learners' oral performances in relation to aspects such as pronunciation, grammar, and fluency. The researcher also intend to explore the Chinese learners' anxiety while speaking under both F2F and SVC conditions.

2.5 Foreign Language Anxiety (FLA)

In general, anxiety is a psychological term that refers to a person's state of fearfulness and nervousness about an object (Tanveer, 2007). Horwitz et al. (1986) claimed that learning a foreign language would cause anxiety. They defined FLA as "a distinct complex of self-perceptions, feelings, and behaviors related to classroom learning arising from the uniqueness of the language learning process" (1986, p. 128).

Later, FLA was classified as a situation-specific anxiety (MacIntyre & Gardner, 1991; Horwitz, 2001). Further, it was noted that this complex, anxious feeling could cause a mental block in the acquisition of language information. Therefore, students' anxiety levels about learning a foreign language would affect their learning performance. For this reason, FLA should be an important consideration for language teachers inside and outside of the classroom.

2.5.1 Affective Filter Hypothesis

Dulay and Burt (1977) first hypothesized that one obstacle to language acquisition is what they termed an 'affective filter.' This understanding was later incorporated into Krashen's five input hypotheses about language learning. According to Krashen (1985), only when the information is comprehensible and students' affective filters are not blocking the incorporation of that information, can they truly acquire the second language. In his theory, affective variables include motivation, attitude, anxiety, and self-

confidence. People with low motivation, low self-confidence, and/or high anxiety levels tend to have higher affective filters, which hinders input and acquisition, (Ellis, 2013 as cited in Wang& Roopchund, 2015). In this regard, his main tenets are:

- A raised affective filter can block input from reaching Language Acquisition Device
- A lowered affective filter allows the input to “strike deeper” and be acquired
- The affective filter is responsible for individual variation in second language acquisition
- The affective filter is not an issue for first language acquisition: children don’t have it/use it

In light of the above, affective factors play a crucial role in language acquisition. If there is a “mental block” in acquiring a language, the acquirers’ comprehensible input would be hindered. Thus, anxiety acts like a barrier that prevents learners from acquiring the target language.

2.5.2 Relevant Studies on Foreign Language Anxiety

It is clear that EFL learners experience differing levels of anxiety during the foreign language learning process. Likewise, since “anxiety is a complex, multi-faceted construct” (Phillips, 1992, p. 14), there is no doubt that early research of anxiety in language learning presented controversial and confusing outcomes. Ellis (2012) has suggested that studies are more likely to relate anxiety to negative language acquisition. Therefore, there is a need to further explore how foreign language anxiety affects language learning, specifically within different interaction environments.

Anxiety has been regarded as a stable trait which is measurable, and Horwitz's scale of Foreign Language Classroom Anxiety has been frequently applied to measure it (Lightbown & Spada, 2013). However, in recent discussions, researchers have shifted the focus, viewing anxiety as a short-term, situation-related characteristic (Brown, 2007, Lightbown & Spada, 2013). In addition, the main stressors—levels of difficulty in tests and student-teacher relationships—should also be considered. As Ellis (2012) suggests, the potential sources of anxiety and learners' performance results should be investigated in related situations. In Satar and Özdener's (2008) study, they adapted Horwitz's anxiety scale to their research focus and contexts.

Anxiety has also been correlated with low proficiency, but it is not clear whether it is actually the source or the result of low proficiency (Ellis, 2012). Gregersen (2003) observed that anxious students made more errors than less anxious learners, supporting the idea that anxiety does affect the quality of oral production, not only the quantity. Sheen (2008) analyzed how anxiety prevented or facilitated the enhancement of oral production in response to recasts, and found that anxiety affected it negatively.

Satar and Özdener (2008) conducted an experiment to investigate and compare SVC and text chat in terms of speaking proficiency and anxiety. In their study, students' speaking proficiency increased in both chat groups, whereas anxiety levels were decreased only in the text chat group. This result could be because text chat, while similar to spoken language, does not require the use of articulators. For this reason, their assessment of speaking performance in general through a comparison of non-vocal text chat and voice chat might not be accurate. Furthermore, their research did not clarify whether the anxiety levels were related to both chat environments. This left many unanswered questions.

Bueno (2011)'s study supported another of Satar and Özdener (2008)'s claims: that non-native speaker interactions would make participants have lower levels of anxiety and thus lower affective filters. However, both these studies failed to discuss whether the SVC environment could potentially alleviate learners' anxiety level.

Baralt and Gurzynski-Weiss (2011) compared the differences in learners' anxiety in F2F and CMC environment. They measured learners' state of anxiety during the task-based interactions in F2F and CMC communication. They found learners felt more anxious in F2F communication due to the urgent feeling of quick response and intimidating feeling of making mistakes in front of others. In contrast, they felt less anxious in CMC environment as it provided learners time to prepare their answers without the concerns of facing others.

As mentioned above, studies (Sheen 2008; Grierson, 2003) have posited a negative relationship between anxiety and learning achievement. Meanwhile several other studies claimed that there was either no relationship, or a positive relationship between anxiety and language achievement. For example, in a research conducted by Chastain in 1975 (cited in Horwitz, 2010, p. 156), the direction of the correlations between anxiety (test anxiety) and language learning (course grades) in three languages (French, German, and Spanish) were not consistent.

For these reasons it becomes evident that further research is needed to better identify the relationship between anxiety and language performance.

2.6 Conclusion

In conclusion, past studies present both positive and negative results of synchronous communication environments in enhancing learners' speaking performance. Also, studies

about the effectiveness of synchronous voice-based chat (SVC) on improving speaking performance are still not conclusive. More studies are needed to explore the potential role of SVC in learners' speaking and anxiety performance, especially in the context of China. In addition, the relationship between anxiety and language learning performance, specifically in speaking, still needs more exploration. This study then, aims to fill in some of the above-mentioned gaps in order to further determine the effectiveness of SVC in speaking performance, and to identify the relationship between speaking and anxiety as it relates to Foreign Language learning.

University of Malaya

CHAPTER 3: METHODOLOGY

3.1 Introduction

This chapter explains in depth the key elements of the methodology employed in order to fulfill the research objectives. The elements described are: research design; study participants; sampling methodology; research instruments, (speaking performance tasks, anxiety questionnaires and focus group interview); pilot study practices and results; data collection procedures; and data analysis.

3.2 Research Design

This study applies a mixed-method approach. As Creswell (2014, 2015) suggests, a mixed-method study allows the researchers to answer the research questions in depth, and present a more comprehensive research result. Thus, it provides a better understanding of the problems compared to either a quantitative or qualitative method. Mix-method approaches also combine the strengths of both methods into one (Creswell, 2014). In this study, the researcher selects the explanatory sequential design whereby the quantitative data are collected first and the qualitative data are then gathered to provide details for the quantitative results.

To answer the first research question, the quantitative data, (oral scores), was ascertained by scoring participants' oral performances in both face-to-face and synchronous voice chat environments. Based on this quantitative data, statistical analysis was run to determine the significant difference between their speaking performances in the two environments. In addition, qualitative data (interview transcriptions), relating to both the chat mode and F2F speaking performances was gathered to provide more insights.

To answer the second research question, the researcher ascertained the participants' anxiety scores concerning their oral performances using both the F2F and SVC chat modes. The researcher analyzed the quantitative data with the use of SPSS version 24. The qualitative data relating to their anxiety, speaking performance and environments was then coded to enable comparison and study.

For the last question, having collected the participants' speaking scores and anxiety scores for the two chat modes, the researcher performed the Pearson correlation test to determine the relationships between the participants' speaking performance and anxiety levels.

3.2.1 Variables

The present study involves dependent, independent and control variables. The relationship between them is presented in *figure 3.1* below

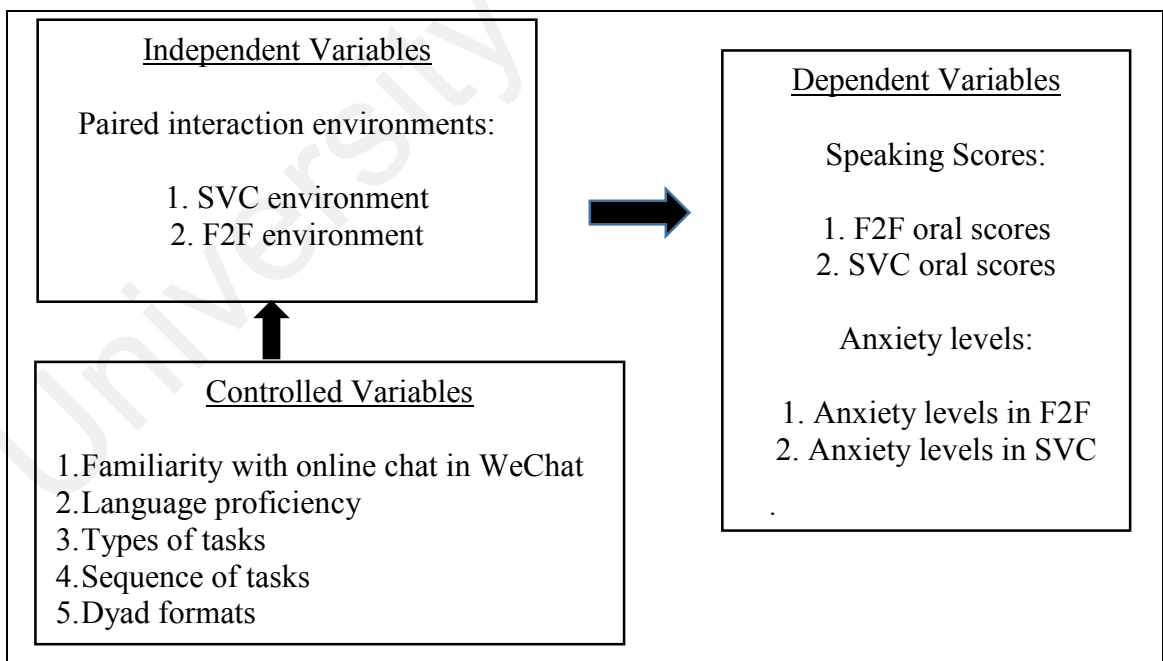


Figure 3.1 Variables in the Study

As shown in *figure 3.1* above, the independent variable was the alternating environments: SVC and F2F. There were also two dependent variables: first, the participants' oral

performance scores in two environments, (F2F and SVC); and secondly, the participants' levels of anxiety in the same two environments (F2F, and SVC). The controlled aspects related to the participants' familiarity with online chat using the WeChat application, their language proficiency, the types of tasks, task sequencing and communication formats.

3.3 Sampling

In this study, the purposeful homogeneous sampling method was employed. Homogenous sampling is a sampling method in which participants who possess similar pre-identified traits or characteristics are selected (Creswell, 2014). In this study, only one public university in China was selected. The pre-identified participants were similar in their English proficiency level, (Intermediate level and above), and in their familiarity, (frequent usage), with the mobile application. Applying this homogeneous sampling method, the researcher identified 40 participants, thus ensuring both equal distribution and comparison within the sample.

3.3.1 Participants

The participants for this study were 40 first-year students from Leshan Normal University in China. The age of the participants was from 19 to 21 years. There were 39 females and 1 male; all from the School of Foreign Languages and were majoring in English. Table 3.1 shows the background information of these selected participants.

As mentioned, the participants with a similar level of language proficiency and the similar familiarity of WeChat usage were selected. Thus, table 3.2 was used to identify the level of learners' language proficiency while Table 3.3 was used to decide learners' familiarity with WeChat.

Table 3.1 Background Information on the Participants (N=40)

		Number of participants, N
Gender	Female	39
	Male	1
English language Ability	0-60	0
	61-90	0
	91-120	32
	121-150	8
Experience using online WeChat	Never	0
	Sometimes	0
	Often	14
	Very Often	16
	“Always”	10

Table 3.2 Description of Proficiency Level According to the Overall Gaokao* Scores

Low proficiency level	Intermediate proficiency level	High proficiency level
61-90	91-120	121-150

*Gaokao is a national assessment for admission to universities in China.

Table 3.3 Frequency of Participants' WeChat Usage

Never	Sometimes	Often	Very Often	Always
0 times	1-3 times	4-6 times	7-10 times	Over 10 times

3.4 Research Instruments

This section explains the four instruments used in this study. They include: the background survey; the oral tasks; the anxiety questionnaires, and the WeChat tool. Each instrument played a vital role in determining the data and conclusions of the present study.

3.4.1 Background Survey

According to Mackey and Gass (2015), a background survey is widely used in educational research in order to match the participants to the research focus. The aim of this background survey was to select participants with similar characteristics. As noted above, the desired characteristics were similar overall university entrance exam scores, and familiarity with the WeChat app. Additionally, demographic information of the participants was collected.

The background survey consisted of three parts, which can be seen in Appendix A. Part one includes the basic demographic information, (name, age, gender, email address), of the participants. Part two contains the questions relating to their language ability, (overall scores of both their entrance and oral exams). Part three determines their mobile application experience (Frequency of daily online WeChat use; WeChat ID).

To achieve homogeneity, the researcher selected students who tested at the Intermediate Level, (a score between 90 and 120 out of a possible 150), and who consistently used WeChat on a frequent, daily basis.

3.4.2 Oral Tasks

Because both decision-making and problem-solving tasks have been identified as ideal triggers to elicit learners' oral communication (Tam, 2009; Chérrez, 2007), the present study selected two decision-making tasks, (Task A, Task B); and two problem-solving

tasks, (Task C, Task D). These tasks can be referred to in Appendix B. The oral tasks were adapted from studies by Tam (2009) and Chérrez, 2007

Task A and Task B were similar in their scope of asking participants to plan two different kinds of tours according to the given criteria, using dyad discussion. In Tasks C and D, participants needed to explain their understanding of the background causes and possible solutions to two current social issues, (unemployment and the leftover women phenomenon). The topics were chosen because they are of interest to students and are widely discussed in Chinese society. In this way, it was ensured that all participants would have knowledge about the assigned questions.

The researcher handed out the task sheets five minutes in advance so the students could read the instructions and prepare. Then, each pair was given 10 minutes to engage in their assigned oral interaction, (either F2F or SVC). The experiments were conducted consistently over a four- week period, with one task being completed each week during a 15-minute session.

3.4.3 Anxiety Questionnaire

The anxiety questionnaire used in this study was adapted from a study by Satar and Özdener (2008). Each questionnaire contained 7 questions dealing with students' anxiety in F2F and SVC chat environments, respectively. Questionnaire 1 was for the F2F chat and Questionnaire 2 was for those involved in SVC. Please refer to Appendix E for Anxiety Questionnaires 1 and 2.

Note that in order to match the questionnaire with the current research focus and context, the researcher changed the “text chat” of Satar and Özdener’s (2008) questionnaire to “face-to-face chat;” and “Foreign language” to “English.” Some

questions that had less relevance to students' anxiety and speaking were deleted according to the results of an internal consistency reliability test, (See section 3.8: *Reliability*).

According to Babakus and Boller (1992), a five-point Likert-type scale is better than a three-point scale in increasing response rate and quality. Also, 5-Likert scale provides participants more options to present their opinions which can increase the response accuracy. Therefore, the researcher modified the initial 3-point Likert scale to a 5-point Likert scale.

3.4.4 WeChat Tool

In 2011, Tencent developed WeChat to be a free messaging and video-calling app. According to Tencent annual report in 2017, WeChat has around 1.08 billion monthly active users in China. WeChat was selected as the SVC tool because it has a large number of active users in China and other countries (Wu, 2015); In the meantime, WeChat facilitates daily use by its multi-functions such as text chat, voice chat and moment share, and by its easy online payment. With this accessibility, WeChat was selected as the best platform for Chinese EFL learners to engage in SVC activities.

3.5 Pilot Study

In order to ensure the research instruments were suitable and reliable for the data collection, a pilot study was conducted in advance. Four second-year students from Leshan School of Foreign Languages were selected to participate in this pilot. Their age range was 19 to 20 years old, and they shared the same characteristics as the participants of this research (Intermediated language level and above; Frequent usage of WeChat). However, they were not included in the sample pool of the actual research study.

First, the researcher briefed the participants of the pilot study so that they understood the research objective and their roles in the present study. The participants were informed that this activity aimed to learn if there were differences in their speaking performance in F2F and SVC environments. Also, it aimed to investigate any changes in anxiety levels while chatting in these two different environments. They would take part in 4 oral tasks, 2 questionnaires, and 1 group interview. After the briefing session, four students were given 4 oral tasks within both the F2F and SVC environments. They were given five minutes to prepare for the oral interaction and 20 minutes to finish each task. Their speaking performance was calculated according to the speaking assessment scale. The maximum score was 36 and minimum score was 0. The result of the pilot study in their speaking performance is tabulated in *Table 3.4* below.

Table 3.4 Participants' Speaking Performance in F2F and SVC

Participant	Oral scores in F2F	Oral scores in SVC
#1	17	20
#2	17	21
#3	17	20
#4	19	21

After fulfilling the F2F oral tasks, participants filled-in Anxiety Questionnaire 1, and then and Questionnaire 2 after completing the SVC oral tasks. Their anxiety levels were calculated according to the anxiety scale. The maximum score was 80 and the minimum score was 16. The higher the score, the higher the levels of anxiety experienced. The result of their anxiety levels is tabulated in *Table 3.5* below

Table 3.5 Participants' Anxiety Scores in F2F and SVC

Participant	Anxiety scores in F2F	Anxiety scores in SVC
#1	51	51
#2	53	50
#3	52	50
#4	56	52

After the participants finished the tasks and questionnaires, a focus-group interview was conducted. In this interview session, opinions, experiences, and preferences regarding the two chat environments were shared. They also described what challenges they faced in the two types of oral tasks. In order to allow the participants to express themselves effectively, the interview was conducted in their first language, Mandarin. This interview was video recorded and their opinions were then listed on the interview sheet.

After the pilot study, the researcher made some adjustments. Since all participants utilized about 5 minutes for F2F tasks and 10 minutes for SVC tasks, the time allocated to each task was modified to a 15-minute time limit. Moreover, the number of questions in the questionnaires was reduced from 13 to 7 questions. Six questions with a low *Cronbach-alpha* ($\alpha=0.53$) value in the pilot test were removed. In addition, since the final research study focused on investigating learners' levels of anxiety and speaking performance in different chat modes (SVC, F2F), it was determined that a total of 6 questions were of little to no relevance and were therefore removed. Questions 1 and 2 focused on participants' familiarity with their chat partners; and questions (3, 4, 5, 6) were insufficiently related to the learners' speaking performance, (i.e., pronunciation,

comprehension, communication). The six questions removed in the SVC mode surveys were:

- “1. Because I knew the person I was chatting with, I was able to communicate more easily.”*
- 2. If the person I had the chat with was a foreigner, I would be worried about not being able to understand that person.*
- 3. The fact that we were completing the activities using voice chat made it easier to express my feelings.*
- 4. Because we were completing the activities using voice chat, I had difficulties in understanding my partner.*
- 5. I felt confident when I spoke English through voice chat.*
- 6. I was not afraid that I would be laughed at when I spoke English through voice chat.”*

Similarly, the six questions removed from the F2F survey were:

- “1. Because I knew the person I was chatting with, I was able to communicate more easily”*
- 2. If the person I had the chat with was a foreigner, I would be worried about not being able to understand that person.*
- 3. The fact that we were completing the activities using text chat made it easier to express my feelings.*
- 4. Because we were completing the activities using text chat, I had difficulties in understanding my partner.*
- 5. I felt confident when I spoke English through text chat.*
- 6. I was not afraid that I would be laughed at when I spoke English through text chat.”*

Apart from these changes, the researcher also removed questions 5 and 6 from the focus-group interview, since they caused confusion among the participants. Question 5 and 6 were as follows:

- “5. In what ways did the SVC chat meet your expectations and needs?”*

6. In what ways did the F2F chat meet your expectations and needs?"

The participants explained that they had approached the experience with very unclear expectations and needs. It was also found that their answers were ambiguous and irrelevant.

The researcher also found it necessary to adjust the mobile equipment. The pilot group participants mentioned that the voice messages were not clear enough and phone storage was limited. Thus, students were advised to use headphones during the SVC, and to transfer the voice messages onto a computer or USB after each conversation.

3.6 Data Collection Procedures

Before the experiment started, the researcher visited numerous first and second-year language students' classes and distributed the background survey. Then, based on students' schedules, willingness, teachers' lecture plans and the survey results, two classes were selected. A briefing session was then held with the two classes where the oral tasks, the two communication environments, time arrangements and research goals were explained. The researcher also obtained the participants' consent to participate in the experiment. Although a total of 53 students participated in the experiments, only 40 completed all aspects. Final data thus includes only the results of these forty learners.

3.6.1 Collection

Since the present study aims to assess Chinese EFL learners' speaking performances in both F2F and SVC conditions, the researcher had to alleviate the order effect so that the participants' performances within those conditions would not be affected by the sequence of the tasks. Creswell (2012) stated that counterbalancing is the most popular solution to the order effect. To achieve this, all the participants were divided into groups

and each group experienced the conditions in a different order. In this case, the researcher divided the participants according to their class. Class 1 was assigned as group 1 and class 2 was assigned as group 2. In sessions 1 and 3, Group 1 finished two F2F tasks and two SVC tasks consecutively. In sessions 2 and 4, Group 2 finished the two SVC oral tasks and then the two F2F tasks. *Table 3.6* shows the schedule for the oral tasks.

Table 3.6 Schedule for Oral Tasks

Session	Chat modes	Group	Oral Task
1	F2F	Group 1	F2F task A -break- task C
2	SVC	Group 2	SVC task A -break- task C
3	SVC	Group 1	SVC task B -break- task D
4	F2F	Group 2	F2F task B - break -task D

Participants' speaking performances under the F2F and SVC conditions were assessed by two experienced colleagues. One of them is a professor with more than 30 years of teaching and evaluation experience in the field of advanced oral English for Chinese EFL learners. The other colleague is a foreign language teaching expert with more than ten years of overseas teaching experience.

For the F2F dyads, the participants sat in separate chambers provided by the faculty. This prevented external interruptions. For the SVC dyads, each pair created a WeChat group with the researcher. The participants then held their chats within their own WeChat group, and voice messages were automatically stored in their mobile phones. No limitations were placed on where they could be during the SVC chat, except that the environment needed to be quiet enough for a clear recording. After each of the participants finished that day's tasks, they completed the anxiety questionnaires.

3.6.2 Focus Group Interview

To gain further insight into the participants' experience of anxiety in both the F2F and SVC environments, a focus group interview was conducted among five willing participants. Since all participants had close relationships with their classmates, the five selected interviewees were able to adequately represent and report the others' feelings and experiences. The focus group met in a quiet and comfortable language lab so that they would feel free and secure to express themselves. The participants (3 from group 1, 2 from group 2) answered five interview questions where they shared their opinions and feelings about going through the oral tasks within the two different chat conditions. The group interview lasted for 16 minutes and the whole procedure was video recorded. To further facilitate frank and accurate input, the interview was conducted in Mandarin, the participants' mother tongue. The video transcript of this interview was then translated into English and the translation was checked for accuracy by the English-speaking Chinese co-worker who was a professor. The English translation was then utilized for the qualitative analysis.

In order to have a better understanding of the focus group participants, their speaking proficiency in the oral tasks and their anxiety scores in the questionnaires (for F2F and SVC chat) were compiled in Table 3.7.

Table 3.7 Demographic Background of 5 Focus Group Participants

Participant Number	Language Proficiency	Anxiety scores (F2F / SVC)
11	Intermediate level	F2F-31
		SVC-26
12	Intermediate level	F2F-33
		SVC-30
27	High level	F2F-20
		SVC-16

39	High level	F2F-16
		SVC-15
40	Intermediate level	F2F-29
		SVC-26

3.6.3 Overview of Data Collection Procedure

Figure 3.2 below provides an overview of the data collection procedures for the present study. It is presented as a flow chart to provide a clearer depiction of the arrangements and steps.

As previously stated, the researcher first ran a pilot study and made adjustments to the tasks and questionnaires. After this, participants were selected following a background survey and briefing section. The experiments were carried out over a four week period, with the participants each completing four oral tasks and two anxiety questionnaires. In week 5, the researcher conducted the focus group interview.

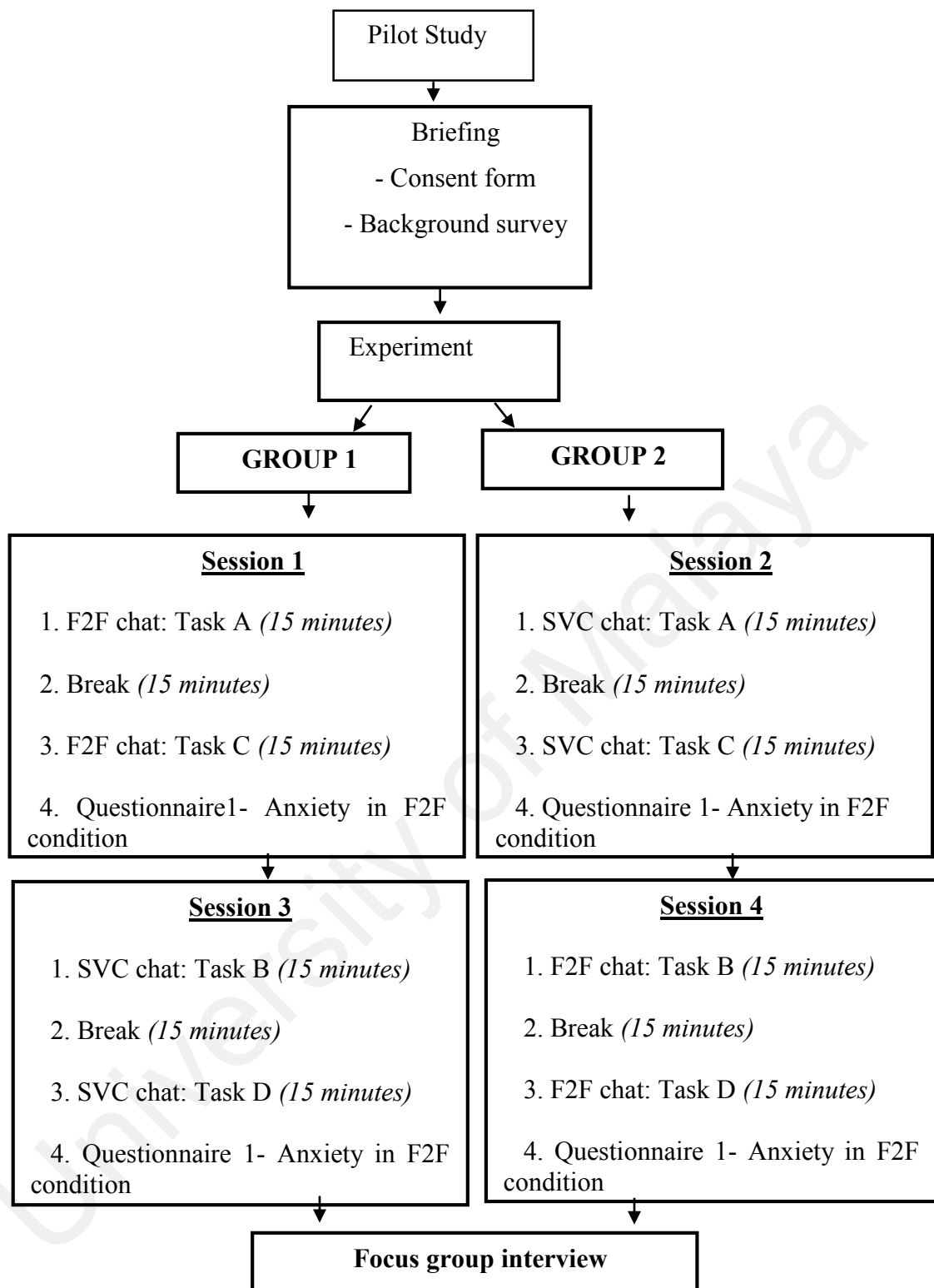


Figure 3.2 Overview of Data Collection Procedure

3.7 Data Analysis

Table 3.8 below shows the source, relevant data, and analysis in answering the research questions.

Table 3.8: The Table of Data Analysis

Research Questions	Source	Relevant Data	Analysis
1.	a) Oral tasks b) Focused group interview	Oral Scores: -grammar -fluency -pronunciation -vocabulary -comprehension	Quantitative analysis: -Oral scores in F2F -Oral scores in SVC -Paired sample t-test Qualitative analysis: -Code and describe themes
2.	a) Anxiety questionnaires b) Focused group interview	Anxiety levels: -Interview	Quantitative analysis -Anxiety levels in F2F -Anxiety levels in SVC -Paired sample t-test Qualitative analysis -Code and describe themes
3.	a) Oral tasks b) Anxiety questionnaires	-Oral scores -Anxiety levels	Pearson correlation test

3.7.1 Data Analysis of Research Question 1

RQ1: To what extent does learners' speaking performance in face-to-face chat differ from synchronous voice chat?

To answer Research question 1, the researcher conducted four oral interaction sessions. The participants' speaking performance of the oral tasks in the two environments were marked by the researcher together with another assessor.

According to Simin and Tyakoli (2014), speaking should be evaluated according to five aspects: grammar, fluency, pronunciation, organization, and vocabulary. Hence, the participants' oral scores were marked according to the above-mentioned five aspects using Hughe's (2003) oral assessment scale, which can be seen in Appendix C. The participants' speaking performances were determined by totaling the points from the five aspects, with the possible scores in each category ranging from 6 to 36. The researcher then tabulated the participants' oral scores for each component, and compiled their total scores. See the following form, *Table 3.9*.

Table 3.9 Sample Outline of Oral Score Tabulation

	Pronunciation	Grammar	Vocabulary	Fluency	Comprehension	Total
S1						
S2						
S3						
....						
S40						

According to Pallant (2007), a Paired-Samples t-test is conducted when the researcher collects data from the same participants on two different occasions or under two different conditions. This test can also be used when the subjects are selected based on specific criteria and when they are in matched pairs. The researcher performed the Paired-Samples t-test to determine whether there was a significant difference between learners' speaking performance when they were involved in F2F and SVC chat conditions. Since Statistical

Product and Service Solutions (SPSS) is an “enormously powerful data analysis package that can handle very complex statistical procedures,” (Pallant, 2007), the researcher used SPSS version 24 to run the test.

As mentioned above, the participants of the present study were selected based on their background surveys. All the participants shared similarities in the following criteria: language proficiency level, and familiarity with the WeChat application. The researcher also considered using non-parametric statistics (Wilcoxon Signed Rank Test). However, the normality test indicated a normal distribution for the data collected from learners' speaking and anxiety levels (*Please refer to Chapter 4 section 4.1 Accessing Normality*). The researcher selected the type of statistics based on the basis of the normality of the data, but not the type of sampling. Thus, the parametric statistics, (the Paired-Samples t-test), was finally used for the present study.

In addition, the interview data regarding anxiety levels was collected for an in-depth analysis of the learners' speaking performances in conjunction with their feelings of anxiety within the two chat conditions. The researcher used open-coding strategies to compare and contrast the differences and similarities of the participants' responses. By reading through the interview data, the researcher highlighted the detailed information about learners' speaking experiences and preferences within two chat conditions. The categories illustrated from the interview data have been developed from the similarities and differences. In this way, themes could be identified and named. The researcher then described the phenomenon based on the identified themes. For example, participants' responses to their reasons of choosing F2F chat environment to practice speaking were grouped under the theme of *helpful*

“I think F2F is more helpful. It plays a more important role in our future daily communication,” (Participant 11).

“F2F is more helpful. In F2F, we could practice our quick reactions and the use of different vocabulary,” (Participant 12).

“I prefer F2F...” (Participant 40).

Based on the theme of *helpful* which emerged from the interview data, the researcher described that the participants prefer to speak English in F2F chat mode.

3.7.2 Data Analysis of Research Question 2

RQ2: To what extent, do learners’ anxiety levels in face-to-face chat differ from synchronous voice chat?

To answer research question 2, the researcher required all participants to complete the anxiety questionnaires concerning F2F and SVC conditions. Since each questionnaire consisted of seven questions regarding learners’ anxiety, the scores ranged from 7 to 35, according to the five Likert-point scale. A higher score indicates a higher level of anxiety. The research conducted the Paired-Samples t-test to check whether there was a significant difference in learners' anxiety levels between the two chat modes (F2F and SVC).

In addition, interview data was gathered to gain insights into the learners’ anxious feelings under the two chat conditions. The researcher also used open coding strategies to identify and categorize the themes that were identified from the interview transcriptions.

3.7.3 Data Analysis of Research Question 3

RQ3: What is the relationship between the learners’ speaking performances and anxiety levels in face-to-face and synchronous voice chat?

To answer research question 3, the researcher collected the participants’ speaking performance and anxiety scores in each chat mode. As Pallant (2013) suggested, the

Pearson Correlation allowed researchers to determine the relationship between two variables, (speaking performance, anxiety levels). The researcher conducted a Pearson Correlation Test to establish the relationship between learners' speaking performance and anxiety level in each chat mode. See *Table 3.10* to see an outline of how the correlations were charted.

Table 3.10: Chart Outline for Correlations Between Speaking Performance and Anxiety Levels

	total oral scores of F2F chat	total anxiety scores of F2F chat
total oral scores of F2F chat	Pearson Correlation Sig. (2-tailed)	
	N	
total anxiety scores of F2F chat	Pearson Correlation Sig. (2-tailed)	
	N	

3.8 Reliability

“The reliability of a scale indicates how free it is from random error,” (Pallant, 2007, p.6). To achieve research reliability, the statistic of Cronbach's Coefficient Alpha is commonly used. Thus, the researcher conducted Cronbach's Coefficient Alpha test on the questionnaire items to test for the internal consistency of the questionnaires. In this test, the Cronbach's alpha value was $\alpha=0.75$ for the SVC anxiety questionnaire, and $\alpha=0.8$ for the F2F anxiety questionnaire. According to Pallant (2007, p.29), “Ideally, the

Cronbach alpha coefficient value should be above .7.” Both questionnaires tested above figure, hence both can be considered reliable in accurately reflecting participants’ ideas.

According to Creswell (2014), when researchers use more than one rater to observe or mark the performance of the participants, the inter-rater reliability should be tested to negate the bias that one rater may bring to the scoring. Therefore, the researcher conducted the inter-rater reliability test in the present study. In this test, the researcher achieved a high level of inter-rater reliability with a value of 0.9. The inter-rater reliability value indicates that personal marking bias was controlled.

3.9 Conclusion

In conclusion, the researcher chose a mixed-mode research design for the present study. Both quantitative and qualitative data were collected through the research instruments such as oral tasks, F2F anxiety questionnaire, SVC anxiety questionnaire and focus-group interview. The researcher applied a purposive sampling method to select the participants according to required criteria so that the research questions could be answered accurately. To that end, the data analysis procedure has been explained concerning each of the research questions.

In summary, the researcher has carefully chosen both the design and method to answer the research questions. The oral interaction sessions, questionnaire, and focused interview have been successfully conducted in answering the research questions. The findings are now reported and discussed in the following chapter.

CHAPTER 4: RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the findings of the research. The research aims to compare and contrast Chinese EFL learners' speaking performances in synchronous voice chat (SVC) with face-to-face chat (F2F). It further explores learners' anxiety levels while having oral discussions in the two chat environments. This chapter then describes the relationship between learners' speaking performances and anxiety levels within the given chat environments.

This chapter consists of two main parts. The first part presents the quantitative results which were gathered from both the learners' speaking and anxiety scores. These scores were collected through four oral tasks and two anxiety questionnaires about F2F and SVC conditions. The second part discusses the qualitative results of the findings gathered from the five-person focus group interview. The research aims to answer the following questions:

- 1: To what extent do learners' speaking performances in face-to-face chat differ from synchronous voice chat?
- 2: To what extent do learners' anxiety levels in face-to-face chat differ from synchronous voice chat?
- 3: What is the relationship between learners' speaking performance and anxiety levels in face-to-face and synchronous voice chat?

In the present study, forty second-year Chinese students were selected to be the participants. They were all students at Leshan Normal University, and have experienced

SVC and F2F chat in a counterbalanced manner. These participants were then divided into two groups. The data was collected through scoring their speaking performances during the oral discussions within the two chat modes, (F2F, SVC), plus the feedback garnered from both anxiety questionnaires, (F2F, SVC), and a focused group interview.

4.2 Assessing Normality

“Normal’ is used to describe a symmetrical, bell-shaped curve, which has the greatest frequency of scores in the middle, with smaller frequencies towards the extremes,” (Grevetter & Wallnau 2004, p.48). According to Pallant (2007), whether the distribution of scores is “normal” is the basic assumption that many statistical techniques rely on. Therefore, assessing normality is very important because this will determine which type of test can be used in a particular study. As seen in *Table 4.1* below, normality was assessed through the Explore Option under the descriptive statistics menu of SPSS. *Table 4.1* below shows the normality test result.

Table 4.1: Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Total scores of SVC chat	.121	40	.143	.955	40	.113
Total scores of F2F chat	.111	40	.200*	.972	40	.427
Total anxiety scores of SVC chat	.132	40	.075	.978	40	.622
Total anxiety scores of F2F chat	.109	40	.200*	.970	40	.358

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

According to Pallant (2007), when the Significance value of KS was more than .05, a non-significant result indicated normality. The Kolmogorov-Smirnov^a (KS) statistic indicated a normal distribution of the data collected from participants’ speaking

performance in SVC chat (Sig. = .143) and F2F chat (Sig. = .200*). The speaking anxiety levels were also normally distributed in SVC chat (Sig. = .075) and F2F chat (Sig. = .200*). Since Chua (2012) and Pallant (2007) stated that parametric statistics should be conducted in data analysis based on the assumption of normal distribution, therefore, the Parametric test (Pair-Samples t-test) was applied in this study to answer the research questions.

4.3 Speaking Performance

In order to answer the first research question, *To what extent do learners' speaking performances in face-to-face chat differ from synchronous voice chat?*, a quantitative approach through the use of statistical product and service solutions (SPSS) version 24 was performed to compare the speaking performance of learners under two chat environments. The themes identified in the focused group interview were then used to further explain the results of quantitative analysis. The explanation is presented in detail as follows.

4.3.1 Quantitative Results

As mentioned, the SVC and F2F chat was conducted within two matched groups, (Group 1 and Group 2), according to the schedule in *Table 3.6: Schedule for Oral tasks*. Each group experienced two sessions of SVC and F2F chat alternatively. Likewise, to avoid the order effects of tasks, the two groups experienced the two chat modes in a counterbalanced order. When one group was in the F2F chat session, the other group was participating in SVC chat session. The oral interactions of both groups were based on the given tasks.

To investigate the differences in learners' speaking performances in F2F chat and SVC chat, the oral performances in different chat environments were scored by two teaching

experts using Hughe’s (2003) oral assessment scale, (See Appendix C). The Paired-Samples T-test was performed using the SPSS software to determine whether there was a significant difference in learners’ speaking performance when they were involved in F2F and SVC chat conditions. Tables 4.2 and 4.3 below, present the results of participants’ speaking performances in F2F chat and SVC chat.

Table 4.2: Learners’ Speaking Performance in the Oral Tasks

Component	Chat mode	Mean	Standard Deviation	Number of Students
Pronunciation	SVC	3.78	.768	40
	F2F	3.20	.911	40
Grammar	SVC	4.08	.526	40
	F2F	3.50	.555	40
Vocabulary	SVC	3.80	.608	40
	F2F	3.13	.757	40
Fluency	SVC	4.28	.554	40
	F2F	3.45	.783	40
Comprehension	SVC	20.93	1.623	40
	F2F	17.50	2.651	40

Table 4.3: Differences of Learners’ Speaking Performance in F2F and SVC Chat

		Paired Differences						
		95% Confidence Interval of the Difference						
	Chat modes	Mean decrease	Lower	Upper	t	df	Sig. (2-tailed)	Eta Squared
Pronunciation	SVC	.575	.315	.835	4.473	39	.000	.35
	F2F							
Grammar	SVC	.575	.385	.765	6.119	39	.000	.49
	F2F							

Vocabulary	SVC	.675	.420	.930	5.356	39	.000	.42
	F2F							
Fluency	SVC	.825	.555	1.095	6.183	39	.000	.50
	F2F							
Comprehension	SVC	1.550	1.300	1.800	12.523	39	.000	.80
	F2F							
Overall scores	SVC	3.425	2.649	4.20	18.924	39	.000	.90
	F2F							

According to *Tables 4.2* and *4.3*, there was a statistically significant difference between the learners' oral performance in SVC and F2F chat in each assessed component, (pronunciation, grammar, vocabulary, fluency, and comprehension). The findings of their speaking performance in each component as well as their overall performance are detailed in the following paragraphs.

In the participants' pronunciation performance, there was a statistically significant difference in the pronunciation scores of the SVC chat ($M=3.78$, $SD=.77$) and the F2F chat ($M=3.20$, $SD=.91$), $t(39) = 4.473$, $p < .0005$ (two-tailed). The participants achieved higher pronunciation scores in SVC than in F2F chat. The mean decrease in overall scores was .575 with a 95% confidence interval ranging from .315 to .835. The eta squared statistic (.35) indicated a large effect size.

In the participants' grammar performance, there was a statistically significant difference in the grammar scores of SVC chat ($M=4.08$, $SD=.53$) and F2F chat ($M=3.5$, $SD=.56$), $t(39) = 6.119$, $p < .0005$ (two-tailed). The participants achieved higher grammar scores in SVC than in F2F chat. The mean decrease in overall scores was .575 with a 95% confidence interval ranging from .385 to .765. The eta squared statistic (.49) indicated a large effect size.

In the participants' vocabulary performance, there was a statistically significant difference in the vocabulary scores of SVC chat ($M=3.80$, $SD=.61$) and F2F chat ($M=3.13$, $SD=.77$), $t(39) = 5.356$, $p < .0005$ (two-tailed). The participants achieved higher vocabulary scores in SVC than in F2F chat. The mean decrease in overall scores was .675 with a 95% confidence interval ranging from .420 to .930. The eta squared statistic (.42) indicated a large effect size.

In the participants' speaking fluency, there was a statistically significant difference in the fluency scores of SVC chat ($M=4.28$, $SD=.56$) and F2F chat ($M=3.45$, $SD=.78$), $t(39) = 6.183$, $p < .0005$ (two-tailed). The participants achieved higher fluency scores in SVC than in F2F chat. The mean decrease in overall scores was .825 with a 95% confidence interval ranging from .555 to 1.095. The eta squared statistic (.50) indicated a large effect size.

In the participants' comprehension, there was a statistically significant difference in the comprehension scores of SVC chat ($M=5.00$, $SD=.00$) and F2F chat ($M=3.45$, $SD=.78$), $t(39) = 12.523$, $p < .0005$ (two-tailed). The participants' achieved higher comprehension scores in SVC than in F2F chat. The mean decrease in overall scores was 1.55 with a 95% confidence interval ranging from 1.30 to 1.80. The eta squared statistic (.80) indicated a large effect size.

In conclusion, there was a statistically significant difference in the overall scores of SVC chat ($M=20.93$, $SD=1.62$) to F2F chat ($M=17.5$, $SD=2.65$), $t(39) = 18.924$, $p < .0005$ (two-tailed). The participants' achieved higher scores of speaking in SVC than in F2F chat. The mean decrease in overall scores was 3.425 with a 95% confidence interval ranging from 2.649 to 4.20. The eta squared statistic (.90) indicated a large effect size.

The findings showed that the participants' speaking performances were better in SVC than in F2F chat. This may be due to the lower affective filter among the participants when they were using SVC (Krashen, 1981). The learners' speaking performance fluency and vocabulary was also better in SVC. This finding was in alignment with the study of Chérrez (2007) who found that SVC interactions could benefit learners' fluency and vocabulary. In the present study, learners also had better pronunciation during SVC than in F2F chat. This finding fulfilled Jepson's (2005) prediction that SVC would be beneficial in improving learners' pronunciation.

4.3.2 Qualitative Results

A focus-group interview was conducted with five voluntary participants (see *Table 3.7* for the demographic background of the participants). The interview provided insights about how the students understood the differences in their speaking performance in the two environments. The Quantitative data clearly indicated that students' performance improved using the SVC, however students perceived the F2F environment as more beneficial. As will be shown, further analysis suggested a possible explanation for this seeming contradiction.

Interview question 1: In your opinion, which chat mode (F2F, SVC) is more helpful for your speaking performance?

Among the five participants, four of them agreed that face-to-face chat was more helpful for their speaking performance. Their main reasons were;

*"I think F2F is more **helpful**. It plays a more important role in our future daily communication," (Participant 11).*

*"F2F is more **helpful**. In F2F, we could practice our quick reactions and the use of different vocabulary," (Participant 12).*

*"I **prefer** F2F, because F2F indeed is much more necessary in our real daily life," (Participant 40).*

“Of course, F2F. SVC is somehow not the same as real life communication,” (Participant 27).

As exemplified by the above quotations from participants 11, 12, 40 and 27, F2F chat was considered more helpful in improving speaking performance. Their reasoning was that F2F chat provided a more realistic or authentic environment compared to the SVC mode. This finding was supported by Nardi and Whittaker’s (2002) claim that F2F communication engaged more human senses for a better interpersonal relationship. In F2F chat, learners could improve their oral ability by practicing quick responses and utilizing their vocabulary in interactions that resembled daily life.

However, participant 39 presented a different idea. She believed that SVC was more beneficial because it allowed her to explore new vocabularies.

*“While I think SVC would be more **helpful**. F2F conversations merely depend on the extent of our vocabulary. If we don't have enough words to say in face to face, the conversations cannot be kept going. In contrast, SVC would be a driving force for us to explore some new words, materials while chatting. Therefore, our knowledge can be expanded more in SVC,” (Participant 39).*

This result could have been influenced by the student’s different learning style as suggested by Chew (2013).

Interview question 2: What are the speaking challenges that you faced in F2F and SVC chat respectively?

*“I think the challenges in F2F would be **the reaction time and vocabulary problems**. In SVC, it would be **grammar and sentence sequences**,” (Participant 12).*

*“In F2F, **limited vocabulary** affects our speaking performance as our expressions could not go in-depth,” (Participant 27).*

*“In F2F, **expressing myself clearly** and making my partner **understand me well** are the challenges. In SVC, my attention could **be distracted** by focusing too much on **grammar and pronunciations**,” (Participant 39).*

Table 4.4 Summary of Speaking Challenges in F2F and SVC

	F2F	SVC
Speaking challenges	Quick reaction-time required Lack of vocabulary Superficial depth of conversations	Challenges in grammar sequences Pronunciation

The above quotes and *Table 4.4* display the challenges that participants faced in the F2F and SVC chats. In F2F chat, these challenges were the pressure of immediate responses, insufficient vocabulary, and the resulting dilemma of superficial dialog. The challenges faced in SVC mode were mainly in grammar and pronunciation. This focus shift could be the reason that participants achieved higher vocabulary and fluency scores in SVC than in F2F chat, as shown in *Section 4.2.1: Quantitative results*.

4.3.3 Summary

In summary, the finding of the quantitative analysis indicated a statistically significant difference in learners’ speaking performance between F2F and SVC chat mode. Looking at each speaking component, the learners achieved better performances in SVC than in F2F chat.

On the other hand, the qualitative data indicated that students generally preferred F2F chats and felt that this mode was more effective in improving their speaking performance. The researcher discovered that learners believe that F2F chats are better because they consider them a more authentic form of communication. However, since SVC allow the

learners more time to focus on grammar, pronunciation and even vocabulary, rather than the quick responses expected in F2F chats, their oral scores in fact improved more in SVC rather than F2F.

4.4 Speaking Anxiety

In order to answer the second research question, (2: *To what extent do learners' anxiety levels in face-to-face chat differ from synchronous voice chat?*), the researcher compared learners' speaking anxiety under the two chat environments using both quantitative and qualitative analysis of data. Two sets of 5 Likert-point anxiety questionnaires, (Questionnaire 1- Anxiety under the F2F condition, Questionnaire2- Anxiety under SVC condition), were used to collect data about learners' level of anxiety. Next, themes related to anxiety were identified through the focus-group interview questions. The qualitative approach was intended to deepen understanding of the quantitative results. Explanations follow.

4.4.1 Quantitative Results

As seen in Chapter 3, *Figure 3.2 Overview of Data Collection Procedure*, both groups finished the F2F anxiety questionnaire after their F2F chat experience and the SVC anxiety questionnaire after their SVC experience.

Based on the anxiety scale adapted from Satar and Özdener (2008), (*See Appendix E*), the researcher ascertained the learners' levels of anxiety through analysing the anxiety questionnaires concerning both F2F and SVC conditions. Next, all the scores were tabulated according to a 5 Likert-point marking guide. Referring to the result of normality test (*Table 4.1: Tests of Normality*), the researcher applied the Paired-Samples t-test to

find out whether there was a significant difference between learners' speaking anxiety when involved in F2F and SVC chat conditions. *Tables 4.5 and 4.6* present the results.

Table 4.5: Learners' Anxiety levels in Anxiety Questionnaires

	Chat modes	Mean	Student Deviation	N
Anxiety Levels	SVC	18.70	4.858	40
	F2F	22.08	5.322	40

Table 4.6: Difference of Learners' Anxiety levels in F2F and SVC Chat

		Paired Differences					
		95% Confidence Interval of the Difference					
	Chat modes	Mean decrease	Lower	Upper	t	df	Sig. (2 tailed)
Anxiety levels	SVC	-3.37	-4.904	-1.846	-4.465	39	.000
	F2F						

The Paired-Samples t-test was conducted to evaluate the difference between learners' levels of anxiety in the F2F and SVC modes. According to *Table 4.6*, there was a statistically significant difference in learners' anxiety level from SVC chat (M=18.70, SD=4.858) to F2F chat (M=22.08, SD=5.322), $t(39) = -4.465, p < .0005$ (two-tailed). Referring to *Table 4.6*, the participants' had lower anxiety levels in SVC than in F2F chat. The mean increase in overall scores was 3.37 with a 95% confidence interval ranging from -4.904 to -1.846. The eta squared statistic (.33) indicated a large effect size.

The literature findings also indicated that SVC enabled the learners to express themselves and exchange information more freely and with fewer concerns (Jasim and Abyseileek, 2015). Satar and Özdener (2008) also found that learners' anxiety levels were lower in both synchronous text and voice chat. They also found that Synchronous voice-based chat would be more beneficial for learners to reduce their speaking anxiety than F2F chat.

Table 4.7: Questionnaire Items (N=40)

Item	Chat Mode	SD %	D %	NAD %	A %	SA %
1. The fact that we were completing the activities using F2F / SVC chat caused communication problems.	F2F	2.5	35	25	37.5	0
	SVC	7.5	45	37.5	10	0
2. The fact that we were completing the activities using F2F / SVC chat made it difficult to think before I said something	F2F	7.5	27.5	22.5	37.5	5
	SVC	10	57.5	20	10	2.5
3. Because we were completing the activities using F2F/ SVC chat I was worried about my pronunciation.	F2F	2.5	17.5	20	37.5	22.5
	SVC	10	37.5	17.5	27.5	7.5
4. It frightened me when I didn't understand what my partner was saying by F2F/ SVC chat.	F2F	17.5	17.5	22	37.5	2.5
	SVC	10	20	17.5	45	7.5
5. Even if I was well prepared for speaking tasks in foreign class, I felt anxious about having F2F / SVC chat with my partner.	F2F	12.5	32.5	12.5	35.5	7.5
	SVC	12.5	60	12.5	15	0
6. I feared to pronounce words incorrectly when I had F2F / SVC chat with my partner.	F2F	10	17.5	20	47.5	5
	SVC	12.5	25	25	27.5	10
7. I felt nervous when I couldn't express myself in English in front of my partner by F2F / SVC.	F2F	7.5	12.5	20	30	30
	SVC	7.5	22.5	35	22.5	12.5

*SD= Strongly Disagree; D=Disagree; NAD= Neither Agree nor Disagree; A= Agree; SA= Strongly Agree

Table 4.7 shows the frequency test results of the questionnaire items in both F2F chat and SVC chat. Regarding item 1, 37.5% of participants responded that F2F chat caused communication problems. However, only 10% of them faced the same problems in SVC chat. Referring to item 2 on the difficulty of thinking before talking, 35% did not face these difficulties in F2F chat. More participants (67.5%) stated they had no difficulty in thinking before talking in SVC chat. For items 3 and 6, more participants worried about their pronunciation in F2F chat (60%) than in SVC (35%). In addition, there were higher percentages of participants fearing wrong pronunciation in F2F chat (52.5%) than in SVC chat (37.5%).

In contrast, for item 4, 52.5% felt frightened of not understanding their partners in SVC chat, compared to only 39.5% who feared this in F2F chat. However, this changed back to a preference for SVC chat regarding items 5 and 7. In SVC chat, only 15% of the students felt anxious when prepared, compared to the 35.5% using F2F. Likewise, for the last question, a higher percentage of students felt nervous about expressing themselves in F2F chat (60%) than in SVC (34.5%).

As shown above, there were higher percentages of participants feeling anxious in F2F chat than in SVC. They were more anxious about pronunciation and the possibility of being unable to express themselves. These results are in line with the studies of Brown (2007) and Ellis (2012) that learners tend to be frightened about their pronunciation and scared of getting negative comments from others in face-to-face interactions. However, it was interesting to find in item 4 that there were more participants facing anxiety about understanding their partners in SVC chat (52.5%) than in F2F (39.5%). This could be due to technological concerns about faulty connections and poor sound quality when using

SVC. This could cause the interactional and understanding problems with partners (Alastuey, 2011).

4.4.2 Qualitative Analysis

In order to gain deeper insights concerning research question 2, the researcher interviewed participants regarding their feelings about their speaking performance in F2F and SVC chat environments. The interview questions and answers were as follows:

Interview question 3: How did you feel about your speaking experience in F2F chat?

*“I felt a bit **nervous** in F2F as I could not express myself accurately in the short time. Also, I felt **upset** that my speaking sometimes was not understandable for my partner,” (Participant 11).*

*“In F2F, the feeling of time urgency and quick reactions made me feel **worried**,” (Participant 12).*

*“In F2F, it was **difficult** for me to transfer my way of Chinese thinking into English thinking. This made me feel **sad** as I was lacked the vocabulary and oral practice,” (Participant 40).*

According to the responses above, the participants had negative feelings about their performance using F2F chat. Participant 11 reasoned that time urgency made her feel nervous and she was upset when her partner found some of her ideas unintelligible. Likewise, participant 12 worried about perceived pressure to respond quickly. And participant 40 was distressed by their lack of vocabulary and inability to convey their ideas in English during the F2F oral interactions.

*“I felt much **freer** and **comfortable** in F2F,” (Participant 27).*

*“I think so as well. F2F made me feel more **comfortable**. Even though we might not express ourselves with proper words, I could also understand my partner through her facial expressions and body languages.” (Participant 39).*

However, participants 27 and 39 had positive feelings concerning their F2F chats, finding the experience more freeing and comfortable. Participant 39 reasoned that facial expressions and body language conveyed meaning, so they were not solely dependent on vocabulary, and that this relieved a great deal of pressure. This difference in reactions could reflect the differing personality types and/or language proficiency of the participants. As Chew (2013) suggested, extrovert students with higher language ability were more confident in face-to-face communications. According to their scores in the oral task, participants 27 and 39 had better language proficiency and they were more confident in speaking in front of others. This was also similar to the research results of Krashen (1981) who found that participants with higher language proficiency levels felt freer and more comfortable in the F2F chat environment than did others.

Interview question 4: How did you feel about your speaking experience in SVC chat?

*“In using SVC, I had a short time to check for proper words and make a short-time preparation. This made me feel **safe**,” (Participant 11).*

*“I felt **less anxious** in SVC as I had less feeling of time urgency,” (Participant 12).*

*“In SVC, we had a short time to think before we talk, thus I felt this was a little **easier** for me,” (Participant 40).*

As seen in the above quotations, participants 11, 12 and 27 all had positive feelings about SVC chats. They reasoned that the SVC environment allowed them time to prepare and check their answers. Feeling safer and less anxious made it easier for them to speak.

*“In SVC chat, we **didn’t need to worry** about our mistakes in front of others. Also, we **didn’t need to feel uncomfortable** with others’ reactions to our mistakes as we didn’t see them face to face,” (Participant 27).*

*“If I was not confident about my voice messages such as stammering, I could choose to cancel my messages. This made me **feel good** about SVC,” (Participant 39).*

Participants 27 and 39 also felt good doing SVC chats. Participant 27 reasoned that because she could not see others' reactions, she did not need to worry about making mistakes. Their sense of satisfaction with their SVC chats is similar to Chew's (2013) hypothesis that online discussion enabled participants to feel they could express their ideas better and more clearly. Surprisingly, participant 39 liked using SVC chat because it allowed her to cancel any voice messages she was not confident about. As Chew (2013) suggested, this reaction could be explained by her learning style, which in this case, could have equated learning progress with perfection.

Interview question 5: In which chat modes did you feel less anxious about speaking English?

*"I felt **less anxious** in SVC chat. Also, this depended on who you were talking with and whether you are familiar with him or her," (Participant 11).*

*"I thought SVC would be better to **release our anxiety** because, I had fewer concerns about others' reaction towards my speaking," (Participant 12).*

*"SVC chat made me **feel less anxious** in speaking as I didn't feel there was a rush to finish the speaking tasks," (Participant 40).*

*"If I was in the initial level of English, I would choose SVC. Thus, I was **not so frightened** of making mistakes in front of others," (Participant 27).*

According to the responses above, four out of five participants felt less anxious about speaking with others using SVC. As participants 11, 12 and 27 stated, they did not feel frightened and uncomfortable with making mistakes when online. Interestingly, participant 11 mentioned that the familiarity of a partner correlated with her anxiety level. If the partner was a stranger, participant 11 felt more anxious. Bueno (2011) also found that interactions amongst non-native speakers with a familiar partner would lower the levels of anxiety. Participant 27 claimed that the level of language ability would affect

her choice of chat modes. She thought that SVC chat would be better for language learner beginners.

*“I thought F2F made me feel **more relaxed**. We had many other ways to help us express meaning that are only available when speaking F2F,”*
(Participant 39).

Contrary to the other participants, participant 39 felt more relaxed in the F2F mode than in SVC. As stated, she felt more relaxed expressing her meaning with the additional forms of communication available in person. This particular participant had higher language proficiency scores and lower levels of anxiety in the F2F environment than all the others interviewed. Tam (2009) also found that students with higher language ability were more willing to express themselves in different conditions. This may explain why she was more relaxed in F2F chat.

4.4.3 Summary

In summary, the finding of the quantitative analysis indicated a statistically significant difference in learners' levels of anxiety between F2F and SVC chat mode. Learners experienced higher levels of anxiety in F2F chat compared to SVC.

The findings of the qualitative analysis was in line with the quantitative results. A majority of the participants had positive feelings, (e.g., less anxiety, greater comfortability), when using Synchronous Voice Chat. Moreover, most experienced negative feelings, (e.g., anxiety, upset and sadness), when speaking Face-to-Face. This indicates that SVC has provided a less anxiety-inducing and more comfortable environment for learners to practice speaking than does F2F chat.

4.5 The Relationship between Speaking and Anxiety in F2F and SVC chat

In order to answer the third research question (3: *What is the relationship between learners' speaking performance and anxiety levels in face-to-face and synchronous voice chat?*), the researcher conducted Pearson's Correlation Test to see the relationship between the participants' speaking performances and their anxiety levels. Pearson Correlation Tests not only enable a researcher to predict the relationship between two variables but also help to explore the strength of the relationship (Pallant, 2007).

4.5.1 Pearson Correlation

The correlations between learners' oral scores and anxiety levels as related to the chat environment, (F2F oral scores and F2F anxiety levels in F2F chat; SVC oral scores and SVC anxiety levels in SVC chat) were explored. The results of these tests are shown in *Table 4.8*, (F2F), and *Table 4.10*, (SVC). The interpretation of the value of these correlations is provided in *Table 4.9*.

Table 4.8: Correlations between Speaking Performance and Anxiety Levels in F2F Chat

		total oral scores of F2F chat	total anxiety scores of F2F chat
total oral scores of F2F chat	Pearson Correlation	1	-.428**
	Sig. (2-tailed)		.006
	N	40	40
total anxiety scores of F2F chat	Pearson Correlation	-.428**	1
	Sig. (2-tailed)	.006	
	N	40	40

** . Correlation is significant at the 0.01 level (2-tailed).

The relationship between the learners' speaking performances and their anxiety levels in the F2F mode was investigated using the Pearson Correlation Coefficient. As shown in *Table 4.8*, and utilizing Cohen's interpretive scale as seen in *Table 4.9*, a medium negative correlation was found between the two variables, $r = -.428^{**}$, $n = 40$, $P < .0005$.

This means that higher levels of anxiety were associated with lower scores of speaking performance in the F2F chat.

Table 4.9 Cohen’s Guideline (1998, as cited in Pallant, 2007, p.132)

Small	r = .10 to .29
Medium	r = .30 to .49
Large	r = .50 to 1.0

Table 4.10: Correlations between Speaking Performance and Anxiety Levels in SVC Chat

		total oral scores of SVC chat	total anxiety scores of SVC chat
total oral scores of SVC chat	Pearson Correlation	1	-.110
	Sig. (2-tailed)		.498
	N	40	40
total anxiety scores of SVC chat	Pearson Correlation	-.110	1
	Sig. (2-tailed)	.498	
	N	40	40

Table 4.10 presents the correlations found between the students’ speaking performances and anxiety levels in the SVC chat mode. In this case, there was only a small negative correlation between the two variables, $r = -.110$, $n=40$, $p < .0005$. While there was a higher level of anxiety associated with lower scores of speaking performance in SVC chat, the strength of the negative correlation was small ($r = -.110$).

The researcher found that there was a negative correlation between the learners' levels of anxiety and their speaking performance under both F2F and SVC chat conditions. In comparison of the effect size, F2F chat ($r = -.428^{**}$) has a stronger influence than SVC

chat ($r=-.110$) in the negative correlations between learners' speaking performance and anxiety levels. These findings supported Gregersen's (2003) observation that anxious students made more errors than less anxious ones. In addition, this was in line with the affective filter hypothesis which proposes that lower affective filters enable people to have better learning achievement (Dualy & Burt, 1997; Krashen, 1982). Ellis (2012) also stated in his theory that a lowered affective filter allowed the input to "strike deeper", and that higher anxiety levels tend to hinder input.

4.6 Conclusion

In this chapter, the researcher interpreted the answers to three research questions. The findings indicate that different chat environments play a crucial role in the outcome of the learners' performance. Specifically, the SVC environment was found to be beneficial for Chinese EFL learners, enabling them to practice speaking English with reduced anxiety, which in turn resulted in increased fluency and improved oral scores. This shows that teachers should take advantage of SVC chat with their students. Further conclusions and implications of these findings, as well as recommendations for future study will be discussed in the following chapter.

CHAPTER 5: CONCLUSION

5.1 Introduction

In addition to traditional face-to-face (F2F) communication, mobile-mediated communications (MMC) have become a popular mode of communication within Chinese society. As we have seen, Synchronous Voice-based Chat is proving to be beneficial new mobile platform enabling language learners to practice speaking English. This study has found that SVC indeed helps to both lower learners' levels of anxiety and to gain better speaking performances.

This study has investigated learners' speaking performance in SVC and F2F chat environments within the context of China. Furthermore, this study intentionally explored the multiple dimensions of speech, by analyzing the participants' pronunciation, grammar, fluency, vocabulary, and comprehension. This researcher had observed a lack of research concerning the relationship between learners' speaking performances and their anxiety levels while using different communication modes. Therefore, this study also explored and compared the changes in anxiety levels while the Chinese EFL learners were speaking within both SVC and F2F chat modes.

To fill in the gap discovered in the current academic literature, (See *Section 1.3: Statement of Problem*), this researcher chose to study learners' speaking performance using both quantitative and qualitative research and analysis. Moreover, given that previous studies only involved a small number of subjects, this study engaged a larger population of 40 students in the experiment. The researcher also controlled the participants' level of language proficiency as well as their familiarity with the chosen SVC app, WeChat.

This chapter presents the summary of the findings, the implications and limitations of this study, recommendations for further study, and a final conclusion.

5.2 Summary of Findings

Figure 5.1 below presents the summary of the findings of the current study. It shows the results of the Chinese EFL learners' speaking performances and the levels of anxiety in the F2F and SVC chat modes. In addition, it depicts the relationship between speaking and anxiety that was discovered under the two chat conditions.

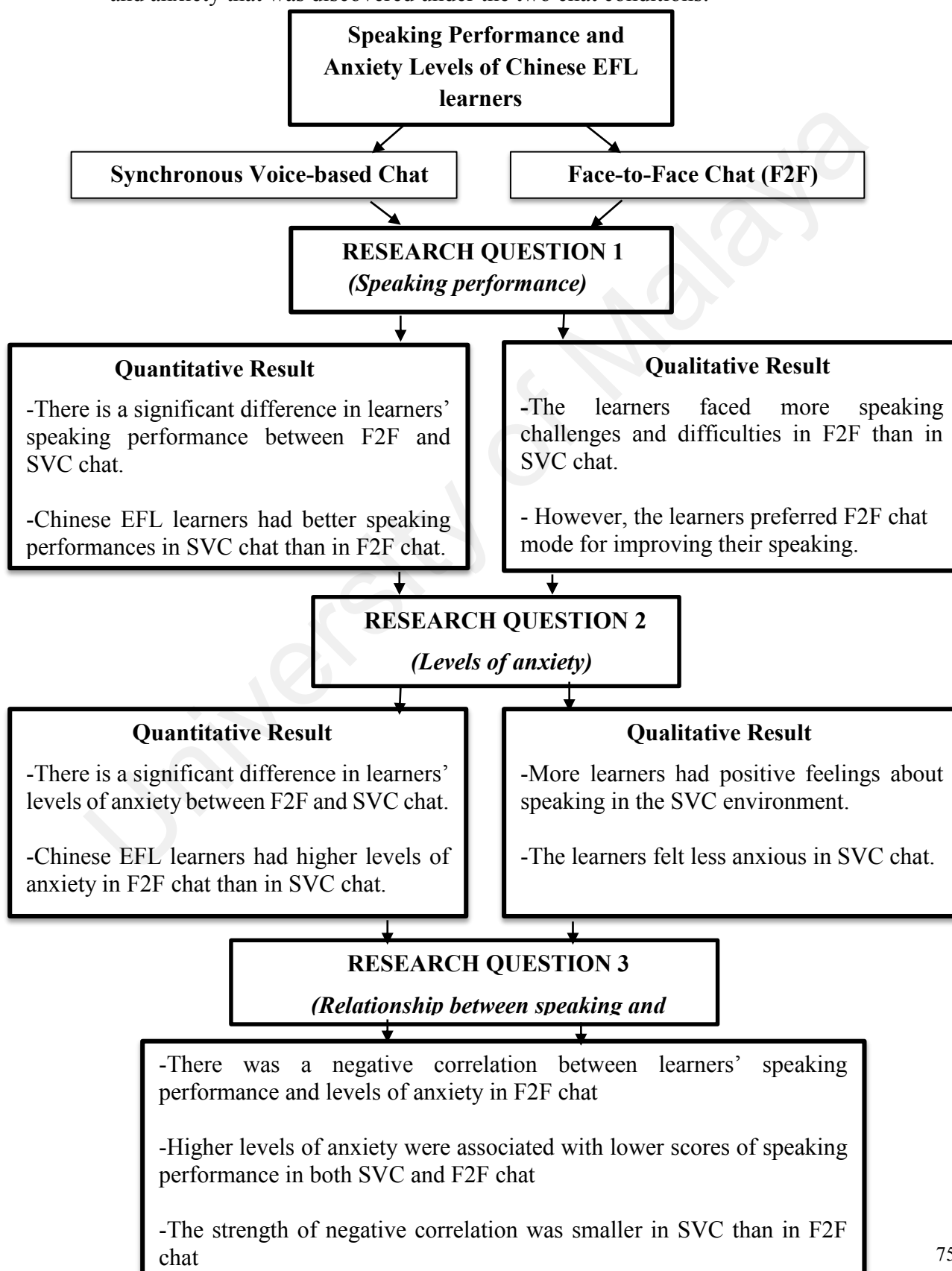


Figure 5.1 Summary of Findings

The results from the first research question showed that there was a significant difference in learners' speaking performances between the F2F and SVC chat environments. Learner speaking performance in pronunciation, grammar, vocabulary, fluency, and comprehension was better in SVC than in F2F chat. Also, students had better overall speaking performance in SVC than in F2F chat. With reference to the qualitative result, the learners felt that they faced more speaking challenges and difficulties in F2F chat. However, they also believed that F2F chat provided a more real environment for them to improve speaking performance, and for this reason they still preferred to practice their speaking in F2F chat mode. In the focus-group interview, the participants claimed that their vocabulary usage and grammar were better in SVC chat than in F2F communication. This was in alignment with the findings of the quantitative analysis of their oral scores during the tasks. Furthermore, the learners stated that the lack of non-verbal information in SVC chat affected their speaking performance. This supports the idea that SVC chat requires learners to speak with greater accuracy than F2F chats where speakers can rely on other cues for mutual comprehension.

The results from the second research question revealed a significant difference in learners' levels of anxiety between the F2F and SVC chat modes. Quantitative tests showed that the learners had higher levels of anxiety in F2F chat than in SVC. According to the qualitative results, the learners also stated that they felt more relaxed, comfortable and less anxious about speaking in SVC. They attributed their lower levels of anxiety during SVC chat to feeling more comfortable and having less concern about making mistakes.

With reference to the third research question, the learners' speaking performance and anxiety levels were negatively correlated for both the F2F and SVC chat. Thus, the higher

levels of anxiety were associated with lower scores of speaking performance in both SVC and F2F chat. The negative correlation was stronger in F2F chat, ($r = -.428$) than in SVC chat, ($r = -.110$). Hence, the F2F chat environment might have a stronger influence than SVC chat environment in terms of learners' speaking performance and anxiety levels.

5.3 Implications of the Study

This study presented the differences between F2F and SVC chat modes in learners' speaking performance and levels of anxiety. It indicated that chat environments played a crucial role in learners' performance. Specifically, SVC chat environment proved beneficial for Chinese EFL learners to practice and improve their English speaking while also reducing their speaking anxiety.

These findings are significant for language instructors. Knowledge of the different results with each chat mode permits teachers to take advantage of both. For example, since SVC has no place and time limitations, a language practitioner can encourage learners to use SVC to complete a task after class. Due to the diverse communication needs and challenges of speaking face-to-face, and students' recognition of its importance, in-class F2F tasks are recommended as well. However, since learners have higher anxiety during F2F interactions, the teacher could have the students engage in F2F tasks after having first practiced using SVC.

This study also has applications for language learners. Knowledge of the results of this study could encourage students to utilize the mobile-mediated platforms to enhance their language ability. Especially for Chinese EFL learners, the WeChat app provides an ideal platform to improve their language performance while utilizing their own learning style. Interview responses showed that learners were most afraid of making mistakes or

pronouncing words incorrectly in front of others. Thus, SVC could be an alternative platform for them to practice speaking with their classmates and friends. In this way, they could practice and improve vocabulary, grammar and pronunciation fluency while experiencing less anxiety.

From the theoretical perspective, this study found that learners' higher levels of anxiety were associated with lower scores in speaking performance. The result further supports Krashen's (1982) Affective Filter Hypothesis which claims that affective variables such as anxiety, motivation and levels of self-confidence have a direct influence on learners' language acquisition. This study also suggests that language acquisition should be studied in connection with student personality types, learning styles and affective feelings.

5.4 Limitations and Recommendations

This study applied a purposive sampling method by using only intermediate-level learners. As the sampling method and participants' selection could lead to different research results, it would be interesting to find out whether SVC would also be beneficial for Chinese EFL learners of beginner and advanced levels.

In this study, learners' initial anxiety levels or pre-task anxiety levels were not measured. To elaborate on the research findings further, it is recommended that further research assess learners' anxiety levels through a pre-test. Also, the researchers could consider grouping the learners according to the similarity of their anxiety levels. Then a comparison of the pre-task and post-task anxiety levels could be used to study changes in anxiety levels.

This study has found that SVC tool can provide learners with opportunities to practise speaking without feeling too anxious. Nevertheless, learners' speaking skill is usually measured in a F2F environment within formal assessment contexts. A question that has not been answered in this study is, to what extent does practising speaking using SVC helps to enhance learners' speaking performance and lower their level of anxiety in an F2F context? This is an area that requires further investigation.

In addition, changes in the grouping format and the number of group members could be considered in future studies. The current study was conducted in pairs between non-native speakers only. It would be interesting to explore the effect of different grouping formats on learners' speaking performances and anxiety levels in both F2F and SVC platforms. For example, as suggested by the participants in this study, researchers could group their learners in larger numbers, rather than in pairs; or could include chats between EFL students and native English speakers.

5.5 Conclusion

This study investigated the speaking performance and anxiety levels of 20 pairs of Chinese EFL learners in both synchronous voice-based chat and face-to-face chat modes. The researcher selected WeChat instant messaging as the SVC platform. The participants were selected according to their familiarity with WeChat usage and language proficiency levels, (intermediate level). The students completed four oral interaction tasks under both F2F and SVC chat modes respectively. The experiment was conducted smoothly and successfully. After completing the oral tasks, five volunteers participated in the focus-group interview.

The research revealed that learners had better speaking performance and lower levels of anxiety using SVC rather than F2F conversations. Higher scores of speaking performance were strongly associated with the students' lower levels of speaking performance in F2F chat mode. However, most learners still preferred to practice speaking performance under F2F conditions.

In summary, this study has found that SVC was beneficial for Chinese learners for improving their oral speaking ability and reducing anxiety levels. SVC provides students a relatively comfortable, relaxing and anxiety-free environment in which to engage in dialog. It helped learners avoid the pressure to give immediate feedback, and released them from fears that inhibit vocabulary production, pronunciation, grammar fluency and comprehension improvement. Furthermore, it increased learners' self-esteem concerning their ability to grow in foreign-language acquisition. Therefore, it would be interesting and productive for language instructors and users to utilize SVC communication modes, rather than simply depending on F2F interactions both inside and outside the classroom.

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