

**AN INVESTIGATION OF LEARNER
AUTONOMY AMONG EFL STUDENTS IN
MAINLAND CHINESE UNIVERSITIES**

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**AN INVESTIGATION OF LEARNER AUTONOMY AMONG EFL
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By

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ABSTRACT

AN INVESTIGATION OF LEARNER AUTONOMY AMONG EFL STUDENTS IN MAINLAND CHINESE UNIVERSITIES

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In the era of globalization, many countries have set up long-term educational goals to promote learner autonomy. However, the current “teacher-centered” teaching approach in China has hindered the development of students’ autonomous learning ability. Accordingly, many Self-Access Centers (SACs) have been established to encourage students to learn English language independently. This study attempted to scrutinize the scenario of learner autonomy among Chinese university students with three objectives: a) to survey university EFL students’ learner autonomy in the context of SACs in Henan province, China, b) to investigate factors affecting Chinese EFL students’ learner autonomy in the context of SACs, and c) to explore the approaches of promoting learner autonomy in SACs.

The mixed methods approach was employed in this study. Quantitative data that were collected by distributing questionnaires to 569 students from three

universities with SACs were analyzed through SPSS 22.0 and AMOS 21.0, including factor analysis, descriptive analysis, and path analysis. Meanwhile, qualitative data that were obtained by interviewing 15 students, 15 English language lecturers and 3 SAC directors were analyzed by thematic analysis.

The results of this research are summarized as follows. University students in China were ready for learner autonomy in general. Language learning belief, strategy, motivation and anxiety had significant effects on learner autonomy. Though English teachers do not have significant effects on learner autonomy, they can exert influence on it through the mediating functions of learning strategy and motivation. Moreover, other factors, including self-control, learning environment, learning materials, information literacy, hardware and software, could also affect learner autonomy. Although the approaches offered by SACs were effective in promoting learner autonomy, there still existed some problems, thus some corresponding measures needed to be taken. Pedagogical suggestions are also offered to English language teachers in assisting their students with regards to the promotion of learner autonomy.

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APPROVAL SHEET

This thesis entitled “AN INVESTIGATION OF LEARNER AUTONOMY AMONG EFL STUDENTS IN MAINLAND CHINESE UNIVERSITIES” was prepared by CHENG JIANFENG and submitted as partial fulfillment of the requirements for the degree of Doctor of Philosophy in Social Science at Universiti Tunku Abdul Rahman.

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DECLARATION

I hereby declare that the thesis is based on my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously or concurrently submitted for any other degree at UTAR or other institutions.

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LIST OF ABBREVIATIONS

AMOS	Analysis of Moment Structures
CERNET	China Education and Research Network
EFL	English as a Foreign Language
ICT	Information and Communication Technology
KMO	Kaiser-Meyer-Olkin
LPLA	Learners' Perception on Learner Autonomy
MOE	Ministry of Education
SAC	Self-Access Center
SEM	Structural Equation Modeling
SPSS	Statistical Package for the Social Sciences
TESOL	Teaching English to Speakers of Other Languages

CHAPTER 1

INTRODUCTION

1.1 Research Background

With the rapid development of Internet and communication technology, human beings have greatly changed their learning style in the twenty-first century. In this information era, learners can get information from the Internet, ask their lecturers for help, and discuss some learning problems with their peers through cellphone, short message, e-mail, QQ, Wechat, Fetion, WhatsApp, and Facebook, which offer them multiple opportunities to communicate with others. Facing a world where the velocity of knowledge is accelerating, learners cannot acquire knowledge passively any more, but learn actively with strong desire, high level of autonomy, and many learning opportunities so as to interpret and construct new knowledge as possible as they can (Yang, 2017). In the twenty-first century, learners should acquire four skills, i.e., “learning to know, learning to do things, learning to grow, learning to live together”, for those four kinds of learning act as an important pillar in a learner’s whole life (Lv, 2017). Autonomous learning that advocates an ongoing, voluntary and self-motivated way of pursuing knowledge meets this requirement, and has been widely accepted by many language educators (Xu, Peng, & Wu, 2004). However, the acquisition of English language in mainland China, where it is regarded as a foreign language, seems difficult for Chinese EFL learners. As a matter of fact, Chinese university EFL learners are in such a predicament that they can read but cannot understand others in communication, and even if they

can follow others, they still do not know how to express themselves (Chen, 2017). This would make the economic competitiveness in China at risk, and jeopardize its sound economic development in the future. Thus, the promotion of learner autonomy has now become an urgent goal in foreign language teaching and learning field in mainland China (Xu, 2014).

As an inseparable part of Chinese higher education, university English language teaching plays a significant role in the promotion of university students' knowledge, ability, and comprehensive quality (China Ministry of Education, 2016). Nevertheless, the "teacher-led" or "teacher-centered" English language teaching approach whereby the teacher dominates the classroom through talks and lectures is still popular in mainland China. This has been greatly challenged by the increasing university enrolment in the past two decades, because teachers cannot respond to students according to their learning needs, style, and interests (Liang, 2017). As a result, it is quite necessary to investigate university students' learner autonomy in order to cultivate it. Many researchers have adopted questionnaires and interviews to investigate university students' learner autonomy, the results of which show that university students' learner autonomy in Mainland China is still weak, because students cannot understand well their English teachers' teaching aims and requirements, do not often make study plans or productively use their learning time, do not effectively use learning methods, and they do not monitor and evaluate their learning process (Cheng, Gerard, & Tan, 2018b; Deng & Wang, 2009; Dou, 2014; Gu, 2013; Lin, 2008; Liu, 2013; Tan & Zhang, 2015; Xu, 2014; Yao & Li, 2017).

In order to promote students' learner autonomy, the new version of College English Curriculum Requirements focuses on the development of students' ability to use English in an all-round way by adopting the computer and classroom-based teaching model, which is built on advanced information technology, especially network technology, so that university English language teaching can cultivate students' learning autonomy and individualization (China MOE, 2007). Moreover, Guidelines on College English Teaching also focuses on the development of students' learning autonomy and personalized learning strategies by seamlessly integrating classroom teaching and Internet autonomous learning (China MOE, 2016). This requires Chinese universities to take reforms in English language education to cultivate students' autonomous English language learning ability by means of advanced information technology. Meanwhile, more and more English teachers are aware of the significance of promoting learner autonomy and try their best to foster it in their teaching practice. In fact, many English language teachers have designed various programs to promote university students' learner autonomy, whose effectiveness has been testified by some empirical studies (Lv, 2016). As early as 1998, Yang (1998) designed a four-year program to cultivate learners' autonomy at a Taiwan university. His experiment was proved to be effective in raising students' awareness of using learning strategies, improving students' use of learning strategies, teaching students how to set up learning goals and evaluate their language proficiency. In mainland China, many experimental studies have been conducted to promote university students' learner autonomy through computer-assisted teaching mode, or classroom teaching (Hu & Li, 2017; Li & Liu, 2015; Lv, 2016; Wu,

2014; Xu, 2010; Xu, 2014; Yang, 2012; Yang & Fu, 2016). However, a few of them have tried to promote learner autonomy in the context of Self-Access Centers (SACs).

According to Benson (2005), Self-Access Centers could be broadly defined as “any purpose-designed facility in which learning resources are made directly available to learners” (p.114). These resources could be broadly divided into audio and video materials, learning software, computers, satellite programs, and various printed learning materials. In the past two decades, numerous Self-Access Centers have been built in universities in the United States, Europe, Hong Kong, Macao, and Southeast Asia. Under the influence of universities in Hong Kong, many universities in mainland China have established Self-Access Centers in the past years to promote students’ independent learning ability. Those centers can be divided into two types: Internet-based model and LAN-based (Local Area Network) model (Zhao, 2015). For the former model, students learn autonomously anywhere at any time through learning websites, whereas for the latter model students learn independently in the fixed location through local area network. Most universities have adopted the LAN-based model when establishing their own Self- Access Centers (Zhao, 2015). For example, students in Henan Normal University can make full use of English listening materials in SACs to practice their English listening skills. Students in Henan Institute of Science and Technology can practice their English listening, speaking, reading, and writing skills on the autonomous learning platform in SACs. Owing to the rich learning resources and flexible learning time, students can improve their

English language proficiency in SACs by taking charge of their own learning. At the same time, the issue of how to make full use of SACs to develop students' learner autonomy has aroused the academic interests of more and more scholars (Li, 2011). So far, an increasing number of researchers have conducted experimental studies of using SACs to promote university students' learner autonomy and language proficiency (Choy, 2014; Hsieh, 2010; Liu, 2013; Marzuki & Saptopramono, 2016; Morrison, 2005; Priyatmojo & Rohani, 2017; Sun, 2011). Nevertheless, there are still some existing problems in those centers such as insufficient staff to manipulate the learning resources, malfunction of online service system, lack of objectives from senior management, few feedback from students on various services and support offered by SACs (Choy, 2014).

In the present study, university students' learner autonomy in the context of Self-Access Centers in Henan province, China will be firstly surveyed; then the factors affecting Chinese EFL students' learner autonomy will be investigated; furthermore the approaches to promote students' English language learning autonomy in Self-Access Centers (SACs) will be explored.

1.2 Problem Statement

The new version of College English Curriculum Requirements highlights the importance of developing university students' learner autonomy and their general cultural awareness so as to meet the needs of China's social development and international exchanges (China MOE, 2007). However, most university students rely heavily on their teachers to learn the English language

due to the current “teacher-centered” English language teaching approach (Liang, 2017). To change this situation, many universities in mainland China have established Self-Access Centers to promote students’ learning autonomy. However, few studies have been conducted to investigate university students’ learner autonomy in the context of Self-Access Centers. In addition, it is still a long way to go to promote university students’ learning autonomy, because it involves many socio-environmental factors and learners’ individual factors (Xu & Li, 2014). Even though some studies have been carried out to investigate the relationships between different factors and learner autonomy (Wang, 2016), few of them have explored the causal relationships between the five independent variables, namely, language learning belief, strategy, motivation, anxiety, teachers’ role and dependent variable, learner autonomy in a single study. Lastly, the limited studies on SACs mainly put emphasis on services and resources offered by them, while few have explored the approaches that SACs provide to university EFL learners and examined the effectiveness of those approaches. The reason is that it is quite challengeable to do so in practice because of the complexity and particularity of autonomous learning systems.

1.3 Research Questions

The research questions are listed below:

- a) How ready are Chinese university EFL students for learner autonomy in the context of Self-Access Centers?
- b) What are the factors affecting Chinese university EFL students’ learner autonomy in the context of Self-Access Centers?

c) How can Self-Access Centers (SACs) promote learner autonomy?

1.4 Purpose of the Study

The purpose of this study is to scrutinize the scenario of learner autonomy among university EFL students in Henan province, China. It is to investigate the following:

- a) to survey learner autonomy of university students in the context of SACs in Henan province, China;
- b) to investigate the factors affecting Chinese university EFL students' learner autonomy in the context of SACs;
- c) to explore the approaches of promoting learner autonomy among university students in SACs.

1.5 Research Significance

First of all, the investigation will provide language lecturers with first-hand quantitative-qualitative data of students' learner autonomy at universities with Self-Access centers in Henan province so as to offer some suggestions for curriculum design, learning materials allocation, classroom activities and learner training. So far, some studies have been conducted to investigate university students' learner autonomy (Lin, 2008; Tan & Zhang, 2015; Xu, 2014; Yao & Li, 2017). However, few of them have been carried out in the context of Self-Access Centers.

Then, the study will offer insights into the causal relationships among language learning belief, strategy, motivation, anxiety, teacher's role and

learner autonomy. So far, many studies have been conducted to investigate the relationships among language learning motivation, strategy, belief, anxiety, teachers' role and learner autonomy (Abdipoor & Gholami, 2016; Cui, 2017; Guo & Qin, 2009; Kabiri, Nosratinia, & Mansouri, 2018; Teng & Xu, 2015; Wei, 2014). However, those studies often centered on one or two aspects, never focusing on the relationship between all the above five variables and learner autonomy in a single study. In the autonomous learning process, all these factors do exist and affect learner autonomy simultaneously. Moreover, this study not only investigates the direct effects of factors on learner autonomy, but also explores the indirect effects of factors on learner autonomy. The study of factors affecting learner autonomy makes English language teachers know how to reinforce the positive factors and restrain the negative factors in the promotion of students' learning autonomy.

In addition, this study focused on the important role of English language teachers in the promotion of learner autonomy in the context of Self-Access Centers. Even though autonomous learners are expected to take responsibilities for their own learning in Self-Access Centers, they still need their teachers' instruction and supervision. However, in the information era, a substantial number of English language teachers have not adopted modern information technology as an effective tool to assist their foreign language teaching (Ding, 2011). As a result, teachers, as the motive power to promote students' autonomy in foreign language acquisition, also need to learn autonomously so as to play multiple roles rather than just source-provider and knowledge-purveyor for assisting their students in autonomous learning.

Furthermore, the approaches of promoting learner autonomy explored in this study can offer valuable advice to university policy-makers, language lecturers, students, and SAC directors on the development of students' learning autonomy, which will further push forward the reform of university English language teaching in mainland China. Most previous studies have investigated services and resources offered by SACs (Li, 2013; Marzuki & Saptopramono, 2016; Zhao, 2015). However, little is known about what approaches SACs provide to university EFL students and how effective those approaches are. This study explored the approaches of promoting learner autonomy and testified the effectiveness of SACs through quantitative data collected from questionnaires and qualitative data collected from interviews.

Finally, the study will find out the existing problems in SACs, the solutions of which will benefit the operation of the centers. Some recent studies have been conducted to focus on the efficiency and effectiveness of Self-Access Centers in the promotion of students' autonomy (Choy, 2014; Hsieh, 2010; Priyatmojo & Rohani, 2017). Nevertheless, there are still some problems existing in the SACs: insufficient learning materials, lack of teachers' guidance, mal-function of autonomous learning platform, shortage of manpower, and lack of objectives from senior managements. The corresponding measures to solve those problems given in this study can offer some insights into the management of SACs.

1.6 Definition of Terms

a) Learner autonomy

Nguyen (2014) defined learner autonomy as “learner’s willingness and ability to take responsibility, to plan, implement, monitor and evaluate his/her learning with tasks that are constructed in negotiation with and support from the teacher” (p.21).

b) Teacher-centered approach

Dupin-Bryant (2004) defined teacher-centered approach as “an approach of instruction that is formal, controlled, and autocratic in which the instructor directs how, what, and when students learn” (p.42).

c) Self-Access Center

Benson (2005) defined Self-Access Center as “any purpose-designed facility in which learning resources are made directly available to learners” (p.114).

1.7 Summary

This chapter presented the research background, problem statement, purpose of the study, research questions, research significance, and definition of the terms. Chapter Two will give a review of the literature in relation to definition of learner autonomy, characteristics of learner autonomy, students’ readiness for learner autonomy, factors affecting students’ learner autonomy, Self-Access Centers, theoretical foundation, and conceptual framework.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews various definitions of learner autonomy made by previous scholars. Then it summarizes the main characteristics of learner autonomy. Next, readiness for learner autonomy in China and other countries is analyzed in terms of policies for promoting learner autonomy, electronic facilities and environment, and students' learner autonomy. Furthermore, the factors affecting learner autonomy are discussed, including language learning motivation, strategy, belief, anxiety, and teachers' role. Self-Access Centers (SACs) are introduced and discussed regarding the functions and effectiveness of promoting learner autonomy. Finally, the theoretical foundation and conceptual framework of this study is discussed.

2.2 Definition of Learner Autonomy

The concept of learner autonomy has been widely accepted in the past few decades, yet there are still some disagreements on its definition. According to Gardner and Miller (2002), it is difficult to get a consensus on the definition of "learner autonomy" or "autonomous learning," because "First, different writers have defined the concepts in different ways. Second, there are areas of ongoing debate...Third, these concepts have developed independently in different geographical areas and therefore they have been defined using different (but often similar) terminology" (p. 5). Chan (2001) also stated that

“the literature suggests different interpretations of the concept in different contexts” (p. 505). Learner autonomy is mainly defined from the perspective of learners’ ability (Holec, 1981; Hua, 2009; Miu, 2017; Wan, 2013), learners’ psychology (Fan, 2004; Li, 2016; Lin, 2013; Little, 1991), and political-social context (Benson, 2005; Morrison, 2011; Nguyen, 2014).

Holec (1981) firstly defined learner autonomy as “the ability to take charge of one’s own learning” (p.3), which was further explained as taking charge meant being responsible for deciding learning management and organization, i.e., setting up learning objectives, having the right to decide learning content and progress, selecting suitable learning methods, monitoring acquisition procedure, and making an evaluation on what had been acquired (p.3). In this respect, learner autonomy is an ability to know how to learn rather than how to acquire this ability. Holec’s definition “has proved remarkably robust and remains the most widely cited definition in the field” (Benson, 2007, p. 22). It should be noted that Holec’s autonomous learners need to have some psychological and methodological preparation, but his definition does not make it explicit.

By highlighting learners’ capacity and psychology in the learning process, Little (1991) further developed Holec’s definition. According to Little (1991), learner autonomy is “essentially a matter of the learner’s psychological relation to the process and content of learning---a capacity for detachment, critical reflection, decision making, and independent action” (p. 4). That is to say, learners should have some psychological preparations for their learning

process and learning content, as Benson (2007) argued that this definition assumed “the capacity to manage one’s own learning depends upon certain underlying psychological capacities” (p.23). In addition, Little (1994) pointed out that autonomy also meant that learners could enjoy freedom in their learning, but this freedom was restricted by other factors, because “as social beings our independence is always balanced by dependence” (p. 81).

Benson and Voller (1997) put learner autonomy into the political context and defined it as “the recognition of the rights of learners within educational systems” (p. 29). Similarly, the two researchers affirmed that learner autonomy could be viewed as “redistribution of power among participants in the social process of education” (Benson & Voller, 1997, p. 2). Thus, the promotion of learner autonomy in the political framework could be realized through various teaching methodologies in which students had more opportunities to take part in decision-making process. The significance of Benson’s efforts is to identify learners’ political rights in autonomous learning. When defining learner autonomy, Holec (1981) put emphasis on learners’ technical ability, while Little (1991) focused on learners’ psychological ability. Different from the above two researchers, Benson (2001) regarded learners’ political rights to learn as a key element of learner autonomy, i.e., “the essentially political and transformative character of autonomy” (p. 50), and autonomy will be activated when learners “have the power and right to learn for themselves” (Smith, 2007, p.2).

Morrison (2011) paid much attention to the necessity of support from teachers or peers in the language learning process. In this view, learner autonomy need “not be a solitary experience but rather one in which the learner, in conjunction with relevant others, can make the decision necessary to meet the learner’s needs” (p. 31). It is widely accepted that autonomous learners should be responsible for analyzing their learning needs, selecting appropriate approaches to achieve them, monitoring the whole learning process and evaluating learning outcomes. However, according to Morrison (2011), this cannot be possibly achieved without teachers’ or peers’ assistance. This is in line with Nunan’s (2003) statement: “Teachers who are committed to the concepts of learner-centeredness and autonomy must therefore help their learners to develop this knowledge and skills” (p. 94).

Similarly, Nguyen (2014) defined learner autonomy as “learner’s willingness and ability to take responsibility, to plan, implement, monitor and evaluate his/her learning with tasks that are constructed in negotiation with and support from the teacher” (p.21). Here, it can be seen that learners’ interaction and communication with their teachers in autonomous learning are also emphasized. Besides, learners must have the strong willingness to engage into their learning, which means that they should be active and positive towards their studies, just as Dam (1995) declared that autonomous learners need to be: “an active participant in the social processes of classroom learning.....An active interpreter of new information in terms of what s/he already and uniquely know” (p. 102). In addition, when learners are motivated and ready to learn, it is crucially important for them to be responsible for their learning

and have the ability to learn effectively. At last, teachers' support and negotiation with their students act as an important role to develop learner autonomy.

Even though the definitions of learner autonomy are different from each other, they have some widely acknowledged common characteristics, which include that autonomy is not an inborn ability but can be acquired; autonomy requires learners' willingness to take charge of their own learning; autonomy asks for learners' psychological preparations; autonomy is learners' political rights and freedom to learn for themselves; autonomy can be interpreted from the individual dimension as well as the social dimension; and the promotion of autonomy cannot be separated from teachers' support and assistance.

In this study, learner autonomy was defined as "learners' readiness to take charge of their own learning in terms of setting up learning objectives, making study plans, monitoring learning process, and evaluating learning outcomes in a suitable learning environment". Unlike the previous definitions, this definition emphasized that autonomous learning took place in a suitable learning environment. In addition, learner autonomy was affected by many external factors and internal factors (Xu & Li, 2014). The former consisted of learning environment, education policy, family background, and English language teachers, while the latter included language learning belief, strategy, motivation, and anxiety. In informationized age, learner autonomy can be promoted in Self-Access Centers, because there were various advanced

learning hardwares and softwares for students' autonomous learning (Priyatmojo & Rohani, 2017).

2.3 Characteristics of Learner Autonomy

Although the concept of learner autonomy is interpreted from different aspects, there are some common features, including ability, willingness, responsibility and control, and independence and dependence, which will be discussed as follows.

2.3.1 Ability

Since many researchers (Benson, 1997, 2011; Little, 1991; Miu, 2017; Nguyen, 2014) have acknowledged Holec's (1981) statement "the ability to take charge of one's own learning", ability becomes a common and fundamental feature of learner autonomy. To some extent, it can be said that without ability, there is no learner autonomy. According to Holec (1981), this ability meant that learners should be capable enough to make objectives, choose what to learn, select suitable learning methods, supervise learning process, and evaluate learning outcomes. In addition, Little (1991) also highlighted language learners' ability when he further illustrated learner autonomy, but he paid more attention to learners' psychological ability. That is to say, learners should be able to detach, reflect, make decisions, and act independently in terms of psychology. Benson (1997) focused on natural ability that was often repressed in traditional education institutions, but this ability to control one's own learning lay on psychological potentialities (Benson, 2007). Adopting the critical method, Benson (1997, 2011) interpreted learners' control ability from

three independent perspectives: control of learning management, of cognitive process, and of learning content.

2.3.2 Willingness

In addition to emphasizing ability in learner autonomy, many scholars (Hsu, 2005; Ma, 2013; Nguyen, 2014; Sinclair, 2009) paid special attention to learners' affective factors, including attitudes, willingness, and self-confidence. Among the above mentioned affective factors, Hsu (2005) viewed willingness as one of "the most important ingredients [that] needed to be seriously considered in developing learner autonomy" (p.14), because if learners are not willing to be responsible for their learning, they will not develop their autonomous learning ability. In the same way, Sinclair (2009) argued that learners' willingness to take responsibility of their learning depended on a set of variables, including "psychological (e.g., depression, irritation), physiological (e.g., headache), and contextual factors (e.g., too much noise, not enough resources)" (p. 185). In addition, Ma (2013) identified willingness as the most important variable in the promotion of learner autonomy in the Vietnamese context, because only when willingness is present, can the construct of autonomous ability become possible. Similarly, Nguyen (2014) put learner's willingness at the first place in learner autonomy, for it would finally influence the way that learners accepted novel learning concepts and actively engaged in learning activities.

2.3.3 Responsibility and Control

Quite some researchers (Hoven, 1999; Lei, 2016; Ren, 2015; Stickler, 2001) took reference to Holec's (1981) initial definition when making their own definitions, i.e., the capacity to take the responsibility of one's own learning. However, having the ability to be responsible for one's learning is far from enough. According to Macaro (1997), to take responsibility of one's own learning was also one of the significant features of learner autonomy (p. 168), because in Macaro's view, an autonomous language learner should take the responsibility of his/her learning aims, content, process, strategies, control over learning pace, and evaluation of learning process. Similarly, Benson (2001) regarded learner's control ability as a crucially important factor in learner autonomy. The ability to control one's learning could be generally classified into three different levels: "learning management control, cognitive process control, and learning content control" (Benson, 2011, pp. 92-116). Moreover, in the modern society, consumerism and materialism are so popular that Swaine (2012) was worried if learners could not control themselves well, the promotion of learner autonomy would "give license to unhealthy imaginings on the part of those who seek it" and therefore risked "undermining crucial liberal commitments" (pp. 113-115).

2.3.4 Independence and Dependence

Although taking charge of one's own learning suggests independence, it does not mean that it is opposite to dependence, because autonomous learning also requires collaborations and communications between teacher and students and among students themselves (Chen, 2015). Based on Vygotsky's socio-cultural

theory, Little (1994) argued that all learning came from the interaction with others and with the related surroundings. Similarly, learner autonomy will not come to learners automatically but derives from learner's interaction with the outside world, for full independence was the striking feature of autism but not of autonomy. With regards to dependence on learning surroundings, Cui (2012) argued that autonomous learners must be sociable and responsible, because they could not study by themselves in an isolated context but had to collaborate and communicate with others in autonomous learning. Similarly, Chen (2015) put emphasis on students' dependence on teachers' support and assistance when shifting from dependence to independence.

In conclusion, the connotation of ability in learner autonomy differs greatly, which entails ability, psychological ability, and political ability. Among learners' affective factors, willingness is the premise to learn a foreign language independently. Moreover, autonomous learners should take responsibility of their learning and control over their learning management, cognitive process, and learning content. Last but not least, learners need to learn independently; on the other hand, they cannot learn well without communication and interaction with others, so both independence and dependence are closely related to learner autonomy.

2.4 Readiness for Learner Autonomy

Wiley (1983) defined readiness for self-directed learning as "the degree the individual possesses the attitudes, abilities and personality characteristics necessary for self-directed learning" (p.182). Since many researchers (Gu,

2013; He, 2012; Li, 2016; Miu, 2017; Pang, 2003) have used self-directed learning as an alternative term of learner autonomy, this definition is also suited to readiness for learner autonomy. Within this definition, there are several assumptions. First of all, readiness is learners' degree of a particular attitude or skill at a given time and exists in individuals as potential ability to some extent. Secondly, ability that is required for autonomy can be promoted through encouragement, support, and assistance from the outside world. At last, the capacity to learn autonomously in one context is generalizable to another context. The following paragraphs will discuss it in term of policies for promoting learner autonomy, electronic facilities and environment, and students' learner autonomy.

2.4.1 China VS Other Countries in Terms of Policies for Promoting Learner Autonomy

Since the concept of learner autonomy has been put forward, many countries have set up long-term educational goals to promote students' autonomy (Shang & Kou, 2015). In terms of utilizing information technology to cultivate high-qualified talents, the United States has always been the pioneer in the world (Sun, 2013). As early as 1993, the US government brought out the concept of "Information Superhighway", whose core function was to assemble millions of individuals together for the exchange of information with each other (Sun, 2013). For further improving students' degree of creativity, information literacy, and life-long learning ability, the newest US National Education Technology Plan required that "our schools should weave 21st century competencies and expertise throughout the learning experience. These

include the development of critical thinking, complex problem solving, collaboration, and adding multimedia communication into the teaching of traditional academic subjects” (America Ministry of Education, 2017). In order to achieve those goals, personalized learning, blended learning, authentic learning, and co-learning are adopted with the support of information technology.

In Southeast Asia, Malaysia issued national plans of applying information and communications technology (ICT) to education in 2013 to support the country’s long-term vision that was referred as “Vision 2020.” In addition, the National Philosophy of Education in Malaysia demands for “developing the potential of individuals in a holistic and integrated manner, so as to produce individuals who are intellectually, spiritually, emotionally, and physically balanced and harmonious” (Malaysia Ministry of Education, 2013). In line with this objective, the Ministry determines to build all schools into “Smart Schools” which means to utilize and apply ICT to those schools, and at the same time integrate ICT into the process of teaching and learning. By doing so, the Ministry hopes that students’ creativity, activeness and innovation can be fully facilitated through the use of ICT in the face-to-face and virtual surroundings.

Though China started to implement information technology into education a little late, it is developing rather fast in the twenty-first century. The Outline of the National Medium- and Long-Term Programme for Education Reform and Development (2010-2020) takes the development of learner autonomy as the

nation-wide strategic target: “The student-centered teaching approach should be adopted to fully develop their activeness and creativeness ... Respect the nature of education and students’ physical and mental growth so as to offer appropriate education for each student” (The Central People’s Government of PRC, 2010). In order to arrive at this aim, the 10-year Development Plan of Educational Informatization determines to build up smart learning environment and offer high-qualified digital resources as well as different kinds of software for developing students’ learning autonomy. In addition, students are encouraged to utilize information technology for their autonomous learning, cooperative learning, and inquiry learning. Thus, students’ ability to bring forth, analyze, and solve questions will be enhanced.

2.4.2 China VS Other Countries in Terms of Electronic Facilities and Environment

The United States is the most advanced country in the field of information and communication technology. In 2013, the United States set up a goal to make 99% of students be accessed to internet at one gigabit per second per 1,000 students by 2018 (America MOE, 2017). The federal, state, and local institutions have spared no effort to reach this goal in recent years. In 2016, it was found that 81% of school systems’ Internet speed had already reached 100 megabits per second per 1,000 students. Furthermore, the United States government has set a goal to bring high-speed Internet to low-income families so as to make everyone learn on the Internet. In addition, every five students now in public schools can share at least one computer. With regards to

learning resources, over 100 school districts and 19 states declared to afford to use highly-qualified learning resources in January, 2017.

The Ministry of Education in Malaysia have made great efforts to use ICT for adopting new media as effective tools to serve rich curricula, novel pedagogies, and efficient organizational structures in schools. In 2013, the Malaysia Ministry of Education issued the Education Blueprint 2013-2025, in which it concentrates on teaching and learning quality, access to rich and qualified online information, transparent responsibilities and advanced e-learning environments. According to the Blueprint, Smart Schools will be built across the country to stimulate critical thinking, creativity, and cater to individual differences of all students; high-speed internet and virtual learning environment via 1BestariNet will be provided to 10,000 schools, augment online video will be developed by best teachers in critical subjects; and maximum use of ICT for distant and autonomous learning will be achieved (Malaysia MOE, 2013).

Since 1990s, China has implemented many important national projects to create informationized learning environment. As a result, e-Education, Cyber Education, Online Education, or Network-Based Education make ICT applicable in every corner of education (Sun, 2013). By 2015, China Education and Research Network (CERNET) had covered all levels of educational institutions, and supported Internet Protocol version 6 (IPv 6). In addition, the internet speed of primary and secondary schools reached 100Mbps, and that of higher educational institutions 1Gbps. Besides, the

national public educational resource system had provided service to more than 70 million users and more than two million classes (Du, 2017). With regards to the Internet penetration, there were 772 million netizens by December, 2017, one-fifth of the netizens in the world (China Internet Network Information Center, 2018).

2.4.3 China VS Other Countries in Terms of Students' Learner Autonomy

Since the middle of the twentieth century, countries in Europe and America have advocated student-centered teaching approach, which focuses more on learners and the way of their learning (Gu, 2013). In order to explore the relationship of students' needs for autonomy and competence in different educational contexts, Levesque and Stanek (2004) compared the autonomy and competence among American and German university students. There were 1,289 university students from four universities (two from America and two from Germany) who participated in the survey. The results showed that students from America were more competent than that of German students. However, German students were more autonomous than that of American students. In addition, Lee (2011) interviewed 16 American university students who took part in blogs to promote their intercultural competence. Qualitative analysis indicated that the majority of American participants could manage their learning and solve problems on their own. In addition, the participants preferred the virtual learning surroundings, for they had a sense of community where they worked in cooperation for the construction of cultural knowledge and got support from their peers.

However, university students in Southeast Asia were not ready to be autonomous learners and preferred to be spoon-fed by language instructors (Januin 2007; Runwaraphong, 2012; Thang & Alias, 2007; Tse, 2012). Thang and Alias (2007) investigated the readiness for learner autonomy of Malaysian university students in three public universities. The questionnaire items were classified into three categories: students' attitudes towards teacher-centeredness, students' inclination to autonomous learning and students' computer literacy. The quantitative data were analyzed through item analysis, factor analysis and frequency analysis. The results of this study showed that most participants were not ready for autonomous learning and they still preferred a teacher-centered teaching approach. The researchers finally proposed that the interpretation of learner autonomy in the Malaysian context should take socio-cultural factors into consideration. The findings of Thang and Alias were confirmed by that of Januin (2007) and Tse (2012).

Similarly, even though the promotion of learner autonomy is an important objective in College English Curriculum Requirements (2007), and English teachers have adopted tasked-based, cooperative, project-based, and inquiry teaching approach to help students learn autonomously, students' learner autonomy in China is still weak (Gu, 2013). Moreover, findings from some previous studies (Dou, 2014; Liu, 2012; Miu, 2017; Tan & Zhang, 2015; Yao & Li, 2017) also show that Chinese university students are not ready for autonomous learning. For instance, Liu (2012) investigated the readiness for learner autonomy of English major students at a university in Shaanxi province. Questionnaires and interviews were employed in this study as

research instruments. There were 280 English major students who participated in the study. The findings revealed that the participants had positive attitudes towards learner autonomy, but they performed badly in autonomous learning practice due to their lack of proper motivation and confidence. Similar results are found in the study of Yao and Li (2017) who surveyed 229 Chinese non-English major students' readiness for learner autonomy. Their results indicated that more than half of the participants were not ready for autonomous English language learning. Moreover, even though most students knew they should use meta-cognitive learning strategies in practice, only less than half of them actually did so in practice. Thirdly, many students lacked self-discipline and still needed their language teachers' help and instruction.

In summary, many countries have issued the E-readiness policies to enhance students' learner autonomy in the competitive information era. Both the developed countries and developing countries have determined to apply information and communication technology in education for developing their students' creativity, information literacy, and learner autonomy. In line with the above mentioned policies, these countries try to offer various electronic facilities, increase Internet speed, create favorable e-learning environment, and supply students with high-qualified learning resources. As far as learner autonomy is concerned, American and European students have high level of autonomy, for they can manage their learning well and solve learning problems on their own. In comparison, the findings of most studies indicate that Southeast Asian learners are not ready for autonomous learning, even though they have some autonomous learning characteristics such as awareness

of autonomous learning and using appropriate learning strategies. Similarly, Chinese university students also have low level of learner autonomy.

2.5 Factors Affecting Learner Autonomy

In this part, the researcher reviews some factors that affect learner autonomy, including language learning motivation, strategy, belief, anxiety, and teachers' role. First of all, it is extremely important to know the role motivations play in learner autonomy, because a very strong motivation will make the whole learning process effective and efficient. Second, learning strategies that can help language learners internalize, store, retrieve, or use the new language are identified as relevant or even crucial factors in the promotion of learner autonomy. Third, learners' beliefs as one of learners' inside factors are likely to have a great influence on learners' learning process and academic achievements. Fourth, anxiety that stems from communication, test, or negative evaluation has debilitating effects on the language learning process. Lastly, even though autonomous learners are expected to take more responsibilities of their learning, they still need their teachers' guidance and assistance.

2.5.1 Language Learning Motivation

To learn a foreign language well requires a very strong motivation, otherwise the whole learning process will be unbearable, cumbersome, and boring. Dornyei and Otto (1998) defined motivation as “the dynamically changing cumulative arousal in a person that initiates, directs, coordinates, amplifies, terminates, and evaluates the cognitive and motor processes whereby initial

wishes and desires are selected, prioritized, operationalized and (successfully or unsuccessfully) acted out” (p. 65). So far, three different voices have existed on the relationship between learning motivation and learner autonomy. The first point was that learning motivations were generated and promoted in autonomous learning environment (Deci & Ryan, 1985). However, Spratt, Humphreys, and Chan (2002) claimed that motivation came before autonomy, and weak motivation would hinder students’ participation in learning activities. Different from the above two voices, results from a number of empirical studies (Cheng, Gerard, & Tan, 2018b; Pu, 2009; Teng & Xu, 2015; Wang & Xu, 2015; Yang, 2013) have shown that there exists a bidirectional close relationship between learning motivation and learner autonomy.

First of all, Deci and Ryan (1985) held that learner autonomy came before learning motivations. In their study, the two researchers classified motivation into two types: intrinsic motivation and extrinsic motivation. The former was motivation to participate in an activity for the sake of enjoyment and satisfaction, while the latter referred to actions performed for instrumental purposes, such as getting praise, gaining awards, or avoiding punishment. The intrinsic/extrinsic theory of motivation linked motivation with learner autonomy, because intrinsic motivation derived from circumstances where learners had the chances to take responsibility for learning, and taking responsibility was exactly one of the key concepts of learner autonomy. Similarly, Dickinson (1995) claimed that learning motivation was one of conditions where learners took charge of their learning, for “enhanced motivation is conditional on learners taking responsibility for their own

learning, being able to control their own learning and perceiving that their learning successes or failures are to be attributed to their own efforts and strategies rather than to factors outside their control” (p. 174). The self-regulatory conditions are exactly the features of learner autonomy.

Secondly, learning motivations are prior to autonomy. In order to find out autonomy first or motivation first, Spratt et al. (2002) employed a questionnaire composed of five sections to collect data from 508 tertiary students in Hong Kong, China. The researchers stated: “motivation would appear to precede autonomy ... Low motivation ... discouraged the pursuit of autonomous activities” (p. 506). It can be inferred that learning motivation is prior to autonomy, and occupy a very important role in promoting learner autonomy. Pedagogical suggestions are offered to language teachers for enhancing their students’ learning motivation so as to develop learner autonomy. The results are in line with that of Benson (2001) who claimed that learners’ motivation to learn second languages could be enhanced by taking responsibility of their learning. That is to say, learner autonomy can enhance motivation. Similarly, Ushioda (1996) believed that learning motivation contributed a lot in the promotion of learner autonomy, for “without motivation, there is no autonomy” (p. 40). In addition, Chinese scholar Xu (2004) held that learning motivation was a vital factor that affected learner autonomy, because “it is learning motivation that provides motive and direction for autonomous learning” (p. 68).

Inconsistent to the above two voices, results from more and more empirical studies have verified Garcia and Pintrich's (1996) statement that learner autonomy was "more closely related to motivational factors than to performance and...seem(s) to foster intrinsic goal orientation, task value, and self-efficacy, all of which are critical components of 'continuing motivation'" (p. 477). To explore the relationship between students' learning autonomy and motivation in the context of computer-assisted language learning (CALL) in China, Pu (2009) conducted a survey by collecting data from 512 subjects who were undergraduates at five universities in Guangdong province, China. Three sets of questionnaires were adopted in the study: the background questionnaire, the learner autonomy questionnaire, and the motivation questionnaire. From the analysis of Canonical correlation, it was found that students' learning autonomy and motivation were closely related to each other. That is to say, the stronger the learner autonomy of the students, the stronger their motivation was. In addition, students who had stronger learning autonomy and motivation tended to have better English language proficiency. However, the online survey to examine students' learning autonomy under the web-based CALL program may miss those students who were against CALL program, thus the statistics would not be so representative.

Another local research worth mentioning was conducted by Yang (2013), who not only explored the relationship among learner autonomy, motivation and English learning outcomes, but also studied which category of learning motivations were closely related to learner autonomy and learning outcomes. To arrive at this aim, 99 freshmen were chosen as participants at a university

in Hubei province, China. The data collected from questionnaires and interviews were analyzed by Pearson correlation analysis, Multiple regression analysis and paired-sample T-test. The results showed that intrinsic interest motivation and going abroad motivation had the highest relationship with learner autonomy. In addition, learner autonomy could better explain the variance in learning outcomes when compared with learning motivations.

The results that intrinsic interest motivation had the highest relationship with learner autonomy were supported by the following two studies (Cheng et al., 2018b; Wang & Xu, 2015). Wang and Xu (2015) conducted an empirical study to examine the influence of English language learning motivation on learner autonomy. The subjects in this study were 300 non-English major students at a university in Taiyuan, China. The results of LISREL 8.70 indicated that intrinsic interest motivation and immediate achievement motivation had positive correlations to learner autonomy, while going abroad motivation and learning situation motivation were negatively related to learner autonomy, and self-development motivation and information media motivation had no significant relationship with learner autonomy.

Though Cheng et al. (2018b) found intrinsic interest motivation had the highest relationship with learner autonomy, they also obtained some contradictory results in this study with regards to the relationship between other types of motivations and learner autonomy. Cluster sampling method was utilized to choose 458 non-English major students at a university in Henan Province, China to take part in the survey. The results of Pearson

correlation analysis showed that learning motivation had a statistically significant relationship with learner autonomy. Pertaining to the subcategories of learning motivations, intrinsic interest motivation was found to have the strongest relationship with learner autonomy, followed by social responsibility motivation, going abroad motivation and individual development motivation. However, learner autonomy was negatively correlated with immediate achievement motivation and not significantly related to learning situation motivation. In addition, path analysis through AMOS 21.0 revealed that learning motivations could better explain the variance in English language proficiency when compared to learner autonomy.

It can be concluded that the close relationship between learning motivation and learner autonomy is not only discussed theoretically, but also supported by some empirical findings. At the early stage, researchers tended to interpret the relationship between learning motivation and learner autonomy from the unidirectional way, either learning motivation was generated from autonomous learning environment or learning motivation preceded learner autonomy. However, results from several empirical studies indicate that there exists a bidirectional relationship between the two variables. However, the above studies have not studied the mediating role of language learning motivation on the relationship between other factors and learner autonomy. In this study, language learning motivation acted as a mediating variable, i.e., it could directly affect learner autonomy; meanwhile it could also indirectly affect learner autonomy through the mediating function of language learning strategy. In addition, it also had mediating effects on the relationships between

learner autonomy and the other three independent variables: language learning belief, language learning anxiety, and English teachers.

2.5.2 Language Learning Strategy

Learning strategy acts as an important role in foreign language acquisition, just as the Chinese proverb goes “Give a man a fish and you feed him for a day. Teach him how to fish and you feed him for a lifetime.” However, what does the term “learning strategy” exactly mean? Oxford (1990) defined learning strategies as “specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations” (p.8). Learning strategies can help language learners to internalize, store, retrieve, or use the new language. Based on whether learning strategies influenced learning directly or indirectly, or the level and type of information possessed when learners employed those strategies, Oxford (1990) classified language learning strategies into direct strategies and indirect strategies. The former is divided into memory, cognitive, and compensation strategy, while the latter is subcategorized into metacognitive, affective, and social strategy. Ellis (1994) claimed that Oxford’s classification nearly compromised all perspectives of learning strategies and was the most satisfying classification.

Researchers (Abdipoor & Gholami, 2016; Oxford, 2008; Wenden, 1991) in the field of autonomous learning identified learning strategies as relevant or even crucial factors in the promotion of learner autonomy. For instance, Wenden (1991) associated learning strategy with learner autonomy:

“successful or expert or intelligent learners have learned how to learn. They have acquired the learning strategies ... the attitudes that enable them to use these skills and knowledge confidently, flexibly, appropriately and independently of a teacher. Therefore, they are autonomous” (p.15). In line with this point, Oxford (2008) claimed that “learning strategies are generally signs of learner autonomy” (p.52). In addition, Abdipoor and Gholami (2016) clearly pointed out that “autonomous learners use language learning strategies more than non-autonomous learners” (p.120).

Though results from some empirical studies (Cheng, Gerard, & Tan, 2018a; Ni, 2010; Nosratinia, Eftekhari, & Sarabchian, 2013; Shi, 2015; Wang & Wu, 2017; Xu & Li, 2014) have shown that there exists a significant correlation between learner autonomy and learning strategy use, they are not consistent with each other pertaining to the correlations between subcategories of learning strategies and learner autonomy. For instance, Ni (2010) looked at the correlations among learning motivation, learning strategy and learner autonomy by surveying 202 university students. The results from this study showed that meta-cognitive strategy had the highest positive relationship with learner autonomy, followed by cognitive, memory, compensation, social, and affection strategy. Metacognitive strategy had the highest statistically significant correlation with learner autonomy suggests that metacognitive strategy which involves making learning plans, self-monitoring, and self-evaluation have the greatest influence on learner autonomy.

Similar results can also be found in Xu and Li's (2014) study that examined the influences of five learners' individual factors on their autonomy. The participants were 416 non-English major students in three universities located in different cities. The findings indicated that there existed a positive relationship between learning strategy and learner autonomy. In addition, learner autonomy was significantly related to all categories of learning strategy, including meta-cognitive, cognitive, social, affective, memory, and compensation strategy. Finally, results from Multiple regression analysis indicated that among the six variables that had predictive power in explaining the variance of learner autonomy, three came from learning strategies, which were metacognitive strategies, compensation strategies, and memory strategies.

In the same way, in Cheng et al.'s (2018a) study, results of the Pearson correlation analysis also indicated that a positive significant relationship existed between learning strategy and learner autonomy. The subjects in this study were 422 non-English major students from three universities in Henan province, China. Regarding the subscales of learning strategies, metacognitive strategies were discovered to have the highest relationship, followed by cognitive, social, affective, memory, and compensation strategies. Besides, both language learning strategy and learner autonomy had positive correlations with language proficiency. Nevertheless, results of Multiple regressions analysis showed that learner autonomy could better predict the variance in language proficiency when compared with that of language learning strategy.

However, the results in Nosratinia et al.'s (2013) study differed from the above three sets of findings. For the exploration of the relationship between EFL learners' learning autonomy and vocabulary learning strategies, quantitative data was collected from 144 students, who were selected by the random sampling method, at a university in Iran. The results indicated that social strategy was most closely related to learner autonomy, while the relationship between learner autonomy and memory, meta-cognitive, cognitive, determination strategy stood at the second, third, and fourth place respectively. Additionally, results of Multiple Regression analysis indicated that social strategy was the best predictor of the variance in learner autonomy.

Different from the above mentioned results, Shi (2015) found that the relationship between learner autonomy and six subcategories of learning strategies from the highest to the lowest were affective, social, meta-cognitive, memory, compensation, and cognitive strategy. Moreover, only three types of learning strategies, i.e., affective, memory, and social strategy entered the regression equation and explained 74.7% of the variance in learner autonomy. However, the participants in this study were not university students, but 256 senior high school students in Zhejiang province, China.

The important role of language learning strategy was also stressed in Wang and Wu's (2017) study that explored the mediating function of learning strategy between learning motivation and learner autonomy. Quantitative data was collected by surveying 1,018 EFL learners from four universities in China. Results showed that different learning strategies have different mediating

functions on the correlations between learning motivations and learner autonomy. To be specific, memory and cognitive strategies had partial mediating effects on the relationship between motivations of intrinsic interest, immediate achievement, social responsibility, individual development and learner autonomy. In addition, compensation strategy had full mediating effects on the positive relationship between immediate achievement motivation and learner autonomy, while metacognitive and affective strategy had full mediating effects on the relationship between social development motivation and learner autonomy. Social strategy too, had partial mediating effects on the relationship between motivations of intrinsic interest and social responsibility and learner autonomy.

From the above literature, it could be seen that learning strategy was closely related to learner autonomy. That is to say, when students used learning strategies more frequently, they became more autonomous language learners. However, the above mentioned studies did not reach a consensus on the highest relationship between learner autonomy and the subcategory of learning strategies. However, the previous studies have not studied the mediating role of language learning strategy on the relationship between other factors and learner autonomy. In this study, language learning strategy acted as a mediating factor regarding its relation to learner autonomy, i.e., it could directly influence learner autonomy; meanwhile, it also had mediating effects on the relationships between learner autonomy and other three independent variables: language learning belief, language learning anxiety, and English

teachers. In addition, it could mediate the relationship between learner autonomy and language learning motivation.

2.5.3 Language Learning Belief

Language learning beliefs are “preconceptions language learners have about the task of learning the target language” (Huang, 1997, p. 29). With regards to its influence on language acquisition, Thomas and Harri-Augustein (1983) claimed that learning beliefs opened “a whole new Aladdin’s cave of personal beliefs, myths, understandings, and superstitions as they were revealed by the persons’ thoughts and feelings about their learning” (p. 338). The categories of learners’ language learning beliefs were threefold: beliefs about learning a language, beliefs about personal factors, and beliefs about learning environment (Benson & Lor, 1999). Results from recent studies have shown that there exist three voices regarding the relationship between language learning beliefs and learner autonomy.

To begin with, results from some studies indicate that language learning beliefs are beneficial to the promotion of learner autonomy (Guo & Qin, 2009; Melisa, Rahayu, & Susilawati, 2014; Orawiwatnakul & Wichadee, 2017). In order to investigate Chinese university EFL learners’ out-of-class autonomous learning in computer-assisted context, Guo and Qin (2009) collected quantitative and qualitative data from 345 participants by means of questionnaires and interviews. Results from Pearson correlation analysis showed that Chinese EFL learners’ language learning beliefs were significantly related to their autonomous learning behaviours. In addition,

students' beliefs on the strengths of computers and networks had the highest relationship with their actual computer-assisted autonomous language learning. The findings suggested that the more positive beliefs students had towards computer-assisted autonomous learning, the more autonomous they would become in language learning practice.

Melisa, et al. (2014) supported this positive relationship through the exploration of the correlations between language learners' beliefs and learner autonomy. To this end, a descriptive study was conducted by choosing 18 subjects who joined the English language club at a university in Indonesia. The findings of Pearson Product Moment analysis revealed a positive relationship between language learning beliefs and learner autonomy. Moreover, it was also discovered that most participants were positive towards foreign language learning, indicating that they were autonomous learners to some extent. For example, they could take charge of their learning, cooperate with others, and self-evaluate their learning.

Similar results can also be found in the study conducted by Orawiatnakul and Wichadee (2017) who attempted to investigate undergraduate students' beliefs about learner autonomy in a university context. Simple random sampling method was adopted to choose 160 undergraduate students as participants at a private university in Thailand. Quantitative data was collected by means of questionnaires on learner autonomy. Results of Pearson correlation analysis revealed that students' beliefs about English language learning were positively correlated with their autonomous learning behaviours

out of classroom. This indicated that students who had stronger language learning beliefs would exhibit higher level learner autonomy, while those students who had lower language learning beliefs would have lower level learner autonomy.

However, the findings of Wu's (2014) study are not in line with the above discussed positive relationship. In the study, the researcher attempted to explore the relationships among learning beliefs, learning strategies and learner autonomy through three sets of questionnaires on learning belief, strategy, and learner autonomy respectively. The subjects were 82 sophomore English major students at a university in Hubei province, China. The findings showed that there was a negative relationship between learning beliefs and learner autonomy. Moreover, it was found that beliefs about language aptitude was negatively correlated with most subcategories of learner autonomy, including teaching aims and requirements, learning objectives and study plans, and monitor of learning strategy use. Furthermore, beliefs about the nature of language learning were negatively related to learning objectives and study plans. Lastly, beliefs about learning and communication strategies had negative correlations with all subcategories of learner autonomy. The results, however, were based on a small number of university students, thus not so generalizable.

Inconsistent with the above mentioned two voices, the findings of Zhong's (2010) study indicated that only some language learning beliefs were conducive to learner autonomy, while other beliefs were not. Using

naturalistic inquiry, Zhong (2010) examined the effects of Chinese EFL learners' beliefs on learner autonomy. The instruments, including interviews, classroom observations, stimulated recall, and learning logs, were adopted to explore five Chinese EFL learners' learning beliefs and behaviors. After qualitative data analysis, five categories of learners' beliefs were identified. Among them, some beliefs like effort and self-efficacy were conducive to learner autonomy, whereas others like teacher's role and importance of accuracy were not. This suggested that language learning beliefs were very sophisticated and sometimes they were even contradictory with each other.

In sum, as a fundamental factor to EFL learners' learning, language learning belief has always been focused in educational research. Results from most recent studies suggest that language learning beliefs have a significantly positive relationship with learner autonomy. However, the relationship between learning beliefs and learner autonomy in one study was negative, and in another study became a little complex, because some beliefs were beneficial to learner autonomy, while others not. Different from the previous studies, the present study used Amos 21.0 to explore the direct and indirect effects of language learning beliefs on learner autonomy. Language learning belief, as an independent variable, could directly affect learner autonomy. Besides, it could indirectly affect learner autonomy through the mediating function of two mediators, namely, language learning strategy and language learning motivation.

2.5.4 Language Learning Anxiety

In the past several decades, researchers have emphasized on the relationship between learning anxiety and language proficiency (Onwuegbuzie, Bailey, & Daley, 2000), as Horwitz (2000) claimed: “countless language learners and teachers across the world identify with the experience of foreign language anxiety, and the potential of anxiety to interfere with learning and performance is one of the most accepted phenomena in psychology and education” (p. 256). Foreign language learning anxiety is defined as “the feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning” (MacIntyre & Gardner, 1994, p. 284), which can be subdivided into three categories “communication apprehension, test anxiety and fear of negative evaluation” (Horwitz et al., 1986, p. 127). In recent years, a growing body of studies have been conducted to explore the relationship between language learning anxiety and learner autonomy (Kabiri, Nosratinia, & Mansouri, 2018; Liu, 2012; Peng, 2009; Sanadgol, 2015; Savaskan, 2017; Wang, 2012; Wei, 2014), the findings of which can be divided into three categories.

First of all, results from some studies indicate that language learning anxiety has the debilitating effects on learner autonomy (Kabiri et al., 2018; Liu, 2012; Peng, 2009), just as Liu (2012) stated: “anxious learners may be less motivated to engage in autonomous learning activities either in or out of the classroom and less likely to spend effort learning the language, eventually becoming less proficient language learners” (p. 133). Peng (2009) carried out a study to explore the relationship between English language learning anxiety

and learner autonomy. To arrive at this aim, 180 non-English major undergraduates were selected from three universities in Guilin, China. Horwitz's (1986) Foreign Language Classroom Anxiety (FLCA) and Xu's (2004) Learner Autonomy Questionnaire were adopted to investigate students' language learning anxiety and learning autonomy respectively. The findings showed that English learning anxiety was negatively correlated with learner autonomy. With regards to the subcategories of learning anxiety, general feeling of anxiety was found to have the strongest negative correlation with learner autonomy, followed by communicative apprehension, and fear of negative evaluation.

Similar results are also found in Liu's (2012) study that attempted to explore the relationships among foreign language anxiety, learning motivation, learner autonomy, and language proficiency. The participants were 150 non-English major university students. The instruments included learning anxiety questionnaire, learning motivation questionnaire, learner autonomy questionnaire, and General English Proficiency Test (GEPT). The results indicated that foreign language anxiety, popular among university students, had significant negative relationship with learner autonomy as well as learning motivation, listening proficiency, and reading proficiency. In addition, language learning anxiety and autonomy were the best predictors of the variance in language proficiency. Finally, Liu (2012) suggested that before students became autonomous learners, language teachers should try the best to help their students control and manage language learning anxiety so as to learn a foreign language effectively and efficiently.

A recent study by Kabiri et al. (2018) on the exploration of the correlations between autonomy, anxiety and motivated learning strategies among Iranian EFL learners also belongs to this category. Convenience sampling method was used to select 158 undergraduate students at Islamic Azad University as research subjects. Three questionnaires, namely, Learner Autonomy Questionnaire, Foreign Language Classroom Anxiety Scale, and Motivated Strategies for Learning Questionnaire were adopted for collecting quantitative data. The findings indicated that learning anxiety was significantly negatively related to learner autonomy as well as motivated strategies, whereas motivated strategies were positively related to learner autonomy. In addition, results of regression analysis revealed that motivated learning strategies were more negatively affected by anxiety when compared with learner autonomy.

However, there are some contradictory findings where there exists a significantly positive relationship between language learning anxiety and learner autonomy (Wang, 2012; Wei, 2014), for “severe performance anxiety mitigates against autonomy and motivation, though mild anxiety may sometimes enhance them” (Young, 1998, as cited in Oxford, 2003, p. 83). One of the studies related to this was conducted by Wang (2012) that attempted to investigate the links between test anxiety and learner autonomy among secondary school students. Mixed research methods, i.e., quantitative (questionnaire) and qualitative (interview) were utilized to collect data from 145 participants at two secondary schools in Zibo, China. The results of Pearson correlation analysis showed that learner autonomy had positive relationship with test anxiety. However, as for the two subcategories of test

anxiety, results indicated that learner autonomy was significantly related to worry, but not significantly correlated with emotions.

Similar results can also be found in Wei's (2014) study that attempted to investigate interrelationships among achievement goal orientation, language learning anxiety, and autonomous learning behavior. There were 429 university students who participated in the survey. After analyzing the collected data by AMOS 7.0, the researcher found that there was a significant positive relationship between English language anxiety and learner autonomy. Besides, the mastery of achievement goal orientation could effectively reduce students' learning anxiety, and low level of learning anxiety was beneficial to the development of learner autonomy when affected by performance-oriented goals.

Inconsistent with the above two points, some researchers found that there was no significant relationship between learning anxiety and learner autonomy (Sanadgol & Abdolmanafi-Rokni, 2015; Yuan, 2014). For instance, Yuan (2014) examined the relationship among three variables: learning motivation, language anxiety and learner autonomy. Both questionnaires and interviews were utilized as research instruments for data collection. The subjects were 116 year-two students at a university in Gansu province, China. Results of Pearson correlation analysis indicated that language anxiety was not significantly correlated with learner autonomy, while learning motivation had statistically significant relationships with learner autonomy and language anxiety. In addition, test anxiety counted a lot in students' language learning

anxiety, suggesting that students have higher level of anxiety when taking part in English tests.

Similarly, Sanadgol and Abdolmanafi-Rokni (2015) attempted to explore the correlations among three variables: language anxiety, learning motivation, and learner autonomy. To arrive at this aim, 207 students were selected as participants at a secondary school in Ramian, Iran. The research instruments were three sets of questionnaires on language anxiety, learning motivation, and learner autonomy respectively. The results indicated that language learning anxiety was not significantly related to learner autonomy, nor was motivation to learner autonomy. However, there existed a significant correlation between language anxiety and learning motivation. As a result, language teachers do not need to take language anxiety into consideration in the promotion of their students' learning autonomy.

To conclude, anxiety had debilitating effects on language learning process, because anxious learners were more likely to have “self-directed, derogatory cognition rather than focusing on the task itself” (MacIntyre & Gardner, 1988, p. 255). Besides, many researchers in their empirical studies found that language learning anxiety was detrimental to the promotion of learner autonomy. However, this is not always the case. The review of previous studies showed that there were three kinds of relationships between language learning anxiety and learner autonomy: significantly negative relationship, significantly positive relationship, and no statistically significant relationship. Unlike the above studies, the present study employed Amos 21.0 to investigate

the direct as well as indirect effects of language learning anxiety on learner autonomy. Language learning anxiety acted as an independent variable regarding its relation to learner autonomy, i.e., it could directly affect learner autonomy. At the same time, it could indirectly affect learner autonomy through the mediating function of two mediators: language learning strategy and language learning motivation.

2.5.5 Teachers' Role

In the traditional teacher-centered approach, teachers play the decisive role and act as the center in the field of foreign language teaching and learning. However, in the twenty-first century, Internet and communication technology are developing so fast that many countries focus on the promotion of learner autonomy in their long-term national educational plan (Shang & Kou, 2015). Since learner autonomy has been paid more and more attention to in the educational field, teachers, as the motive power to promote students' autonomy in foreign language acquisition, need to play multiple roles rather than just source-provider and knowledge-purveyor to assist their students in autonomous learning. As a result, in order to encourage learners' activeness, creativeness, and responsibility in language learning process, teachers' assistance and supervision is of utmost necessity, as Little (2000) claimed: "for most learners the growth of autonomy requires the stimulus, insight and guidance of a good teacher" (p. 4). So far, teachers' roles in the promotion of learner autonomy have already been discussed in some studies (Alonazi, 2017; Cui, 2017; Duan, 2011; Li & Du, 2015; Reeve, 2006; Sun, 2013; Voller, 1997; Zhong, Zhang, & Zhang, 2016).

According to Voller (1997), teachers' roles were identified as facilitator, consultant, and resource provider in the promotion of students' learning autonomy. The psychological-social characteristics of teachers as facilitators include: "personal qualities (being caring, supportive, patient, tolerant, empathic, open, and non-judgmental), a capacity for motivating learners, and an ability to raise learners' awareness" (Voller, 1997, p. 102). In this vein, teachers as facilitators supported their students to make study plans and implement those plans, set up learning objectives, assess learning process, and master necessary skills and information to carry out the above. Additionally, teachers as counselors can consult with their students on how to achieve learning aims. At last, teachers can also act as resource providers. Whatever teachers' roles are, the main point to promote learner autonomy depends on their "view and attitudes that underpin our view of autonomous language learning" (Voller, 1997, p. 112).

Pertaining to the high or low quality of autonomy support, Reeve (2006) obtained some interesting findings. The researcher claimed that teachers were of great importance in creating autonomy-supportive environment by "nurturing students' inner motivational resources" and using "informational, non-controlling language" (p. 229). He stated that learners could be curious and highly involved in class activities, or they could be in a state of alienation, reactivity, and passiveness. The active or inactive engagement of students depended on the quality of teachers' support. Particularly, teachers who supported students' autonomous learning were likely to design their teaching with the consideration of students' needs. Concerning how teachers behaved

in supporting learner autonomy, the researcher made a list of nine “instructional behaviours function as autonomy support” (Reeve, 2006, p. 231). For instance, they permitted their students to deal with and manage ideas and instructional materials; they tended to inquire students’ needs and answer their questions.

Aiming to examine teachers’ roles in developing Saudi EFL secondary school students’ autonomy, Alonazi (2017) used questionnaires as research instruments to collect data from 60 EFL teachers in Riyadh. The results indicated that Saudi secondary school EFL teachers played multiple roles to develop their students’ autonomy. Among the multiple roles, resource-provider was ranked as the highest, followed by classroom manager, consultant, and facilitator. The results in this study showed that teachers as facilitators need to encourage their students to reflect on and evaluate their learning process. In addition, teachers as consultants need to offer their students positive feedback and communicate with students to solve the learning problems. Finally, teachers need to engage their students into making decisions with regards to classroom management and learning tasks.

Since teachers play an important role in fostering learner autonomy, it is quite necessary to examine the effectiveness of teachers’ guidance and supervision in students’ autonomous learning. Recently, several empirical studies (Cui, 2017; Duan, 2011; Li & Du, 2015; Sun, 2013) have been conducted to promote learner autonomy with the teachers’ instruction. Firstly, Duan (2011) examined the effects of the consulting roles of English teachers in the network

context. There were 48 students at a university in Luoyang, China selected as participants. In the experiment, six English teachers offered two-hour online instructions for students every week. At the same time, students could make full use of online learning resources to learn English autonomously, and communicate with their peers or English teachers through e-mail, short messages, QQ, and Wechat. The results showed that students preferred chat-room feedback to other ways of feedbacks, including E-mail feedback and web page feedback. Regarding feedback types, students preferred their teachers to give corresponding suggestions rather than only point out their mistakes, or give positive evaluation, or make negative comments. As a result, English teachers should utilize high-tech well to give proper and immediate feedback to their students so as to greatly dig out their potential ability in autonomous English language learning.

In addition, to examine the effect of teacher's roles in the development of learner autonomy, Sun (2013) conducted a study by dividing sixty students into the experimental group and the control group. Before the experiment, the English teacher offered the students some learning strategy training and encouraged them to apply the strategies into their learning practice. During the experiment, for stimulating students in the experimental group to complete their learning tasks on time, a learner contract including learning content, time, and ways of evaluation, was signed with participants. At the same time, learning log was employed to monitor students' learning process. The findings indicated that the English teacher's training of learning strategy, learner contract, and learning logs could foster students' learning autonomy as well as

their autonomous learning awareness. It is suggested that teachers' instruction and guidance can benefit students in language learning, especially those who had low level of autonomy and proficiency.

Last but not least, in order to investigate English teachers' mediating role in promoting learner autonomy, Cui (2017) conducted an empirical study by adopting quantitative and qualitative approaches. The research subjects were 170 year-one students and 18 English teachers from a university in China. Results showed that English teachers' mediating function was significantly related to learner autonomy. This indicated that English teachers' mediating role was beneficial to students' autonomous learning. In addition, the most frequently utilized mediation tools were "share intention", "sense of competence", "sharing", and "control of own behaviour", while "awareness of change" and "challenge" were infrequently used by English teachers due to the traditional Chinese teaching approach.

However, results from Li and Du's (2015) study indicated that Chinese EFL teachers were still not fully prepared for giving students' enough autonomy in language learning process. The two researchers investigated teachers' perceptions of students' learning autonomy in the context of Problem-based Learning (PBL). In-depth interviews were used to collect qualitative data from teachers who took part in PBL practice at two universities. The results showed that teachers had quite different perceptions of supporting their student with autonomy. Specifically, only a few teachers agreed to give their students sufficient autonomy, whereas most teachers still insisted on giving their

students limited freedom and offering proper instructions. Hence, a dilemma existed between teachers' desire to foster students' learning autonomy, and their preference to give instruction to students in the learning process.

In conclusion, autonomous learners are expected to be responsible for their language learning. However, this student-centered learning approach cannot be separated from teachers' guidance and supervision. The review of the above literature shows that teachers' roles can be identified as facilitator, consultant, collaborator, and resource provider in the promotion learner autonomy. In the information era, English teachers as facilitators can support their students to make study plans, set up learning objectives, master necessary techniques, and evaluate learning outcomes. In addition, teachers as consultants can discuss with their students to solve some learning problems. Furthermore, teachers as collaborators can take part in the students' learning activities, and collaborate with their students to fulfill certain learning tasks. Fourthly, teachers as resource providers can introduce good online learning resources to their students and instruct them on how to search useful and interesting materials. Last but not least, the effectiveness of the above mentioned teachers' roles in the promotion of learner autonomy have been verified by some empirical studies. Different from the previous studies, the present study adopted Amos 21.0 to investigate the relationship between teachers' role and learner autonomy. Teachers played a very important role on the promotion of learner autonomy. However, it could only indirectly affect learner autonomy through the mediating function of two mediators, namely, language learning strategy and motivation.

2.6 Self-access Center

Self-Access Center (SAC) was defined as “any purpose-designed facility in which learning resources are made directly available to learners” (Benson, 2005, p. 114). Students can go to SACs to take part in various activities that range from homework to autonomous language learning. In other words, learners can practice their speaking, listening, writing, reading, and translating, and also receive their lecturers’ support in SACs.

2.6.1 The Evolution of SACs

Historically speaking, the library, the language laboratory, and the computer rooms were the three institutional roots of SACs (Fouser, 2003). The library, as the storage of information and the primary place for autonomous learning, was the center to university students at the early age, because the information there could not be easily accessed somewhere else.

In contrast to the library, the language lab was relatively new, coming into being only in the last half of the 20th century. Establishing as a unique form of classroom, the language lab was a learning space where teachers controlled the flow of information with varying degrees through the teacher computer (Stack, 1966).

As the newest form of SACs, the emergence of the computer room could be traced back to the end of 1980s, when CRAPEL (Centre de Recherches et d’Applications Pedagogiques en Langues) established such kind of center at the University of Nancy, France (Gremmo & Riley, 1995, p.156). This center

offered different kinds of materials, consulting services, and opportunities for communicating with native speakers for facilitating autonomous learning (Holec, 1980). In the 1990s, these forms of SACs started to merge due to the widespread of the Internet, and became a unique form of learning place: “the multipurpose information access center” (Fouser, 2003).

For better acquiring a variety of foreign languages, a large number of SACs were established among universities in Europe (Liu, 2017). Among them, the Language Centre at the University of Cambridge was one of the largest and most active SACs in the world (Li, 2011), which provided various kinds of services and facilities to students and staff. In contrast, SACs in North America, particularly in the United States, spread slower than that in Europe, because a foreign language was not required for admission or graduation. Different from their European and North American counterparts, SACs in Asia gained great popularity because of the boom in English language education.

The Ministry of Education in mainland China paid special attention to develop their university students’ learner autonomy, which could be seen from College English Curriculum Requirements that pointed out: “the goal of university English teaching is to enhance students’ ability to learn independently and improve their general cultural awareness so as to meet the needs of China’s social development and international exchanges” (China Ministry of Education, 2007, p.1). At the same time, due to the large-scale enrollment in Chinese universities in the past decade, there were even dozens of students in

one English class, so English language teachers could not respond to their students' individual needs (Liu, 2017). Also, Chinese university students' learner autonomy was still weak: many students were unable to set up learning objectives, could not make a study plan according to their own situation, unable to use learning strategies properly, and could not monitor their learning process on their own (Wang, 2014). In this case, many Chinese universities, like China Normal University, Central South University, Chongqing University, Beijing University of Science and Technology, and Wuhan University of Science and Technology (Zhang, 2015), set up Self-Access Centers (SACs) to promote their students' learner autonomy.

2.6.2 Functions of SACs in Relation to Learner Autonomy

First of all, SACs offer a wide range of learning materials according to learners' linguistic levels, learning motivations, learning needs, and learning styles so as to cater to various potential users (Shi & Xia, 2013). Sheerin (1991) argued that "anyone who has been involved in setting up a SAC knows that one of the most urgent considerations is to provide as great a quantity and range of materials as quickly as possible, since it is one of the most obvious criteria by which users judge a SAC" (p.153). According to Zhao (2015), language learning resources in SACs can be further divided into four categories: 1) physical resources, like printed books, audio tapes, video tapes, and DVD, 2) various kinds of video and audio resources, including English films, English TV series, well-known scholars' lecture videos, celebrity's speeches, and classic English songs, 3) satellite TV programs, including CNN, BBC, NHK, TVS, KBS, and CCTV English channel, 4) various kinds of test

materials, including College English Test band four and band six (CET-4 and CET-6), TOEFL, IELTS, and the National Entrance Examination for Postgraduates (NEEP). In addition, online language learning resources are easy to be accessed for most computers in SACs are connected to the Internet (Liu, 2017). However, to utilize online resources well asks for learner' willingness, self-control, and information literacy. Since SACs have provided EFL learners with a large quantity of learning resources, they can freely select suitable materials for their autonomous English language learning.

Next, SACs create an effective learning environment for students' autonomous learning. Gardner and Miller (2002) proposed that SACs should have some specially designed areas like leisure reading area, video and audio booths, speaking arena, and rooms for special purpose such as consultation room, computer lab, and store room. Students can take part in various learning activities in different areas in SACs. For example, in the silent study room, students can practice exam papers to improve their reading, writing and translating power. In the reading room, students can read books, magazines and other printed materials loudly without interruption. In the audio-video room, students can watch English movies, TV programs or TV series, and listen to wonderful English music in a very pleasant environment. In the computer room, students can complete their teachers' learning tasks on autonomous learning platform, make use of e-learning materials, or search information through Baidu or Google search engine.

Furthermore, SACs provide various learning facilities for students' autonomous learning. Since 2004, around 180 universities in China have set up SACs. Though those centers are different in terms of size, they have similar learning facilities which include computers, audio-recorders, videotape players, satellite TV, karaoke machines, photocopy machine, and learning software (Li, 2013). The full use of the facilities can promote students' learning autonomy. For example, students can submit their writing manuscripts to Juku Writing Software that will point out errors in their writing manuscripts in terms of expression, words spelling, grammar, and word collocation. According to the proofreading suggestions, students can revise their compositions. In addition, with the popularity of wireless campus network, students can make good use of SACs anywhere through their smart phone, laptops, or iPads (Zhao, 2015).

Finally, autonomy support is provided by English teachers, SAC directors and staff. Before new users come to SACs, English teachers will give them some training to assist them into setting up learning objectives, making study plans, monitoring learning process, and evaluating learning outcomes. Besides, teachers often issue learning assignments on autonomous learning platform to help their students master what they have learnt in class (Zhao, 2015). In addition, teachers can give feedback to students' autonomous learning through question-answer function of autonomous learning platform, e-mail, Wechat, QQ, and Fetion. For SAC staff, they often train new users on how to use the autonomous learning platform, like searching for teachers' assignments, downloading learning materials, selecting suitable materials, and doing online tests (Zhao, 2015). The autonomy support in SACs can familiarize students

with the learning process, help them solve various learning problems, and foster their learner autonomy.

2.6.3 The Effectiveness of SACs in Promoting Learner Autonomy

In order to investigate the effectiveness of SACs in language learning, it needs to be answered on the relationship between SACs and the promotion of learner autonomy. Some researchers stated that Self-access centers can play a positive role in the promotion of learner autonomy (Cotterall & Reinders, 2001; Gardner & Miller, 2002; Hsieh, 2010; Marzuki & Saptopramono, 2016; Priyatmojo & Rohani, 2017; Sun, 2011), because SACs act as “a way of encouraging learners to move from teacher dependence towards autonomy” (Gardner & Miller, 1999, p. 8). In addition, Gardner and Miller (1999) also believed that SAC was a learning environment where students were responsible for their autonomous learning.

One of the earliest empirical studies to examine the effectiveness of SACs on students' autonomous learning is Cotterall and Reinders' (2001) study that scrutinized the operation of a Self-Access Center at the University of Victoria in Wellington. The results revealed that 88% of students claimed that the center had promoted their learning autonomy, and 90% of students thought that SAC played a very important role in their learning process. The statistics also showed that learners who had positive attitudes towards SAC tended to use the center more frequently. However, there were also about 60% of students who complained that it was not easy to find suitable materials, so it is

quite necessary to arrange SAC learning materials systematically and scientifically.

In order to investigate the correlations between students' utilization of SAC and their autonomous learning behaviors, Hsieh (2010) examined SAC users' motives, activities and learning effects at a SAC in Taiwan. Altogether, 35 users took part in the study. Email interviews, student SAC use records and observation notes were employed as research instruments. The results suggested a statistically positive relationship between SAC use and the promotion of learner autonomy, i.e., learners who frequently utilized SAC behaved more autonomously. The reason was that SAC users utilized various facilities and learning materials in their autonomous learning activities. The frequent use of SAC led to the enhancement of students' language ability, which further encouraged them to learn English language autonomously.

Different from the above two studies that focused on students' autonomous learning in SACs, Sun (2011) conducted an empirical study to examine the effects of teachers' instruction of learning strategies in SACs on promoting students' learning autonomy. This empirical study involved 60 year-one university students in Beijing, China who were divided into the experiment group and the control group. The results indicated that learner contract as a means of strategy training had a significant and positive effect on the development of learner autonomy. Moreover, the experiment group had a better performance in autonomous learning, meta-cognitive strategy use, and English tests when compared to that of the control group. It was suggested that

more instructions of learning strategies should be offered in SACs to promote learner autonomy as well as to enhance foreign language learning efficiency.

For identifying the benefits of SACs at vocational high schools in the promotion of learner autonomy, Marzuki and Saptopramono (2016) carried out a study through a quantitative and qualitative design. Questionnaires were used to collect quantitative data, while observation, focus group discussion, and interview adopted to get qualitative data. The findings of this study revealed that SAC was effective to make students become autonomous. To be specific, students in SAC could learn English independently without their teachers' instructions. Besides, SAC offered an environment where students could focus on their study, either do their homework or discuss with their peers freely. Lastly, polytechnic English teachers had already acted as an important role in supporting their students to become autonomous learners.

Similarly, Priyatmojo and Rohani (2017) conducted a qualitative study to find out the benefits of SACs in developing learner autonomy since SACs are still a novelty in Indonesia. Two classes were selected as research sample. To get more valid and reliable data, observation, interview, and learning document were employed as research instruments. Results from SWOT analysis indicated that SAC had fostered students' autonomous learning. To be specific, free wifi and computer in the SAC assisted students in conducting various learning activities like searching information and fulfilling teachers' assignments. In addition, the integration of SAC and university library enabled students to read books as freely as they can. However, some constraints

existed in SAC, including unstable electricity and internet access, limited space, students' lack of self-discipline, and not enough SAC staff.

However, contradictory results are found in Li's (2007) empirical study that aimed to investigate whether SACs could promote learner autonomy. To arrive at this aim, 110 year-one university students in Chongqing, China were selected as research subjects. Questionnaires and interviews were employed for collecting quantitative and qualitative data respectively. The results of T-test showed that there was no significant difference between pre- and post-test of learners' autonomous beliefs as well as their learning strategies, suggesting that the SAC could not significantly promote learner autonomy. The probable explanation was that on the one hand, teachers did not offer enough instructions to students' autonomous learning in SACs; on the other hand, students did not receive corresponding training on learner autonomy.

It can be concluded that SACs play a positive role in the promotion of learner autonomy, because SACs offer various learning resources, create an inductive learning environment, provide various learning facilities, and offer autonomy support when it is necessary. In addition, results from many studies show that the utilization of SACs has positive effects on the development of learner autonomy, especially with teachers' instruction and guidance. However, a few researchers did not find an obvious link between the use of SACs and the promotion of learner autonomy.

2.7 Theoretical Foundation of Learner Autonomy

Positioning the study with theories is very important. According to Swanson (2013), theories could explain, predict, and understand phenomena, which often challenge and expand the existing knowledge with the limitation of critical bounding assumptions. Learner autonomy does not come out automatically. In fact, it is deeply rooted into many foreign language learning theories. According to Davison (2011), humanist psychology, constructivist theory of learning, and developmental psychology laid the solid theoretical foundation for learner autonomy. Hadi (2012) claimed that learner autonomy was theoretically based on developmental learning, constructivism, humanist learning theory, and experiential learning. Hogan (2012) put forward that learner autonomy stemmed from cognitive psychology and constructivism. Wang (2014) summarized the theoretical foundation of learner autonomy as humanist theory, constructivist theory, and metacognition. Meng (2016) stated that learner autonomy came from cognitive learning theory, constructivism, and humanism. Ouyang (2017) proposed that the theoretical foundations of learner autonomy were humanist learning theory, constructivist learning theory, and metacognitive learning theory. On the basis of the above studies, the researcher proposed that humanist psychology, constructivist learning theory, and cognitive learning theory had provided theoretical support for learner autonomy.

2.7.1 Humanist Psychology

Humanistic psychology came from humanism in the mid-1950s. It mainly focuses on the inner world of learners and gives priority to individual learners'

thoughts, emotions, and attitudes in all aspects of human beings' development (Williams & Burdens, 1997). To be specific, it explores how an individual learner's behavior is related to his/her emotions and self-image, how his/her perceptions and experiences influence his/her growth and learning process. Roberts (as cited in Stevick, 1990) claimed: "the affective aspects of language learning are as important as the cognitive aspects, and therefore the learner should be treated in some sense as a whole person" (p. 26). It is clear that language learners should not only be treated mentally and cognitively, but also as a person with worries, fears, desires, and various learning needs. So far, humanistic psychology has imposed great influence on foreign language education.

As a leading figure in humanistic psychology, Maslow (1968, 1970) examined the whole person's physical, intellectual, psychological and interpersonal aspect, and explored how those factors affected learning. In Maslow's (1987) hierarchy of needs model, human needs were identified as lower level deficit needs and higher level growth needs. The former could be categorized into four types: "biological and physiological needs, basic psychological needs, safety needs, love and belongingness needs, and self-esteem needs", while the latter contained three types: "cognitive needs, aesthetic needs and self-actualization needs". Self-actualization needs, as the highest level of these needs, can only be realized when an individual is satisfied physiologically and psychologically. Though Maslow's hierarchical theory of needs has been criticized by many other researchers, it gives a lot of inspiration to learner autonomy (Qi, 2002), because Maslow (1968) believed that the primary aim of

education was to help learners learn something in light of their rights and get their self-actualization, suggesting that learners should take the responsibility and make decisions for their learning, which was the essence of learner autonomy.

Carl Rogers, another influential figure in humanistic psychology, put forward the famous concept known as “client-centered” therapy or “non-directive” therapy, which centered on the importance of developing learners’ autonomy and adaptability in the learning process. According to Rogers (1969), a person saw the world on the basis of his/her experiences and perceptions of the world. As a person grew, he/she would seek to actualize himself/herself. In line with his view, “learning how to learn” is much more important than “learning through teaching”. As a result, it is necessary to adopt the “learner-centered” teaching approach rather than the traditional “teacher-centered” teaching approach. In addition, Rogers (1969) believed that human beings had a natural potentiality to learn, and effective learning would take place when the subject matter was closely related to the learner and the learner actively participated in the learning activities. At the same time, the teachers’ task was to dig out this potential ability, for “the only man who is educated is the man who has learned how to adapt and change” (Rogers, 1969, p. 104). To some extent, Rogers’ main contribution to learner autonomy lies in the defining of teachers’ role as facilitators in the promotion of learner autonomy (Benson, 2005).

Humanistic psychology pays much attention to learners’ centered place in the whole learning process, because it identifies learners’ personal identity, meet

their various learning needs, encourages them to make their own decisions, and treats them as integrated person. From humanistic psychology, it could be known that learners' emotional factors, including language learning belief, language learning motivation, and language learning anxiety, counted a lot in their autonomous learning (Cui, 2011). Consequently, English language teachers should pay more attention to their students emotional factors so as to promote learner autonomy, i.e., to develop students' positive beliefs about language learning, to enhance students' language learning motivation, and to help students successfully overcome language learning anxiety.

2.7.2 Constructivist Learning Theory

Learner autonomy draws upon a lot from constructivist theory which centers on the active and constructive process of learning. According to Thanasoulas (2000), constructivist theory was a kind of learning philosophy whose premise was "by reflecting on our experiences, we construct our own understanding of the world we live in" (p.12). Moreover, Erben et al (2009) claimed that "in constructivist pedagogy, all learning is active and not passive" (p, 63). This coincides with the connotations of autonomous learning, because autonomy "is essentially a matter of the learner's psychological relation to the process and content of learning" (Little, 1990, p.7). In language learning, an individual learner has his/her own way of interpreting and constructing the target language, suggesting that language learning is learner-centered rather than teacher-centered. Additionally, in the process of constructing the target language, creativeness, cooperation, and engagement with the target language

are all focused. Generally speaking, constructivism can be divided into two groups: cognitive constructivism and social constructivism.

Cognitive constructivism refers to how an individual learner understands, interprets, and constructs things in terms of different developmental stages. As a biologist and psychologist, Piaget (1896-1980) has done a lot in the formalization of cognitive constructivism. His view that children's minds can actively process learning materials and present in their own way has significantly influenced educational theories. According to Piaget (1972), three elemental processes, that is, assimilation, accommodation, and equilibrium, contributed to children's cognitive development. In the process of assimilation, an individual learner would put his/her new experience into the existing mental framework without making any changes. In the process of accommodation, an individual learner would adjust his/her mental framework to form a new mental structure for accommodating new information. In the process of equilibration, an individual learner would make a balance between himself/herself and the learning environment, between assimilation and accommodation. Thus, Piaget set up a mechanism of learning that knowledge was analyzed, processed, and constructed. Here, the notion of learner autonomy is clearly explained that one should develop his/her thoughts and actions based on his/her own decisions, choices, reflections, and mental activities (Jarvis & Chandler, 2001).

Social constructivism involves the learner's construction of knowledge in the social context. In other words, to learn a foreign language also involves social

activities, because an individual learner will learn through the interaction with others like relatives, friends, roommates, teachers, or even strangers. Vygotsky (1978), as one of the representatives of this school, stated that an individual's knowledge was firstly constructed in a social context and then adopted by individuals. His main points are summarized as follows: a) social interaction is of great importance in the process of cognitive development; b) "The More Knowledgeable Other" (MKO) principle regards others as more capable and knowledgeable than the learner; c) the zone of proximal development means that a learner's ability to fulfill a task is under the instruction of an adult and/or with peer cooperation.

In summary, Both Piaget and Vygotsky stressed learners' centeredness in acquiring new knowledge. Only when learners actively participated into their language learning, i.e., setting up learning objectives, making study plans, monitoring learning process, and evaluating learning outcomes, could they learn a foreign language efficiently and effectively (Little, 2007). Also, students need to cooperate with others in the process of autonomous learning, for their construction of knowledge cannot be separated from the social context. For English language teachers, they could help their students develop learner autonomy through the following actions: a) to help their students develop strong language learning motivation, b) to offer their students some training on language learning strategy, c) to help their students manage language learning anxiety so as to learn a foreign language effectively, d) to design group activities for students so that group members could cooperate and interact with each other.

2.7.3 Cognitive Psychology

Cognitive psychology is another theory closely linked with learner autonomy, which emphasizes learners' mental process and mental system in learning. According to cognitive psychology, learning is a mental process in which learners could change and adapt their organism to various learning situations. Broady (1996) claimed that when students combined the knowledge they had acquired or the knowledge they were going to acquire and their experience together, their learning would become more efficient and effective. Crabbe (1993) believed that learners would learn better if they took responsibility of their learning. Among the main psychologist's theories, Ausubel's meaningful language learning theory and Bruner's "cognitive discovery" are closely related the learner autonomy (Xu, 2007, p. 38).

Ausubel (1978) regarded learning as a process of acquiring meanings by the way of cognition and learning was an organization and reorganization of cognitive structure. In Ausubel's meaningful language learning theory, if the learner can connect his/her previous knowledge and the new information, his/her learning experience will be more meaningful. In addition, he put emphasis on intrinsic knowledge, experience, and learning materials. Huttunen (1986) stated that the meaningfulness of new knowledge was decided by a language learner's active engagement, which could not be realized without learner autonomy. In this way, meaningful learning theory is correlated to learner autonomy which was defined as "a capacity to include an attitude to learning" (Dickinson, 1995, p.167).

According to Bruner's "cognitive discovery", learners should be stimulated to find rules and principles on their own through the active participation of experiments. Bruner (1996) stated: "We teach a subject not to produce little living libraries on that subject, but rather to get a student to think ... for himself, to consider matters as a historian does, to take part in the process of knowledge-getting. Knowing is a process, not a product" (p. 72). To be specific, the aim to teach a subject was to make a learner think in his/her own way and participate the process to acquire knowledge. He took a broad view of the education from the whole person. The need to learn how to learn was one of the central elements of education, which was considered as the key to transfer what had learned from one situation to another. His theory suggested that learners should be the center of language learning and were offered more opportunities to discover and acquire knowledge independently so as to adapt the changing society.

Up to now, cognitive learning theory has offered some important notions in students' autonomous learning. First, cognitive psychologists like Ausubel (1978) emphasized students' meaningful learning and practice of the target language. Second, language learning was a cognitive process that a learner could be in charge of his/her learning, including the ability to organize, monitor and modify these processes (Wenden, 1998). Therefore, if students want to acquire a foreign language effectively, they must utilize some language learning strategies. Lastly, cognitive learning theory also emphasized that learners were the center of language learning, so more opportunities should be provided to learn a foreign language.

In conclusion, humanist psychology gives privacy to emotional factors in learners' autonomous learning, including language learning belief, learning motivation, and learning anxiety. Constructivist learning theory tends to emphasize on learners' active construction of knowledge in foreign language acquisition, and learners also need to cooperative with outside world in their learning process. For English language teachers, they could help their students foster learner autonomy through developing students' learning motivation, offering some training on language learning strategy, and helping students manage their learning anxiety. Cognitive psychology emphasizes students' meaningful learning and meaningful practice of the target language, and explains why students need to utilize some language learning strategies. As a result, many SACs have been established in the past for students' practice of their speaking, listening, writing, reading, and translating. The theories discussed above have laid solid theoretical foundation for learner autonomy, which is presented in Figure 2.1.

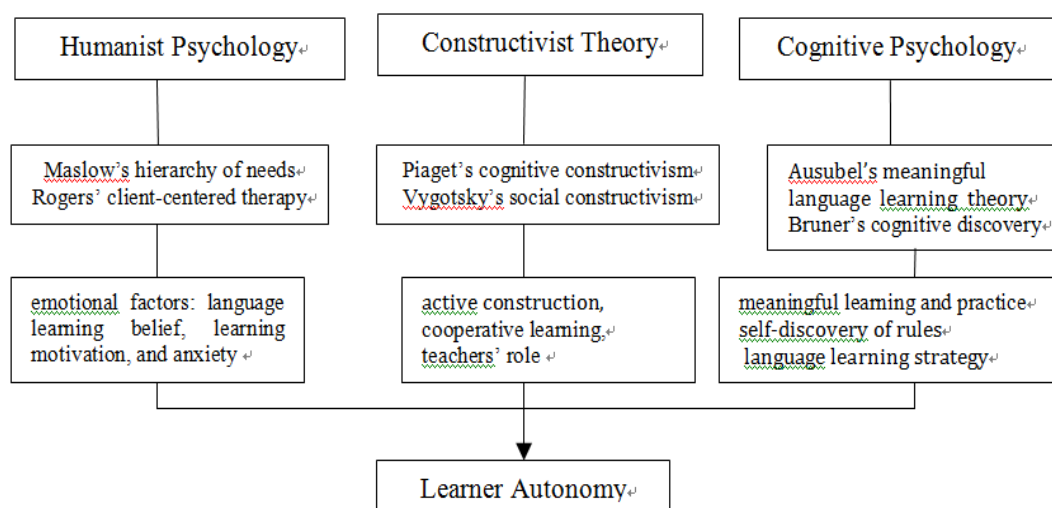


Figure 2.1: The Theoretical Foundation of Learner Autonomy

2.8 Conceptual Framework in this Study

Conceptual framework is “a network, or ‘a plane,’ of interlinked concepts that together provide a comprehensive understanding of a phenomenon or phenomena” (Jabareen, 2009, p. 51). It is often used to distinguish different concepts and organize ideas together. An effective conceptual framework can make abstract ideas easy to understand and apply. The components that form a conceptual framework are related to each other, together explain the phenomena, and set up a specific philosophical framework.

Took reference to the above three theories, i.e., humanist psychology, constructivist learning theory, and cognitive psychology, the researcher developed the conceptual framework of this study. As shown in Figure 2.2, pertaining to factors affecting learner autonomy, first of all, language learning belief as an independent variable can directly affect learner autonomy which included three aspects: setting up learning objectives and making study plans, use of learning strategies, and monitoring and evaluating learning process (Xu, et al., 2004). Moreover, it can indirectly influence learner autonomy through the intervening function of learning strategy as well as motivation. Second, language learning anxiety as an independent variable can directly influence learner autonomy. Besides, it can indirectly influence learner autonomy through the mediating functions of language learning motivation and language learning strategy. Third, teachers play an important role in training students’ language learning strategy, stimulating their learning motivation, and promoting learner autonomy. Fourth, as a mediating variable, language learning motivation can directly influence learner autonomy and language

learning strategy. Meanwhile, it is also affected by three independent variables: language learning belief, language learning anxiety, and English teachers. Fifth, language learning strategy, as an independent variable, can directly influence learner autonomy. As a dependent variable, it is affected by three independent variables: language learning belief, language learning motivation and English teachers. Sixth, as independent variables, language learning belief, language learning anxiety, and teachers' role are interrelated with each other. At last, in the information era, learner autonomy can be promoted in the context of Self-Access Centers.

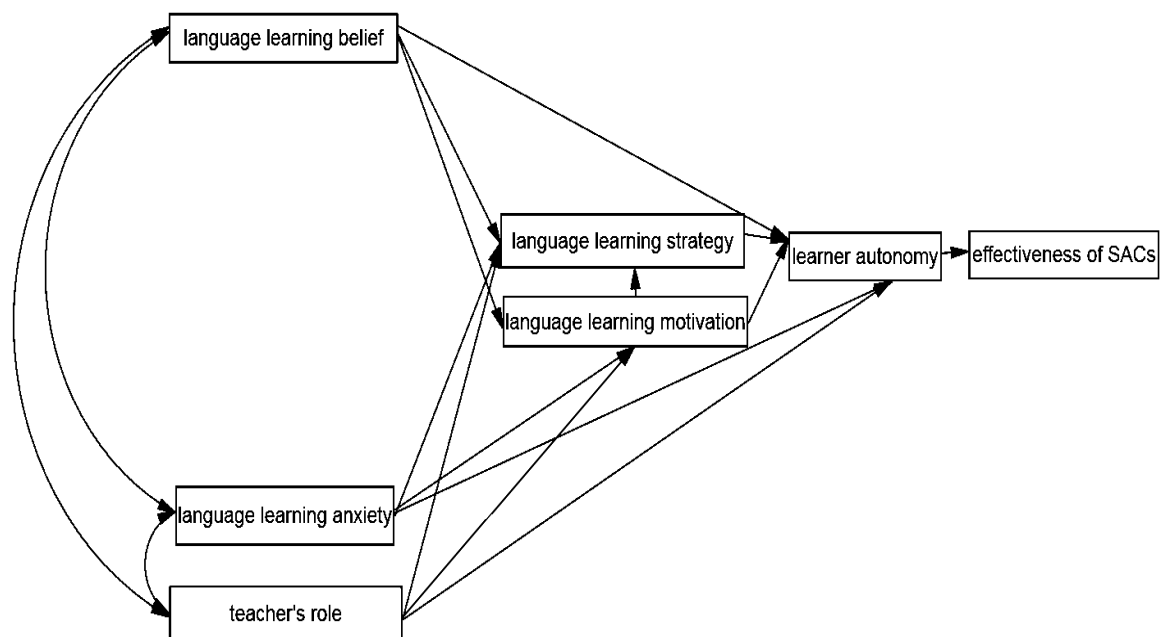


Figure 2.2: Conceptual Framework in this study

2.9 Summary

This chapter first reviewed the previous definitions of learner autonomy and summarized its characteristics. Then, readiness for learner autonomy in China and other countries was analyzed from the perspective of policies for

promoting learner autonomy, electronic facilities and environment, and students' learner autonomy. Furthermore, the main factors affecting learner autonomy, consisting of language learning motivation, strategy, belief, anxiety, and teachers' role, were discussed. In addition, Self-Access Centers that played a vital role in the promotion of learner autonomy were studied in terms of learning resources, learning environments, learning facilities, and autonomy support. Next to the last, humanist psychology, constructivist learning theory, and cognitive learning theory have laid theoretical foundation of learner autonomy. Finally, based on the theoretical foundation, the conceptual framework in this study was developed.

Next chapter involves research methodology used in this study, including research methods, instruments, pilot study, sample of the study, data collection, data analysis, and ethical issue.

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter firstly discusses the mixed methods used in the present study, which includes quantitative and qualitative methods. Then, the rationale, structure, and procedure of the research instruments are introduced. The research instruments include student questionnaire, and interview questions for students, lecturers, and SAC directors. Moreover, a pilot study is carried out to examine the validity and reliability of the research instruments. The rest of this chapter involves the selection of research sample, data collection, data analysis, and ethical issues.

3.2 Research Methods

The researcher adopted mixed methods to investigate Chinese university students' learner autonomy in the context of SACs. Mixed methods research is an approach to employ both quantitative and qualitative methods, techniques, and skills in a single study (Nguyen, 2014). Many researchers and experts have taken it as one of the most important research approaches used today (Alhaysony, 2016; Bryman, 2007; Doğan & Mirici, 2017; Doyle, Brady & Byrne, 2009; Feng, 2014; Johnson & Onwuegbuzie, 2004; Li, 2017; Liang, 2015; Sandelowski, 2000; Tashakkori & Creswell, 2007; Wang, 2015; Yang, 2016; Yin, 2006; Yin, 2012). The characteristics of the mixed methods research includes complex research problems, research questions that

emphasized methodological decisions, the combination of quantitative and qualitative approach in the research process, the practical behaviours of the researcher, and the research results generated from quantitative and qualitative data analysis (Ponce & Pagán-Maldonado, 2015).

As far as this study is concerned, questionnaires and semi-structured interviews were used to collect quantitative and qualitative data respectively, because results from quantitative data informed “how a large population views an issue and the diversity of these views” (Creswell, 2012, p.13), while that of the qualitative data relied “more on the views of the participants in the study and less on the direction identified in the literature by the researchers” (Creswell, 2012, p.17).

For addressing research question one “How ready are Chinese university EFL students for learner autonomy in the context of Self-Access Centers?” descriptive analysis of quantitative data was used to describe Chinese EFL learners’ readiness for learner autonomy, while thematic analysis of qualitative data was employed to get Chinese students’ in-depth perceptions of learner autonomy and their experiences related to autonomous learning. The combination of them could complement each other, thus providing a holistic view of Chinese EFL learners’ autonomy. For addressing research question two “What are the factors affecting Chinese university EFL students’ learner autonomy in the context of Self-Access Centers?”, path analysis of AMOS 21.0 was used to obtain the direct effects, indirect effects, and total effects of independent variables, namely, language learning belief, motivation, anxiety,

strategy and teacher’s role, on the dependent variable, learner autonomy. In addition to the factors in questionnaires, thematic analysis of qualitative data helped explore more factors affecting learner autonomy. For example, students can give a list of factors affecting learner autonomy from their own point of view as well as language lecturers and SAC directors. When addressing the third research question “How can Self-Access Centers (SACs) promote learner autonomy?” thematic analysis of qualitative data could help find out the ways that SACs adopted to promote learner autonomy. Descriptive analysis of quantitative data testified the effectiveness of those approaches.

In summary, the use of mixed methods can offer exactness and depth for the research so that the researcher can make better judgments about the findings and conclusions of the study. The research design is presented in Figure 3.1.

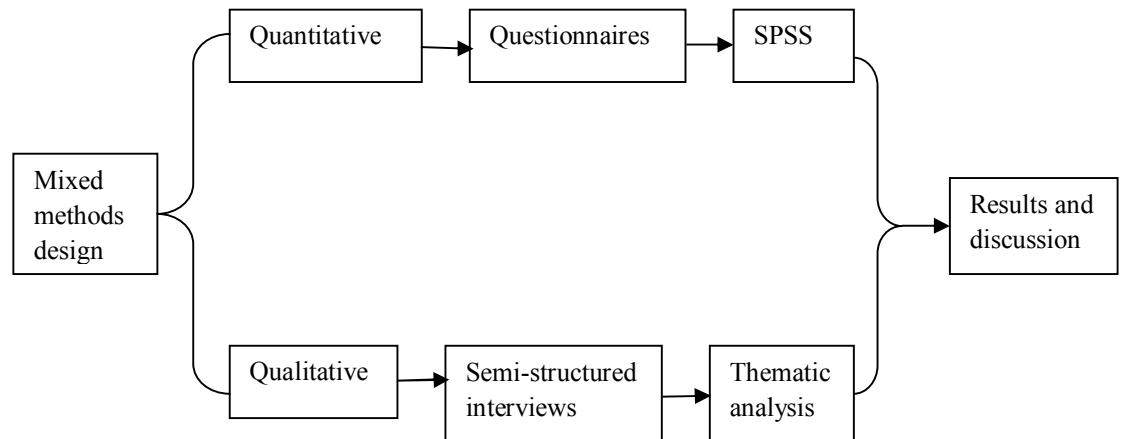


Figure 3.1: The Research Design of this Study

3.3 Research Instruments

3.3.1 The Rational for the Use of Research Instruments

It is a difficult and complex task to decide which instruments should be utilized in a study, because any instrument to collect data is not inherently better than another (O’Leary, 2004). As a result, the researchers must take “fit for purpose” notion when adopting research instruments in their research (Hesse-Biber, 2010). Johnson and Onwuegbuzie (2004) held the same opinion that what works in a study should be used without considering any philosophical and paradigmatic assumptions. The researcher in this study chose questionnaires and interviews as research instruments to collect rich and credible data according to the “fit for purpose” principle.

A questionnaire is “a document containing questions and other types of items designed to solicit information appropriate to analysis” (Babbie, 1990, p. 377). It is widely used in the research field of ESL/EFL, for it can help “identify important beliefs and attitudes of individuals” (Creswell, 2012, p. 376), and process data fast in a straightforward manner through the use of modern computer software. Generally speaking, questionnaires have the following advantages. First of all, standardization is the most distinguishable strengths of using questionnaires to collect data. Researchers can adopt questionnaires to get answers from all subjects on the same questions in the same order, which is easy and consistent to tabulate and compare the answers. Such standardization will make data collection objective and feasible. Then, questionnaires can be distributed to a large number of respondents at the same time, so it saves time, money and manpower compared to other approaches

like field study. Third, the respondents are anonymous when completing questionnaires, so they can express their views and opinions as freely as they can. Finally, questionnaires can generate a large quantity of quantitative data in a short time (Dörnyei, 2009), and all the items in the questionnaire are coded, so the data can be put into computers easily and analyzed statistically. However, there are also some disadvantages of questionnaires, which includes the inability to administer questionnaires to less educated people or kids, no way to check misinterpretations and unintelligible answers, the superficiality of answers especially when the questionnaire invades the respondents available time, and fatigue effects (i.e., respondents may not answer accurately for being tired or bored) (Dörnyei, 2003).

Interviews as one of the most important instruments in educational research is “an interchange of views between the interviewer and interviewee(s) on a theme of common interest” (Kvale & Brinkmann, 2009). Seidman (2006) argued that the root of in-depth interview was “interviewer’s interest to understand other people’s lived experience and the meaning of that experience” (p.9). When the researcher wants to explore people’s in-depth beliefs, he/she often uses interviews to collect rich data. The strong points of interviews are summarized as follows: research questions can be explored in-depth; the interview questions can be explained or restated if respondents do not understand them; the respondents’ various opinions about the same research questions can be collected; more reliable and comprehensive qualitative data could be obtained. On the other hand, interviews are rather time-consuming, for it will require much time to conduct the interview,

transcribe and analyze interview data, and report the results. Also, the possibility to make subjective evaluations does exist.

The researcher can get numerical data from questionnaires, but cannot get in-depth data as compared to the data derived from interviews. From the above analysis, it can be seen that the strong points of interviews can potentially complement the weak points of questionnaires, and vice versa, so it is necessary to integrate the two research methods. Harris and Brown (2010) pointed out that the combination of questionnaires and interviews could generate complementary findings, thus increase the reliability and validity of the study. In addition, the employment of questionnaire and interviews is consistent with the principle of triangulation in ESL/EFL research. Triangulation refers to the use of various theories, research methods and diversified data sources to overcome the biases coming from a single viewpoint and explain the observed situation from different perspectives. As a result, it can make research findings credible and confirmative through the integration of different aspects. At last, there are many similar studies on learner autonomy using questionnaires and interviews to collect research data: Alhaysony (2016), Cem (2010), Doğan and Mirici (2017), He (2008), Hsieh (2010), Ma (2012), Nguyen (2014), Su (2013), and Yu (2014) used questionnaires and interviews to investigate the English teachers' and students' perceptions on learner autonomy; An (2010), Chan (2012), Cheng et al (2018a), Davison (2011), Feng (2014), Ja (2017), Kabiri, Nosratinia, and Mansouri (2018), Li (2017), Lu, Woodcock and Jiang (2014), Matsumura and Hann (2004), Shi (2015), and Yang (2016) employed questionnaires and

interviews to study the factors affecting learner autonomy; Cui (2017), Hadi (2012), Ikonen (2013), Kawano (2008), Liang (2015), Ma (2013), Rungwaraphong (2012), Sun (2011), Wang (2015), Yang and Fu (2016), Yang (2017), and Zhang (2016) employed questionnaires and interviews to investigate the promotion of university students' learner autonomy. The researchers in all these studies had proved the validity and reliability of the combination of questionnaire and interview methods.

3.3.2 Student Questionnaire

Questionnaires are frequently employed in survey study and experiments. Through questionnaires, the researcher can collect information on human behaviours through a set of questions. Questions in questionnaires can be roughly divided into two types: open-ended and closed-ended. In open-ended questions, respondents can give their answers without restrictions, which can be a sentence, a paragraph, or even a page or more. Consequently, open-ended questions generate various responses, and some even beyond the researcher's anticipation. However, the researcher needs to take a long time to read them through and then code the data for identifying the common themes. Moreover, it is difficult to report the results, because each respondent's views can be interpreted from many aspects.

In a close-ended question, the respondents are usually asked to choose the answer that can accurately represent their opinions among a set of options. Forced choices, agree/disagree and Likert scales are the most often used ways to structure responses to close-ended questions. The strong points of such kind

of questions are: restricting the respondents to a finite set of options, taking the respondents less time to complete the questionnaire, making the researcher to code and analyze the data easily and quickly, and allowing the researcher to generalize results due to the great specificity and consistency yielded by closed-ended questions. However, the respondents do not have enough freedom to express themselves on a certain topic.

A close-ended questionnaire, Learners' Perception on Learner Autonomy (LPLA) (See Appendix A) was used to collect quantitative data in the context of Self-Access Centers. It included four parts. The first part was designed to collect the subjects' demographic information, including their gender, grade, English language proficiency, and name of universities. The second part was adapted from Xu, Peng, and Wu (2004) for investigating students' learning autonomy in the context of SACs. After consulting two professors who were experts in autonomous learning, the researcher deleted some items that were not closely related to learner autonomy in Self-Access Centers. This part contained the following three dimensions: learning objectives and study plans (1-7); using language learning strategies (8-13); monitoring and evaluating the process of English language learning (14-19).

Factors affecting learner autonomy, as the third part, was designed to explore the factors affecting Chinese university EFL students' learner autonomy in the context of Self-Access Centers. This part included five dimensions. Items about language learning beliefs (20-25), language learning motivation (26-31) and teacher' role (48-52) were taken from He's (2012) study. Items about

language learning anxiety (32-37) were adapted from Horwitz's (1986) Foreign Language Classroom Anxiety Scale (FLCAS). Items about language learning strategy (38-47) were adapted from Oxford's (1990) Strategy Inventory for Language Learning (SILL).

Students' attitudes to autonomous learning in SACs, adapted from Xia's (2014) questionnaire, was the last part for finding out approaches of promoting learner autonomy in Self-Access Centers (SACs). It was further subcategorized into two dimensions: the effectiveness of autonomous learning in SACs (53-59) and students' attitudes towards the facilities in SACs (60-65).

The five-point Likert scale, regarded as a proxy interval level of measurement in educational research, was adopted in this study (Dornyei, 2003). The use of it can free the participants from immense work and make them focus on the research (Hinkin, 1995). In the present study, respondents were asked to circle the number that best reflected their option, represented by a five-point Likert scale, ranging from "1: strongly disagree", "2: disagree", "3: no comment", "4: agree", and "5: strongly agree".

After the first draft of Learners' Perception on Learner Autonomy (LPLA), the researcher gave it to three language teaching professors, who were asked to give their comments on the items from the aspect of clarity, content validity, and face validity. Based on their suggestions, the researcher made some necessary changes. For example, the researcher changed the instruction "Please tick your answer" into "Please circle your answer", because if the

respondent makes a big “tick”, it is difficult to judge which answer he/she chooses. Item “I know teachers’ teaching purpose” was changed as “I know the teacher’s purpose of employing some learning activities to improve students’ language skills”. Item “People who have strong faith can learn English well” was changed into “I believe that I will ultimately learn English very well”, for the latter is more related to the subject’s language learning belief. Item “I like autonomous learning in web-based Self-Access Centers (SACs)” was revised as “I like autonomous learning in Self-Access Centers (SACs)”, because in some SACs, there is no internet, for the university authority is afraid that students will use it for playing computer games. Item “The SAC provides me with a good learning environment to learn English independently” was changed into “The learning environment in the SAC is good”, because the latter is more focused for the respondents. Item “The facilities supplied by SACs are helpful for my English language learning” was revised as “The facilities (eg, language learning software) supplied by SACs are helpful for my English language learning”, because students will be clear about what the facilities refer to.

After making some amendments according to the professors’ advice, the researcher invited a colleague who taught English-Chinese translation course to translate the English questionnaire items into Chinese. Finally, the author used cluster sampling method to select 60 students from a university to participate in the pilot study on June, 8th, 2016. The aim of the pilot study was to test the validity and reliability of the questionnaire.

3.3.3 Interviews

Interviews are “not only a method of gathering information, but a vehicle for producing performance texts and performance ethnographies about self and society” (Denzin, 2001, p. 24). Interviews can be generally divided into three types in social science: structured interviews, unstructured interviews, and semi-structured interviews. Structured interviews are “interviews in which all respondents are asked the same questions with the same wording and in the same sequence” (Corbetta, 2003, p. 269). In structured interviews, the interviewees often receive a set of specific and standard questions on particular topics, and then they can choose their answers from a list of predetermined options. Such a format works well to make the interview directly aimed at the target topic (Bryman, 2008). However, this kind of interviews cannot ensure the flexibility and freedom of interviewers and interviewees (Corbetta, 2003), because it will restrict the interviewers’ interruption and the interviewees’ elaboration. As a result, the data collected from this type of interviews often lacks richness and variation.

Unlike structured interviews, unstructured interviews offer freedom and flexibility to both interviewers and interviewees in terms of the design, implementation and organization of the interview content and questions (Gubrium & Holstein, 2002). In such an interview, the interviewer asks questions and the interviewees can express themselves freely and frankly because there is no interview guide. Consequently, the interviewer will be “keen to follow up interesting developments and to let the interviewee elaborate on various issues” (Dörnyei, 2007, p. 136). Nevertheless, in

unstructured interviews, the interviewers need to be experienced ones. If inexperienced, the interviewers may ask some irrelevant or inappropriate questions. Moreover, interviewees may give some unrelated and unnecessary information, which will be hard for the coding and analyzing process.

Semi-structured interviews are a mix of the two above-mentioned kinds. Compared to the structured interviews, this kind of interviews allows “depth to be achieved by providing the opportunity on the part of the interviewer to probe and expand the interviewee’s responses” (Rubin & Rubin, 2005, p. 88). According to Berg (2007), researchers are recommended to use a basic checklist that helps cover the relevant research areas, the strengths of which is that it “allows for in-depth probing while permitting the interviewer to keep the interview within the parameters traced out by the aim of the study” (p. 39). Also, the researcher can guide the interviewing process by asking probing questions, asking for clarification if the respondents’ answers are not clear, and encouraging them to give further explanations in semi-structured interviews (Kvale & Brinkmann, 2009). Semi-structured interviews were adopted to further explore participants’ ideas and conceptions on learner autonomy in the context of Self-Access Centers. The interview questions for students, lecturers, and SAC directors are explained as follows.

The semi-structured interview questions for students (See Appendix B) were designed to gather their in-depth information on learner autonomy. Interview question on students’ understanding of learner autonomy (one question) was adopted from Wang (2014), while interview questions on students’ readiness

for learner autonomy (five questions), factors affecting learner autonomy (one question), students' autonomous learning in SACs (three questions) were derived from student questionnaire Learners' Perception on Learner Autonomy (LPLA). The detailed process of examining the credibility and validity of the interview questions was similar to that of the student questionnaire.

Then, the semi-structured interview questions for English language lecturers (See Appendix C) were designed to collect their perceptions of learner autonomy and ways to promote learner autonomy. Interview questions on factors affecting learner autonomy in lecturers' views (one question) was derived from student questionnaire Learners' Perception on Learner Autonomy (LPLA). Other interview questions on lecturers' understanding of learner autonomy (one question), approaches to promote learner autonomy (three questions), the training that teachers received from SACs on learner autonomy (one question), and the promotion of learner autonomy by means of Self-Access Centers (three questions) were derived from Zhang (2011). The detailed process of checking the credibility and validity was similar to that of student questionnaire.

Finally, the semi-structured interview questions for SAC directors (See Appendix D) were designed to explore the functions, operation, and the existing problems of SACs. Interview questions about background information of SACs (four questions) were developed according to language experts' advice. Interview questions about factors affecting learner autonomy (one

question), the promotion of students' learner autonomy by SACs (one question), and training provided by SACs for students (one question) were derived from student questionnaire Learners' Perception on Learner Autonomy (LPLA). Interview questions on making full use of SACs (three questions) were adapted from Hsieh (2010). The detailed process of testifying the credibility and validity was similar to that of student questionnaire, but only one SAC vice director participated in the pilot study.

3.4 Pilot Study

Pilot study was used to test the reliability and validity of the adapted questionnaire and semi-structured interview questions. The main objectives of the pilot study were: a) to make sure that every participant understood the terminology and intention of each questionnaire item, b) to get some advice for modifying questionnaire items and interview questions, c) to determine the anticipated length of time for the completion of questionnaires and interviews, d) to check the reliability of the questionnaire, e) to find out any possible problems that would occur in the process of distributing questionnaires to subjects and conducting interviews. The pilot study involved 60 university students for questionnaires, and five lecturers, five university students, and one SAC vice director for interviews. All of them were selected from one university in Henan province. The subjects who participated in the pilot study were not included in the sample of the actual study. The cluster sampling method was employed to select the subjects who participated in the survey, while purpose sampling method was adopted to choose the subjects who took part in the interviews. The pilot study was carried out on June, 6th—10th, 2016.

3.4.1 Findings of the Survey in the Pilot Study

The validity of student questionnaire. Factor analysis was used to determine the validity of student questionnaire. It refers to the use of a few factors to look at the inter-correlations of a set of variables or indicators (Pallant, 2013). In doing so, the variables that are closely related will be classified into the same category which is called factor. Each factor seizes part of the overall variance in the observed variables. Also, the factors are always put in an orderly list of the variation that they explain. As far as this study is concerned, the subscales of the questionnaire aimed to investigate different contents, so it was appropriate to conduct factor analysis to determine the structure validity of different subscales.

Before conducting factor analysis, the value of Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity must be checked at the very beginning. KMO is used to explore the correlation between variables. To be specific, it compares the value of simple correlation and partial correlation between variables. The value of KMO ranges from 0-1, and the bigger it is, the more common factors exist between variables. According to Pallant (2013), when the value of KMO test was 0.60 or above, factor analysis could be conducted. Bartlett's Test of Sphericity is used to test whether correlation matrix is a unit matrix, namely, all variables are independent. If it is significant ($p < .05$), there exists inter-correlations between different variables, and factor analysis could be conducted (Pallant, 2013). For this study, principal component method was adopted to extract factors, and eigenvalue and screeplot were used to determine the number of factors. In addition, oblimin rotation method was

used to help interpret the factors. For the results of factor analysis of each part in Learners' Perception on Learner Autonomy (LPLA), please refer to Appendix E.

For learner autonomy part, factor analysis showed that KMO coefficient was .908, bigger than the recommended value, and Bartlett's Test of Sphericity arrived at statistical significance, for $p=.000 < .05$, suggesting that factor analysis could be performed. Principal components analysis showed that there were three components with eigenvalues bigger than 1, explaining 32.9%, 9.3%, and 5.9% of the variance respectively. The screeplot further supported that three factors could be extracted. Structure Matrix revealed that items 1, 2, 3, 4, 5, 6, 7 belonged to the first factor. According to the content of these seven items, the first factor could be named as learning objectives and study plans. Next, items 8, 9, 10, 11, 12, 13 could be attributed to the second factor. On the basis of the content of these six items, the second factor could be named as using language learning strategies. At last, items 14, 15, 16, 17, 18, 19 were part of the third factor. In line with the content of these six items, the third factor could be named as monitoring and evaluating the process of English language learning. The results of factor analysis suggested that learner autonomy part was designed scientifically.

For factors affecting the learner autonomy part, factor analysis was adopted to check the validity of each dimension. For language learning belief, factor analysis showed that KMO coefficient was .778, bigger than the recommended value, and Bartlett's Test of Sphericity was significant, for $p=.000 < .05$,

suggesting that it was suitable to conduct factor analysis. Principal components analysis showed that there were two components with eigenvalues bigger than 1, explaining 47.2% and 18.6% of the variance respectively. The screeplot broke clearly after the second component, which supported that it was suitable to extract two factors. Structure Matrix revealed that items 21, 23, 24 belonged to the first factor. According to the content of these three items, the first factor could be named as belief about learners' ability. Items 20, 22, 25 could be attributed to the second factor. On the basis of the content of these three items, the second factor could be named as belief about learners' efforts.

For language learning motivation, factor analysis showed that KMO coefficient was .812, bigger than the recommended value, and Bartlett's Test of Sphericity was significant, for $p=.000 < .05$, showing that it was suitable to conduct factor analysis. Principal components analysis showed that there were two components with eigenvalues bigger than 1, explaining 36.1% and 26.6% of the variance respectively. The screeplot broke clearly after the second component, which indicated that it was feasible to extract two factors. Structure Matrix revealed that items 26, 27, 28 belonged to the first factor. According to the content of these three items, the first factor could be named as internal motivation. Items 29, 30, 31 could be attributed to the second factor. On the basis of the content of these three items, the second factor could be named as external motivation.

For language learning anxiety, factor analysis showed that KMO coefficient was .803, surpassing the recommended value, and Bartlett's Test of Sphericity was significant, for $p=.000<.05$, revealing that it was feasible to conduct factor analysis. Principal components analysis showed that there were two components with eigenvalues bigger than 1, explaining 49.3% and 17.1% of the variance respectively. The screeplot broke clearly after the second component, which indicated that it was suitable to extract two factors. Structure Matrix revealed that items 32, 34, 35 belonged to the first factor. According to the content of these three items, the first factor could be named as fear of negative evaluation. Items 33, 36, 37 could be attributed to the second factor. On the basis of the content of these three items, the second factor could be named as test anxiety.

For language learning strategy, factor analysis showed that KMO coefficient was .790, bigger than the recommended value, and Bartlett's Test of Sphericity was significant, for $p=.000 <.05$, suggesting that it was suitable to conduct factor analysis. Principal components analysis showed that there were three components with eigenvalues bigger than 1, explaining 33.0%, 12.8%, and 11.6% of the variance respectively. The screeplot broke clearly after the third component, which indicated that it was feasible to extract three factors. Structure Matrix revealed that items 38, 39, 40, 44 belonged to the first factor. According to the content of these four items, the first factor could be named as cognitive strategy. Items 41, 42, 45 could be attributed to the second factor. On the basis of the content of these three items, the second factor could be named as metacognitive strategy. Items 43, 46, 47 could be attributed to the

third factor. On the basis of the content of these three items, the third factor could be named as social strategy.

For teacher's role, factor analysis showed that KMO coefficient was .903, surpassing the recommended value, and Bartlett's Test of Sphericity was significant, for $p=.000 < .05$, suggesting that it was suitable to conduct factor analysis. Principal components analysis showed that there were two components with eigenvalues bigger than 1, explaining 46.3% and 21.0% of the variance respectively. The screeplot broke clearly after the second component, which indicated that it was feasible to extract two factors. Structure Matrix revealed that items 50, 51, 52 belonged to the first factor. According to the content of these three items, the first factor could be named as teacher's role to offer learning opportunities. Items 48, 49 could be attributed to the second factor. On the basis of the content of these two items, the second factor could be named as teacher's role to offer help.

For the third part, students' attitudes to autonomous learning in SACs, factor analysis showed that KMO coefficient was .837, exceeding .60, the recommended value, and Bartlett's Test of Sphericity was significant, for $p=.000 < .05$, suggesting that it was suitable and feasible to conduct factor analysis. Principal components analysis showed that there were two components with eigenvalues bigger than 1, explaining 52.7% and 8.8% of the variance respectively. The screeplot broke clearly after the second component, suggesting that it was suitable to extract two factors. Structure Matrix showed that items 53, 54, 55, 56, 57, 58, 59 belonged to the first factor. According to

the content of these seven items, the first factor could be named as the effectiveness of autonomous learning in SACs. Items 60, 61, 62, 63, 64, 65 could be attributed to the second factor. In line with the content of these six items, the second factor could be named as students' attitudes towards the facilities in SACs. The results of factor analysis showed that students' attitudes to autonomous learning in SACs were well validated.

The reliability of student questionnaire. The credibility, stability, and internal consistency of Learners' Perception on Learner Autonomy (LPLA) were examined by Cronbach alpha coefficient, which is most commonly used for determining the reliability of multiple-rating scale questionnaires. The value of Cronbach alpha coefficient lies between 0-1, and the more it is close to 1, the higher the reliability of the questionnaire. The coefficients of three subcategories of learner autonomy part were: learning objectives and study plans (.761), using learning strategies (.715), monitoring and evaluating learning process (.784). The coefficients of five dimensions of factors affecting learner autonomy part were language learning belief (.725), language learning motivation (.705), language learning anxiety (.813), language learning strategy (.840), and teacher's role (.830). The coefficients of two dimensions of students' attitudes to autonomous learning in SACs were the effectiveness of autonomous learning in SACs (.799) and students' attitudes towards the facilities in SACs (.815). In summary, Cronbach alpha coefficient of the above factors were between 0.705—0.840, and Cronbach alpha coefficient of LPLA as a whole was 0.890, preferable for further survey,

because the ideal Cronbach alpha coefficient of a scale was above 0.700 (Pallant, 2013).

Among the 60 questionnaires, there was an incomplete one, so only 59 valid ones. The results of quantitative data analysis indicated that the majority of participants were not so ready for learner autonomy. Moreover, most participants agreed that factors, including language learning beliefs, motivations, anxiety, strategies, and teacher's role could affect their learner autonomy. Lastly, participants had positive attitudes to autonomous learning in SACs. However, there still existed some problems in SACs: some participants were not satisfied with the learning environment, learning materials, learning activities, and open hours in SACs.

3.4.2 Findings of Interviews in the Pilot Study

After collecting the interview data from the pilot study, the researcher created interview word files for each subject, which were further grouped into files for lecturers, files for students, and files for SAC directors. Before analyzing these data, the researcher read them through many times, found some problems and revised them.

First, after analyzing the interview data for students, the researcher found that for Question Eight, four students gave "Yes" answer separately and told the researcher their improved aspects in English language learning. However, one student gave a "No" answer to this question, and the researcher wanted to know the reason for it, so he added "if not, why", thus

Question 8: Can autonomous learning improve your English language proficiency? If yes, in which aspects?

was changed into:

Can autonomous learning in the SAC improve your English language proficiency? If yes, in which aspects; if not, why?

Similarly, for Question Four, three students only gave “Yes” answer, but then kept silent, so the researcher changed the close-ended question into open-ended question, thus,

Question 4: Do you use learning strategies in your study?

was revised as

What kind of language learning strategies do you employ in your study?

Eventually, there were ten interview questions for university students.

Second, after analyzing the interview data of English language lecturers, the researcher discovered that for Question Two, in addition to giving a “Yes” answer, four lecturers also explained the ways that they implemented autonomous learning in their English language teaching, so the researcher added “how” to this question. Thus,

Question 2: Do you introduce the concept of learner autonomy to your students?

was changed into

Do you introduce the concept of learner autonomy to your students?
How?

Altogether, there were nine interview questions for lecturers.

Finally, after analyzing interview data of SAC directors, the researcher identified some existing problems in SACs like problems of management, because there were not enough staff to serve so many students and repair of breakdown computers. In order to find out the reasons, the researcher added three more questions to get some background information. They were:

Question 1: When did your university set up a Self-Access Center?

Question 2: Currently how many staff are there in your center?

Question 3: What are the facilities and services provided to your students?

Eventually, there were ten questions for SAC directors.

In addition, the researcher found that except factors in the questionnaire, other factors could also affect students' learner autonomy, namely, self-control, learning materials, students' language proficiency, and learning environment. Moreover, the researcher found out some other problems in SACs through qualitative data analysis, which are, lack of teachers' guidance, students' weak autonomy, not enough training for students, and insufficient manpower.

However, the above findings were only based on a small sample size, so in order to get more reliable and credible data, more participants were needed in the actual study. Meanwhile, some problems emerged in the process of pilot study, including one participant who did not complete his/her questionnaire; one participant inquired the meaning of a term; participants wanted to finish it earlier; and one interview was interrupted by something unexpected. Therefore, in the actual study, the researcher should remind participants to check whether

they have completed their questionnaires, explain some special terms to participants before the distribution of questionnaires, try to conduct it towards the end of the class, use different electronic facilities to record the interview data, and to find a quiet and private place to conduct interviews.

3.5 Sample of the Study

The present study was conducted in Henan province that is located in the middle part of China. Its tertiary education is not as good as east coastal areas, but better than the western areas, so university students' learning autonomy in this province can represent that of mainland China. Altogether, there are 43 universities in Henan province, but only eight universities have SACs. Random sampling method was used to select three from those eight universities, including a university for teacher training, a university of science and technology, and a polytechnic university.

Cluster sampling method was then adopted to select 600 university students as participants from those three universities. The total number of students at these three universities is about 100,000. According to Krejcie and Morgan (1970), the recommended statistical sample size of 100,000 respondents is 384, so the number of students to do the survey surpassed the recommended sample size. The participants, from different faculties and departments, majored in computer science, urban planning, mechanics, fashion design, Chinese studies, automation, tourism, chemistry, accounting, law, history, and Chinese medicine. All participants were year-two students who had learnt English in SACs for nearly two years, so they knew the strong points and weak points of

learning autonomously in SACs. Their age ranged from 21 to 23 years with an average of 21.5, and none of them were native English speakers. After 31 unusable questionnaires were identified and discarded, there were 569 cases (94.8% of 600) left for data analysis, including 256 males and 313 females.

In a qualitative research, the sample size is usually small, but should arrive at the aim of the study, and offer enough opportunities to explore deep insight of the research problems (Creswell, 2009). Patton (2002) claimed: “The validity, meaningfulness, and insights generated from qualitative inquiry have more to do with the information richness of the cases selected ... than with sample size” (p. 245). Stake (2006) recommended a sampling of 4 to 10 to carry out a qualitative study. At the end of the survey in one university, the researcher used simple random sampling method to select five participants among those who volunteered to participate in the semi-structured interviews. Using the same method, the researcher selected another 10 participants from the other two universities with five in each university. Altogether, there were 15 students selected to take part in the interviews.

Purposive sampling method was employed to select 15 English language lecturers to take part in the semi-structured interviews. Purposive sampling is “a method of sampling where the researcher deliberately chooses who to include in the study based on their ability to provide necessary data” (Parahoo, 1997, p. 232). The rationale for selecting this method was that the researcher wanted to get in-depth information about language lecturers’ perceptions on learner autonomy in Self-Access Centers. The criteria for choosing lecturers

were: lecturers who had offered instructions to students in SACs, lecturers who were familiar with facilities and learning materials in SACs, and lecturers who had some knowledge of language teaching. Eventually, 15 eligible lecturers were purposively selected as participants.

SAC directors should be responsible for the effective, efficient and well-coordinated running of the center. To be specific, they are in charge of the overall plan of the center (needs assessments, purchasing, and personnel), presiding over academic and administrative meetings in the center, the administration of SAC staff, and creating databases for SAC users. The researcher contacted the three SAC directors, and all of them agreed to take part in the interviews.

3.6 Data Collection

3.6.1 Quantitative Data Collection

The researcher employed group distribution in the study. Dörnyei (2007) defined group distribution as a form of quantitative data collection that the researcher distributed questionnaires to different groups of subjects face-to-face. After contacting the teachers by mobile phone, the researcher went to each university to meet them after school hour. After explaining the purpose of the research, the researcher distributed and collected questionnaires with the assistance of the English language teachers in these universities. Altogether, there were 569 students who participated in the quantitative data collection from June, 13th to 24th, 2016, which was the end of the second semester of an academic year. At this time, year-two students had learnt English in SACs for

nearly two years, gaining rich experience from learning autonomously in SACs. The whole process took about 25 minutes, which was consistent with the pilot study. This tight schedule was of great importance for the following two reasons. One was that the teachers would not allow the researcher to collect data if data collection occupied them too much class time; the other was that more than half an hour would make participant lose their interest in completing the questionnaires (Dörnyei, 2009). During the whole process, the participants' information and answers were kept confidential.

3.6.2 Qualitative Data Collection

Face-to-Face interviews as one of the widely used interview methods were adopted to collect qualitative data on learner autonomy. The interviewer in this kind of interviews can collect more in-depth data, capture interviewee's facial expressions and body language, ask for explanations of responses, and extend the interview length if necessary. The interviews were conducted with 15 lecturers, 15 students, and 3 SAC directors by the means of semi-structured interview questions from June, 13th to 24th, 2016. The interview questions were translated into Chinese by a language professor who taught English-Chinese translation course. After the participant has signed the consent form, the interview began, lasting for approximately 20 minutes. In order to get rich qualitative data, Chinese language was adopted in the whole interview process. The researcher used two tape recorders to record the interview data. In order to avoid background noise, all interviews took place in a small quiet room. In the end, there were 33 interview data recorded.

3.7 Data Analysis

3.7.1 Quantitative Data Analysis

Data generated from questionnaires was put into a computer data file. Then the data was analyzed by Statistical Package for the Social Sciences (SPSS) 22.0 and Analysis of Moment Structures (AMOS) 21.0. The advantages of SPSS are listed below. First of all, SPSS is a good comprehensive data management tool, because it offers a wide range of data documentation which helps the researcher to ensure consistency in data entry. Second, SPSS provides very satisfactory graphical display options. With scatterplots, boxplots, and histograms presented through SPSS, the researcher will be clear about patterns in the data. Furthermore, these graphics will give the researcher an overall framework to understand the data, so that he/she will better interpret the following complex inferential procedures. Fourth, there are a lot of statistical models for the researcher to choose, and most of them are well-known general linear model and logistic regression models, which will meet almost all needs of data analysis in a study. Finally, SPSS has nice menu driven interface, quite easy to learn. As a result, many researchers adopted SPSS to analyze their quantitative data. For example, An (2010), Chan (2012), Chen (2014), Cheng et al. (2018a), Davison (2011), Hadi (2012), Hsieh (2010), Ikonen (2013), Kabiri, Nosratinia, and Mansouri (2018), Kawano (2008), Li (2017), Lv (2017), Nguyen (2014), Rungwaraphong (2012), Su (2013), Sun (2011), and Yu (2016).

Structural Equation Modeling (SEM), also known as Latent Variable Models (LVM), was used to explore the causal correlations between various factors

and learner autonomy. SEM is often utilized to determine the complex correlations among different variables by developing a theoretical model (Walker & Maddan, 2008). Such a theory-testing modeling could be employed to offer theoretical explanations for the causal correlations that existed among the variables (Agresti & Finlay, 1997). In addition, as a causal modeling, SEM also examines whether the default model is theoretically fit or not and whether the default model matches the sample data or not. Consequently, with the strong points of factor analysis and path analysis, SEM not only examines the correlations among observed variables, latent variables and error variables at the same time, but also get the direct effects, indirect effects, and total effects of independent variables on dependent variables (Wu, 2010).

As the most frequently used SEM tools, Analysis of Moment Structures (AMOS), also called Analysis of Covariance Structures or Analysis of Causal Modeling, combines the strong points of traditional linear structural relationship model and factor analysis (Wu, 2010). The strengths of using AMOS to analyze quantitative data are as follows. First, AMOS belongs to SPSS family, so it is compatible with the data in SPSS. Second, the drawing tools in AMOS are image buttons which can draw different SEM theoretical models by dragging and dropping the buttons, making the drawing procedure simple and feasible. Third, it is rather easy for the beginners to interpret the output of data imputation in AMOS. Finally, the function of full information maximum likelihood of AMOS will automatically calculate the standard error and lower estimate means when dealing with default values. Consequently, some researchers have employed AMOS to offer theoretical explanations for

the causal correlations that existed among the variables, for instance, Cheng et al. (2018b), Dai and Chen (2016), Shang and Kou (2015), Tan and Zhang (2015), Wei (2014), Xu and Li (2014).

As far as this study is concerned, a preliminary analysis was conducted to make data accurate and detect any missing values. The use of “sort cases” in descending order for each variable could ensure the accuracy of data, because this function could arrange the values of a variable from the largest to the smallest, helping the researcher identify those out-of-range or misnumbered cases without difficulty and drop them. Then, the researcher examined visually the missing data. After this procedure, thirty-one cases were problematic and discarded. In the end, the valid respondents for research survey were 569.

Factor analysis and Cronbach alpha coefficient were used to determine the validity and reliability of student questionnaire. Descriptive statistics, including frequencies, means, standard deviations, and percentages were then conducted to analyze students’ readiness for learner autonomy and their attitudes to SACs. The measurement model in AMOS 21.0 was to examine the relationship between the observed variables and latent variables, while the structural model was to find out the causal correlations among factors and learner autonomy.

3.7.2 Qualitative Data Analysis

The researcher adopted thematic analysis to analyze the qualitative data. Thematic analysis is a technique to identify, analyze, and report themes within

qualitative data (Braun & Clarke, 2006). It minimally organizes and describes data in great detail. Its biggest advantage is flexibility. The process of thematic analysis is familiarizing the researcher with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. Therefore, many researchers have adopted thematic analysis in their study: Cem Balçýkanlý (2010), Chan (2012), Davison (2011), Hadi (2012), Hsieh (2010), Ikonen (2013), Nguyen (2014), Rungwaraphong (2012), Su (2013), Wang (2014), Xiong (2011), Xu (2010), Xu (2012), Xu (2015), and Zhong (2012).

3.7.2.1 The Transcription and Translation Stage

Before analyzing qualitative data, the researcher transcribed the audio-taped data into written ones. According to Creswell (2012), to transcribe data from oral mode to written ones was also regarded as the initial analysis. In order to ensure the reliability of the data, a colleague of the researcher who was an expert in TESOL was invited to check the transcriptions of the data with the researcher. Together, they compared the original oral and written transcripts for several times to ensure the accuracy of the transcription. Then, the transcribed data was categorized according to the research questions, i.e., university EFL students' readiness for learner autonomy, the factors affecting university EFL students' learner autonomy, and the approaches of promoting learner autonomy in SACs.

When completing the transcription of interviews, the researcher, as a university English language teacher in China, translated the Chinese

transcripts into English. Liamputtong (2010) argued that a bicultural researcher was the most suitable to do cross-cultural study because he/she could overcome linguistic and cultural barriers. Then a licensed professional Chinese-English translator was invited to check the whole translated texts. The involvement of a third party could ensure the reliability of the translated texts and minimize errors in the translation. According to the translator's advice, the researcher revised some inaccurate translations.

3.7.2.2 Data Coding and Analysis

Data coding was to make a marker to the collected data, in which the researcher reviewed all the qualitative data, made connections, and constructed the meaning (Hood, 2009). The researcher in this study first performed open coding, i.e., colored the coded semi-structured interview data in red. Useful quotations which were about learners' learning objectives, study plans, learning strategies, learning motivations, learning beliefs, learning anxieties, and their relevant experiences on autonomous learning in SACs were highlighted through the use of thematic coding approach (Pavlenko, 2007). This was followed by a micro level of coding. In this process, the researcher paid special attention to the participants' language use (e.g., expressions of emotion, the use of pronouns, word choice) to offer more insight into how they positioned themselves in their autonomous English language learning in the context of SACs.

Then, the researcher compiled a code list. The coding schemes were revised again and again until they were most relevant to the research questions. To be

consistent, the code list would be revised if new ideas came out in the process of data analysis (Saldaña, 2009). The researcher formed sub-themes on the basis of similar codes, for example, setting up learning objectives (e.g., to pass CET-4 and CET-6), use learning strategies (e.g., pay special attention to the transitional words in reading), participating in various English activities (e.g., go to English corner to practice spoken English), learning motivation (e.g., to find a high-paid job after graduation), offering a large quantity of learning materials (e.g., paper-printed materials and e-learning materials), giving assignments (e.g., ask students to write an essay on a given topic), etc. Then, the researcher further constructed themes on the basis of the sub-themes, for example, university students' readiness for learner autonomy (e.g. setting up learning objectives, making study plans, using learning strategies, participating in various English activities, etc), factors affecting learner autonomy (e.g. learning motivation, English language proficiency, self-control, learning environment, learning habits, teachers' guidance, learning strategy, etc), approaches to promote learner autonomy (e.g. offering a large quantity of learning materials, providing some training for students, offering timely technical supports, etc). The coding procedure was presented in Table 3.1.

Table 3.1: The Coding Procedure

Research question	RQ 1. How ready are Chinese university EFL learners for learner autonomy in the context of Self-Access Centers?	RQ 2. What are the factors affecting learner autonomy?	RQ 3. How can Self-Access Centers promote learner autonomy?
Theme	university students' readiness for learner autonomy	factors affecting learner autonomy	approaches to promote learner autonomy
Sub-theme	setting up learning objectives, make study plans, use learning strategies, participating in various English activities, evaluating learning process, etc.	learning motivation, English language proficiency, self-control, learning environment, learning habits, teachers' guidance, learning strategy, learning materials, etc.	offering a large quantity of learning materials, providing some training for students, offering timely technical supports, organizing various English learning activities, giving assignments, etc.
Code	term goals, pass CET-4 and CET-6, study plan, time plan, listening strategy, communicative strategy, reading strategy, writing strategy, evaluation, disadvantage, learning outcome, cooperate, learning problems, etc.	find a high-paid job after graduation, pass English exams, interest, go abroad, language proficiency, self-control, metacognitive strategy, cognitive strategy, test anxiety, communication apprehension, fear of negative evaluation, learning environment, instruction, etc.	physical settings, learning facilities, paper-printed materials, e-learning materials, training on the use of hardware and software, maintenance, writing contest, write an essay on a given topic, English corner, monitor, instruction, evaluation, etc.

3.7.2.3 Interpreting Stage

The qualitative data were presented and analyzed in terms of quotes from the semi-structured interview transcripts. In this process, all names of the participants and of their universities were anonymous to protect the participants' anonymity. The data from interpretation was used to support either what the researcher had known or to connect and supplement the findings from previous studies. In most cases, quotes from the participants were integrated together with the interpretation to give the rich description and produce a smoother text.

3.7.2.4 Credibility and Dependability

The following steps were utilized to ensure credibility and dependability of the qualitative analysis.

Member checking. The interview transcripts were sent to the participants via e-mail for member check in terms of the accuracy and credibility of the data. The researcher also sought clarifications from the participants when some discrepancies were emerged.

Two-times-treatment of the qualitative data. In order to ensure the credibility and dependability of the thematic analysis, the two-times-treatment of the qualitative data was employed in this study. The researcher recoded, re-categorized, and reinterpreted the qualitative data from semi-structured interviews and compared the results with that of the first time, and 90% agreement was reached.

Triangulation of data and analysis. Student questionnaire and interview questions for students were utilized to collect data for investigating university students' readiness for learner autonomy. Student questionnaire, interview questions for students, interview questions for English language lecturers, and interview questions for SAC directors were employed to collect data for exploring factors affecting learner autonomy, and finding out approaches to promote learner autonomy in SACs. Drawing on multiple sources of evidence (e.g. survey, semi-structured interviews), the findings could be more reliable (Yin, 2012).

3.8 Ethical Issue

Consent form. The researcher submitted ethical clearance obtained from UTAR (Universiti Tunku Abdul Rahman) to those three universities. Before the commencement of the survey and interviews, participants would be asked to sign a consent form, which included information related to the purpose of the study, data collection method, assurances of anonymity and confidentiality, potential risks, and the right to withdraw the research. The consent form was written in Chinese for better understanding. Only the researcher and his two supervisors had access to the original and transcribed data.

Anonymity. In quantitative data collection, the identity of participants was protected by being anonymous. Before implementing the survey, participants were asked not to sign their names on it. The researcher can be accessible to the original data for doing research only, and his two supervisors can also have access to the original and transcribed data for instructing him to analyze quantitative and qualitative data.

Confidentiality. Ethical conduct for undertaking the study required maintaining participants' confidentiality. In order to abide by the established ethical standards for doing research, the information concerning the identification of every participant would not appear in the thesis, or in any publications related to the research findings. Meanwhile, participants were informed through the consent forms that their personal information would only be used for collecting and analyzing data in the process of thesis writing. For the interviews, the researcher used number to replace each interviewee's real

name, which would maintain their confidentiality. This number was the code for all qualitative data concerning the participants. The interviews were carried out in a way like daily conversation, which made the participants feel relaxed and willing to take part in the interviews. The interviews were recorded discreetly, so they would have little impact on participants.

Information storage. All data collected were kept under lock and key during the conduction of the research. Only the researcher, his two supervisors and the thesis committee could be accessible to the data. After the completion of the research, the data would be destroyed according to the requirements of UTAR Scientific and Ethical Review Committee.

Potential risks. This study would bring little risks to the participants. The survey and the interviews were conducted in Henan province, China. All the interviews were carried out in participants' university where it was available for both the researcher and participants. The participants' confidentiality was guaranteed through the de-identification of data. Audio recordings were destroyed when all qualitative data was transcribed. Before the recording, the participants were informed to have the right to withdraw when they felt uncomfortable. For those who were afraid that their talking would be released online, the researcher carefully explained the risks to them before they signed the consent forms.

3.9 Summary

In this chapter, the researcher presented the research methodology of this study, including the research design, research instruments, pilot study, sample of the study, data collection, and data analysis. Quantitative and qualitative methods were used in this study, because quantitative data collected through questionnaires and qualitative data collected from interviews can complement each other, offer exactness, and depth for the research, so the researcher can make better judgments about the findings and conclusions of the study. A pilot study was conducted to testify the validity and reliability of questionnaires and interview questions, the results of which showed that student questionnaire and semi-structured interview questions could be used in the actual study. The participants of the actual study were selected from three universities with SACs in Henan province, China. SPSS 22.0 and AMOS 21.0 were employed to analyze quantitative data, including factor analysis, descriptive analysis and path analysis, while content analysis and thematic analysis were used for analyzing qualitative data. Finally, ethical issues in this study were discussed. The next chapter will present the result of data analysis.

CHAPTER 4

RESULTS

4.1 Introduction

This chapter presents the results from the quantitative data collected from 569 survey participants and qualitative data obtained from semi-structured interviews with 15 lecturers, 15 students, and 3 SAC directors. It aims to answer the research questions in Chapter One. The objectives of this part are listed as follows: to investigate university students' readiness for learner autonomy in mainland China, to explore factors affecting learner autonomy, and to find out the approaches of promoting learner autonomy in Self-Access Centers.

4.2 Answering RQ 1: How ready are Chinese university EFL students for learner autonomy in the context of Self-Access Centers?

4.2.1 Descriptive Analysis

University students' readiness for learner autonomy was investigated from three aspects in this study: setting up learning objectives and making study plans, using language learning strategies, monitoring and evaluating the process of English language learning. Descriptive statistics, including percentage, frequency, mean, and standard deviation, were adopted to analyze university students' readiness for learner autonomy. Here, frequency means the number of subjects occur in a given option; mean is an average of a group

of data points; and standard deviation is to measure the dispersion of a set of data from its mean (Pallant, 2013). The scale was quantified by the 5-point Likert scale, in which the highest score of every item was 5 points, and the lowest score was 1 point.

Students’ overall readiness for learner autonomy. Table 4.1 shows that students’ overall readiness for learner autonomy was 3.57. Among these three dimensions, using language learning strategies had the highest mean, 3.65; followed by setting up learning objectives and making study plans, 3.58; while the mean of monitoring and evaluating the process of English language learning was the lowest, 3.53. The results indicated that university students’ readiness for learner autonomy was a little higher than the medium level, and students could use language learning strategies to some extent, but they had weak ability to monitor and evaluate their language learning process.

Table 4.1: Students’ Readiness for Learner Autonomy

Dimension	No.	Mean	S.D	Rank
Learning objectives and study plans	569	3.58	.72	2
Using language learning strategies	569	3.65	.81	1
Monitoring and evaluating the process of English language learning	569	3.53	.75	3
Students’ overall level readiness for learner autonomy	569	3.57	.78	

Setting up learning objectives and making study plans. The ability to set up one’s learning objectives and make study plans is the key variable of learner autonomy (Yang, 2012). Learning objectives are what students should be able to master after they have learnt a unit or the whole course, which can further navigate them to select suitable learning materials and appropriate learning

methods (Yang, 2012). Study plan refers to plans to reach a certain learning objective through various learning activities, learning strategies, and learning methods (Wang & Xiao, 2014).

As shown in Table 4.2, two-thirds of the participants (66.4%, $M=3.70$, $S.D.=.82$) agreed or strongly agreed that they could understand the course requirements and the class requirements; 59.6% of the participants ($M=3.64$, $S.D.=.93$) agreed or strongly agreed that it was very important to study hard according to the course objectives; only half of the participants (49.4 %, $M=3.39$, $S.D.=.84$) agreed or strongly agreed that they were able to set up English language learning objectives; only one third of the participants (33.6%, $M=3.15$, $S.D.=.83$) agreed or strongly agreed that they could realize their English language learning objectives; more than three-fourth of the participants (77.5%, $M=3.78$, $S.D.=.71$) agreed or strongly agreed that they could make a time plan to study English; 69.4% of the participants ($M=3.65$, $S.D.=.75$) agreed or strongly agreed that they could make a study plan according to their own situation; more than three-fourth of the participants (78.6%, $M=3.79$, $S.D.=.70$) agreed or strongly agreed that they adjusted their study plan if necessary.

According to the results of learning objectives and study plans of Chinese university students, the item with the highest mean score was “I adjust my study plan if necessary” ($M=3.79$, $S.D.=.70$). On the contrary, the item “I can realize my English language learning objectives” scored the lowest mean ($M=3.15$, $S.D.=.83$). The results of this part indicated that although university

students could adjust their study plans if it was necessary, they lacked the ability to realize them to some extent.

Table 4.2: Learning Objectives and Study Plans

Item	Strongly Disagree f (%)	Disagree f (%)	No Comment f (%)	Agree f (%)	Strongly Agree f (%)	N	M	S.D.
I understand the course requirements and the class requirements.	4 (0.7)	46 (8.1)	141 (24.8)	305 (53.6)	73 (12.8)	569	3.70	.82
I know it's very important to study hard according to the course objectives.	8 (1.4)	57 (10.0)	165 (29.0)	240 (42.2)	99 (17.4)	569	3.64	.93
I am able to set up English language learning objectives.	5 (0.9)	85 (14.9)	198 (34.8)	246 (43.2)	35 (6.2)	569	3.39	.84
I can realize my English language learning objectives.	10 (1.8)	106 (18.6)	262 (46.0)	169 (29.7)	22 (3.9)	569	3.15	.83
I make a time plan to study English.	3 (0.5)	38 (6.7)	87 (15.3)	393 (69.1)	48 (8.4)	569	3.78	.71
I can make a study plan according to my situation.	4 (0.7)	50 (8.8)	120 (21.1)	362 (63.6)	33 (5.8)	569	3.65	.75
I adjust my study plan if necessary.	4 (0.7)	35 (6.2)	83 (14.6)	400 (70.3)	47 (8.3)	569	3.79	.70

Using language learning strategies. It can be said that learning strategies for learners is just like fishing skills for fishermen. The use of suitable learning strategies could make learners learn a foreign language more easily, quickly, effectively, and independently. Therefore, if learners can employ appropriate learning strategies to their English language learning, they can get better academic results.

As shown in Table 4.3, more than two-thirds of the participants (67.1%, M=3.72, S.D.=.83) agreed or strongly agreed that they understood foreign language learning strategies in general; more than half of the participants

(52.6%, $M=3.40$, $S.D.=.84$) agreed or strongly agreed that they used listening strategies when they practiced their listening skills; 55.7% of the participants ($M=3.47$, $S.D.=.80$) agreed or strongly agreed they used communicative strategies when they practiced their oral English; nearly two-thirds of the participants (65.5%, $M=3.61$, $S.D.=.77$) agreed or strongly agreed they used reading strategies when they did English reading comprehension; 65.1% of the participants ($M=3.62$, $S.D.=.78$) agreed or strongly agreed they used writing strategies when they wrote in English; more than three-fourth of the participants (77.6%, $M=3.79$, $S.D.=.66$) agreed or strongly agreed they adjusted their learning strategies if they found they were not suitable for them.

Based on the results of language learning strategies that were used by Chinese university students, the item “I adjust my learning strategies if I find they are not suitable for me” scored the highest mean ($M=3.79$, $S.D.=.66$). In comparison, the item with the lowest mean was “I use listening strategies when I practice my listening skills” ($M=3.40$, $S.D.=.84$). The results revealed that Chinese university students did not often use English listening strategies, but they could adjust their language learning strategies if they found they were not suitable for them.

Table 4.3: Using Language Learning Strategies

Item	Strongly Disagree f (%)	Disagree f (%)	No Comment f (%)	Agree f (%)	Strongly Agree f (%)	N	M	S.D.
I understand foreign language learning strategies in general.	2 (0.4)	50 (8.8)	135 (23.7)	300 (52.7)	82 (14.4)	569	3.72	.83
I use listening strategies when I practice my listening skills.	3 (0.5)	93 (16.3)	174 (30.6)	269 (47.3)	30 (5.3)	569	3.40	.84
I use communicative strategies when I practice my oral English.	6 (1.1)	65 (11.4)	181 (31.8)	288 (50.6)	29 (5.1)	569	3.47	.80
I use reading strategies when I do English reading.	3 (0.5)	55 (9.7)	138 (24.3)	337 (59.2)	36 (6.3)	569	3.61	.77
I use writing strategies when I write in English.	3 (0.5)	54 (9.5)	142 (25.0)	327 (57.5)	43 (7.6)	569	3.62	.78
I adjust my learning strategies if I find they are not suitable for me.	4 (0.7)	25 (4.4)	99 (17.4)	402 (70.7)	39 (6.9)	569	3.79	.66

Monitoring and evaluating the process of English language learning. This included not only the cognitive process of making study plans, selecting learning strategies, determining learning materials, and evaluating learning outcomes, but also contained the non-cognitive factors like learning interests, attitudes, motivation, and emotions (He, 2012).

As shown in Table 4.4, 70.7% of the participants (M=3.70, S.D.=.73) agreed or strongly agreed that they evaluated their learning outcomes in order to find the problems of their study; only a little more than one third of the participants (35.7%, M=3.15, S.D.=.86) agreed or strongly agreed that they could find opportunities to learn English out of class; 72.9% of the participants (M=3.73, S.D.=.74) agreed or strongly agreed they were able to make full use of the

available learning resources; nearly three-fifth of the participants (59.6%, $M=3.58$, $S.D.=.82$) agreed or strongly agreed they tried to use the new knowledge when they practiced their English; a little more than three-fifth of the participants (61.0%, $M=3.57$, $S.D.=.77$) agreed or strongly agreed that they cooperated and learnt together with their classmates; about two-thirds of the participants (65.6%, $M=3.64$, $S.D.=.78$) agreed or strongly agreed they knew the reasons why they made mistakes and would take actions to correct them.

Based on the results of monitoring and evaluating the process of English language learning of Chinese university students, the item “I am able to make full use of the available learning resources” scored the highest mean ($M=3.73$, $S.D.=.74$). On the contrary, the item with the lowest mean was “I find opportunities to learn English out of class” ($M=3.15$, $S.D.=.86$). The results showed that Chinese university students could make full use of the available learning resources, whereas they could not find opportunities to learn English out of class.

Table 4.4: Monitoring and Evaluating the Process of English Language Learning

Item	Strongly Disagree f (%)	Disagree f (%)	No Comment f (%)	Agree f (%)	Strongly Agree f (%)	N	M	S.D.
I evaluate my learning outcomes in order to find the problems of my study.	4 (0.7)	36 (6.3)	127 (22.3)	360 (63.3)	42 (7.4)	569	3.70	.73
I find opportunities to learn English out of class.	6 (1.1)	132 (23.2)	228 (40.1)	179 (31.5)	24 (4.2)	569	3.15	.86
I am able to make full use of the available learning resources.	2 (0.4)	45 (7.9)	107 (18.8)	366 (64.3)	49 (8.6)	569	3.73	.74
I try to use the new knowledge when I practice my English.	2 (0.4)	60 (10.5)	168 (29.5)	282 (49.6)	57 (10.0)	569	3.58	.82
I can cooperate and learn together with my classmates.	1 (0.2)	57 (10.0)	164 (28.8)	309 (54.3)	38 (6.7)	569	3.57	.77
I know the reasons why I make mistakes and will take actions to correct them.	3 (0.5)	52 (9.1)	141 (24.8)	326 (57.3)	47 (8.3)	569	3.64	.78

4.2.2 Thematic Analysis

In order to explore whether students were ready for learner autonomy in the context of Self-Access Centers, five interview questions were designed for them: 1) What learning objectives do you set in your English language study? Can you make them come true? 2) What study plans do you make to achieve your learning objectives? 3) What kind of language learning strategies do you employ in your study? 4) How do you monitor your learning process in class and out-of-class? and 5) How do you evaluate your English language learning outcomes?

To the interview question “What learning objectives do you set in your English language study? Can you make them come true?” the interview results of students were displayed as follows.

Student 1: Well, for me, I set up English language learning objectives. My goal is to pass CET-4 (College English Test band-4) and CET-6 (College English Test band-6), because the certificate of CET-4 or CET-6 can help me find a good job. However, it is not easy to realize these objectives.

Student 2: Ok, I can set up learning objectives. When my scores are not ideal, I will think over what I should do next and what kind of learning goals I should have. You know, my major is International Trade and Commerce, so oral English is rather important when I apply for a promising job in the future. As a result, I want to improve my oral English and grant a certificate for oral English.

Student 5: In my opinion, only a student has his/her own learning objectives, can he/she find the right way to success and make great progress in his/her study. As for me, I think that vocabulary is very important in my English writing, so after learning every unit, I will spare some time to recite those new words. I remember that at one time I correctly spelled all the words on the blackboard in my English class. I felt proud of myself at that time.

Student 10: To tell you the truth, my favorite subject is English. I had developed a habit of setting up learning objectives when I was a secondary school student. My long-term goal is to speak English fluently so that I can talk with English native speakers without difficulty, and fully express myself.

To the interview question “What study plans do you make to achieve your learning objectives?” the interview results of students were given below.

Student 1: Frankly speaking, I have a dream to speak English fluently. As a result, I make a study plan to improve my English speaking power. For instance, I listen to *VOA Special English* for half an hour, and then read some classic English reading materials for another half an hour every day. At the weekend, I go to English corner to practice my spoken English with my roommates.

Student 6: You know, CET-4 counts a lot in job-hunting after graduation, so I make a study plan to pass CET-4. Usually, I go to the SAC to do some listening for thirty minutes, and do some reading exercises for one hour, and finally write a composition. Nevertheless, it is

unimaginable that I failed in CET-4. Then, I lost the confidence to carry out my plan any more.

Student 14: Well, for me, I can make a study plan according to my own situation. Then, I will evaluate whether the study plan is suitable for my study or not after having carried it out for some time. For instance, I now try my best to remember English new words through a kind of learning software BaiCiZhan. At the very beginning, I recite twenty words in a day. Soon, I find that it is easy to arrive at this aim, so I increase the number of words in a day.

To the interview question “What kind of language learning strategies do you employ in your study?” the interview results of students were presented as follows.

Student 11: Uh, let me think. Ok, I use suitable reading strategies when I take part in exams. For example, I will look at the questions behind the article first, and then go back to skim the article to find related information. In addition, I pay special attention to the transitional words like but, however, nevertheless and the sequential words like firstly, secondly, thirdly, and last.

Student 14: As far as I am concerned, I often use listening strategies when I practice my listening comprehension. For example, I use the knowledge of English pronunciation, intonation, grammar, and culture for understanding listening materials better. In addition, listening is the precondition to speaking. Without the powerful listening power, it is no way to enhance my speaking power.

Student 15: Uh, I use writing strategies when I take English examinations. After I have gotten the title of a composition, I will firstly construct a frame and decide the main sentence. Then I spend a lot of time writing the opening paragraph, because the examiner will read this paragraph first.

To the interview question “How do you monitor your learning process in class and out-of-class?” the interview results of students were shown below.

Student 1: Well, after I set up learning objectives and make study plans, I will monitor the implementation of them in my study. For instance, I often self-question myself “what will I learn?”, “How to learn?”, “What about my learning effects?”, and “Have I realized my learning objectives?”. From my point of view, this way of

reflection has strengthened my ability to monitor the learning process.

Student 10: As far as I am concerned, I can monitor my English language learning process. With my English language teacher's help, I often write notes to reflect on my language learning. If I find that I have realized my English language learning objectives, I will reward myself, like going out for a big dinner, buy some beautiful clothes, or seeing a film. If I have not realized my objectives, I will find out the reasons, and take some measures to solve them.

Student 13: To me, I often reflect on my self-study. After I have entered the university, I clearly know that spoken English counts a lot in my future job-hunting. However, my English speaking power is weak, so I try my best to find out the most suitable way to practice my spoken English, including pronunciation, intonation, stress, and rhythm. Besides, I go to English corner at our university nearly every weekend and communicate with different people. During the communication, I will ask my partner to pick out my mistakes, and then try to correct them as possible as I can. After a lot of practice, I can speak English quite well.

To the interview question "How do you evaluate your English language learning outcomes?" the interview results of students were displayed below.

Student 5: You know, ever since my secondary school days, I have developed a habit of evaluating my English language scores. For example, I often collect some mistakes, and try to find the solutions of them. I clearly know that only when I know where I make mistakes can I make some progress next time.

Student 10: Personally speaking, as university students in information era, we should have the ability to find out our weak points in English language acquisition, and take some corresponding measures to make up them. For instance, I failed in CET-4 in last semester, because my listening comprehension is poor. As a consequence, I often come to Self-access center to do some CET-4 listening exercises. After half a year, my English listening power is significantly promoted.

Student 12: Here, I want to tell you something different. In my university, the scores in final exams account eighty percent of the whole scores, while our daily performance only occupies a small share. For some students, they often play computer games, go to the pubs, hang around the street, and murmur to other students in class. However, they can get good academic achievements in the final exams, and get the scholarships too. This is unfair to those who always attend class on time, answer the teacher's questions

voluntarily, and behave well in the class. As a consequence, I think that our English language teacher should evaluate the whole learning process.

After reading through the interview data, open coding was conducted to extract concepts and categories. From the interviews, some sub-themes were identified in this part, which included setting up learning objectives, making study plans, the use of language learning strategies, monitoring learning process, and evaluating learning outcomes.

Setting up learning objectives. The majority of students (n=12) were aware of the importance of setting up learning objectives, because “only a student has his/her own learning objectives, can he/she find the right way to success and make great progress in his/her study” (Student 5). Students’ English learning objectives could be divided into short-term, medium-term and long-term objectives. The first objectives usually referred to mastering the new words, phrases, sentence structure, and main idea of a unit, as one participant claimed: “I now try my best to remember English new words through a kind of learning software BaiCiZhan. ... I recite twenty words in a day” (Student 14).

The second objectives were about passing various English tests, like middle term and final term test, CET-4, CET-6, IELTS, and TOEFL. For example, one participant stated: “My goal is to pass CET-4 (College English Test band-4) and CET-6 (College English Test band-6), because the certificate of CET-4 or CET-6 can help me find a good job” (Student 1). This indicated that in today’s China, a lot of students are quite practical. They learn what the society requires, and what the society does not require, they probably do not learn.

Unfortunately, this statement was supported by many participants who lost learning motivation after having passed CET-4 or CET-6. As a result, those students only knew how to get high scores in English examinations, but did not know how to communicate with native English speakers.

The last objectives that refer to one's future work can motivate the learners to learn English for a long time, like speaking English very fluently, reading original English materials without difficulty, and easily communicating with the native speakers. According to the interview, only some students (n=5) set up long-term learning objectives, just as one mentioned that his long-term goal was "to speak English fluently so that I can talk with English native speakers without difficulty, and fully express myself" (Student 10). In order to realize this learning objective, he took a lot of English learning activities like going to English corner to practice his oral English with peers, and at the same time he participated in English speaking contests to strengthen his critical thinking ability and presentation skills.

Making study plans. After students have set up learning objectives, the next step for them is to make study plans to realize the objectives, which can navigate students successfully complete their course in an effective and organized way. Scientific study plans are the preconditions of accomplishing various learning activities so as to improve learning efficiency, just as a famous Chinese proverb says: "Preparedness ensures success, unpreparedness spells failure." In addition, students should also be able to find out the

problems in their learning process and make corresponding measures to avoid the blindness and irrationality in learning activities.

Ten students mentioned that they made study plans to realize their learning objectives. For improving his English speaking power, one participant told the researcher: “I listen to *VOA (Voice of America) Special English* for half an hour, and then read some classic English reading materials for another half an hour every day. At the weekend, I go to the English corner to practice my spoken English with my roommates” (Student 1). However, to follow the study plan in a short time is easy, but to carry it out for a long time is rather difficult, because it needs a learner’s hard work, self-control, intelligence, and perseverance. In addition, many students do not have strong self-discipline, thus cannot refuse the inside and outside temptations such as computer games, material pleasures, dating with boyfriends/girlfriends, and various entertaining activities. Some students (n=4) had made their study plans, but failed to carry them out from start to end. One student shared her experience: “it is unimaginable that I failed in CET-4. Then, I lost the confidence to carry out my plan any more” (Student 6).

The use of language learning strategies. The capability to use appropriate learning strategies is a key variable of learner autonomy, so the investigation of it can help to measure students’ level of learner autonomy. The majority of students (n=12) claimed that they used learning strategies in their English language learning. The reason is that if students can use suitable strategies like

listening, reading, and writing strategies in their English language learning, they can get higher scores in the final English examinations.

The most frequently used learning strategies were English listening, reading, and writing strategies. Nine participants reported that they often used English listening strategies. One participant explained that listening comprehension counted a lot in CET-4 and CET-6, so if a student was bad at English listening comprehension, he/she was likely to fail in the exam. As a result, many students summarize a set of listening strategies to promote their English listening proficiency. For instance, one student said “I use the knowledge of English pronunciation, intonation, grammar, and culture for understanding listening materials better” (Student 14). Ten participants reported that they often used English reading strategies. For example, one participant “will look at the questions behind the article first, and then go back to skim the article to find related information” (Student 11). In addition, the English teacher would teach students how to do English reading comprehension in the class, and he himself would also summarize some reading strategies. Compared to English listening and reading strategies, only some students (n=7) reported that they often used English writing strategies, just as one participant admitted: “I spend a lot of time writing the opening paragraph, because the examiner will read this paragraph first” (Student 15). However, the participants did not mention that they often adopt communicative strategies, maybe because they seldom used English after class.

Self-monitoring learning process. In order to acquire English language better, it is quite necessary to monitor the whole process of English language learning activities. In the monitoring process, learners take their ongoing learning activities as the object to monitor and regulate their activities consciously and continuously, including the supervision, inspection, evaluation, feedback, control, and adjustment of their learning activities. Only some students (n=5) said that they could monitor their English language learning process. One participant shared his experience: “I often self-question myself ‘what will I learn?’, ‘How to learn?’, ‘What about my learning effects?’, and ‘Have I realized my learning objectives?’ ” (Student 1) This way of self-reflection and monitoring helps English language learners know clearly about their learning effects, and thus set up new learning objectives or revise the old ones to ensure the success of their English language learning. Moreover, when students have found out their mistakes, they will adopt some remedial measures to make up their weak points. In this aspect, one participant did much better than other students, for he tried his best to “find out the most suitable way to practice my pronunciation, intonation, stress, and rhythm. ... I will ask my partner to pick out my mistakes, and then try to correct them as possible as I can” (Student 13).

Evaluating learning outcomes. The evaluation of learning outcomes is to find out the existing problems in the learning process, based on which students can correct their mistakes. In universities, learners are encouraged to learn English autonomously out of class, for they seldom receive the face-to-face instruction after class. As a result, it is crucially important for Chinese EFL

learners to evaluate their learning outcomes. Only in this way can they have good academic results in final examinations. Ten participants reported that they often evaluated their learning outcomes. One student tried to explore the reason why he failed in CET-4, and discovered that it was his poor English listening proficiency that led to this failure, as he stated: “as university students in information era, we should have the ability to find out our weak points in English language acquisition, and take some corresponding measures to make up them” (Student 10). In addition, English language teachers also need to change the traditional way of summative assessment, and add the weight of formative assessment, for it can help English teachers adjust their teaching plans according to the feedback from the formative assessment, and offer some specific instructions to their students’ learning activities. One participant complained: “In my university, the scores in final exams account eighty percent of the whole scores, while our daily performance only occupies a small share” (Student 12).

From the qualitative data analysis, it could be concluded that the participants could make learning objectives according to their own situation, which included short-term, medium-term and long-terms goals. Moreover, most participants mentioned that they made study plans to realize their learning objectives. However, some of them could not carry out the plans for a long time for the lack of self-control, hard work, and perseverance. In addition, university students in China could employ English language learning strategies in general; the most frequently used were English listening, reading, and writing strategies. Nevertheless, the participants did not mention that they

adopted communicative strategies, maybe because they seldom used English after class. At last, only some students could monitor their English language learning process, whereas most students evaluated their learning outcomes to find out the existing problems in the learning process, and took some corresponding measures to solve the problems. The results of qualitative data coincided with the quantitative data, suggesting that Chinese university EFL learners were ready for learner autonomy.

4.3 Answering RQ 2: What are the factors affecting Chinese university

EFL students' learner autonomy in the context of Self-Access Centers?

4.3.1 Measurement Model

Analysis of Moment Structures 21.0 (AMOS) was utilized in this study to find out the correlations among language learning belief, strategy, motivation, anxiety, teachers' role and learner autonomy. In AMOS, the measurement model should be performed first for all latent constructs before setting up a structural model to investigate the inter-relationships among the latent constructs. The measurement model is used to investigate the relationship between the observed variables and latent variables (Wu, 2010), in which observed variables can be measured in data collection procedure through questionnaires or other quantitative research instruments, while latent variables are concepts that are measured by one or more observed variables. In order to test goodness of fit and construct validity, all latent variables in the measurement model are supposed to be correlated with each other. As far as this study is concerned, a measurement model is set up by making latent

variables, namely, language learning belief, strategy, motivation, anxiety, teachers' role and learner autonomy, be related to each other. The results of measurement model in Amos 21.0 are shown below.

Multiple goodness-of-fit indices were adopted to examine whether the measurement model matched with the data. As presented in Figure 4.1, X^2/DF was 2.618, suggesting that the data matched the default model well, for X^2/DF value in the range of 1-3 indicated a good model fit (Wu, 2010). In addition, other model fit indices like GFI=.962, AGFI=.934, TLI=.920, NFI=.918, CN=287.00 and RMSEA=.053 showed that the measurement model matched with the data. When GFI, AGFI, TLI, NFI values of the default model were greater than .90, CN>200, and RMSEA value less than .08, it was a good fit (Wu, 2010). However, the P-value of Chi-square was significant ($p=.000<.05$), it may be due to the large sample size in this study ($n=569$), because Chi-square value is very sensitive to the research sample, and is likely to become significant when the research sample is large enough (Wu, 2010). Taking all goodness-of-fit indices into consideration, the measurement model in this study was accepted, thus path analysis could be performed.

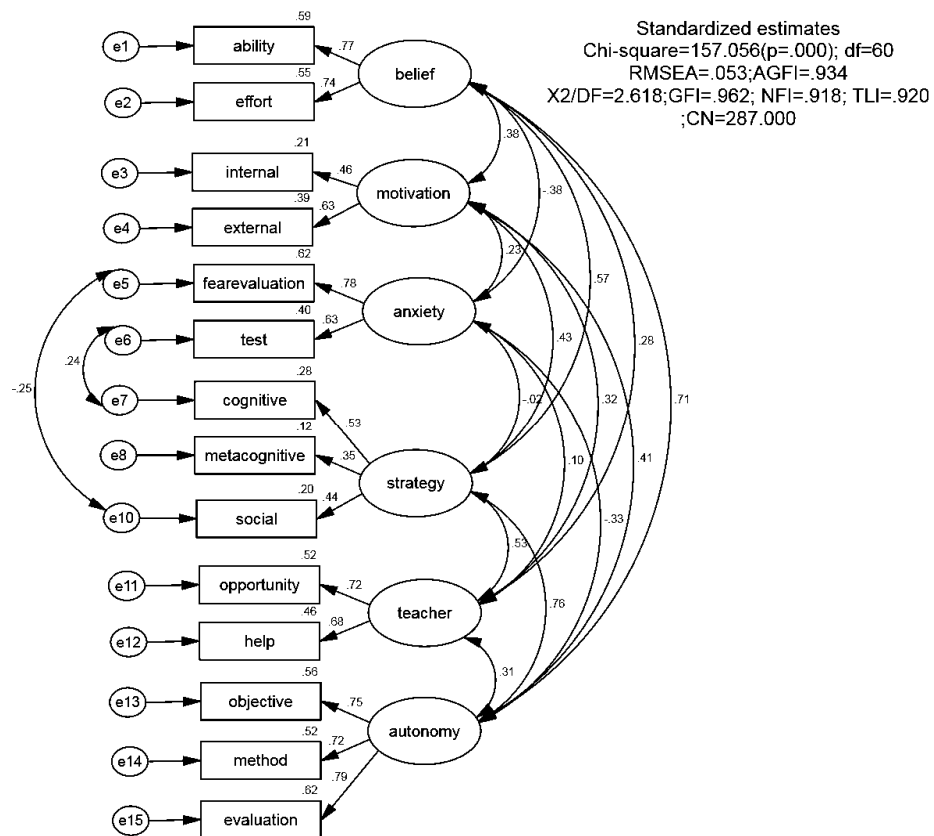


Figure 4.1: Measurement Model in this Study

4.3.2 Path Analysis

Path analysis in AMOS 21.0 was utilized in this study to find out the causal relationships among language learning belief, strategy, motivation, anxiety, teachers' role and learner autonomy. By the literature, the researcher let language learning belief, anxiety, and teachers' role be the independent variables, language learning strategy and motivation be mediating variables, and learner autonomy be the dependent variable, then created the model. The standardized indirect effects of four variables, namely, language learning belief, motivation, anxiety, and teachers' role on learner autonomy, were tested by using bootstrapping methods. Byrne (2010) defined bootstrapping as "a re-sampling procedure whereby multiple sub-samples of the same size as

the original sample are drawn randomly to provide data for empirical investigation of the variability of parameter estimates and indices of fit” (pp. 330-331). The lower bounds, upper bounds, and two-tailed significance of bias-corrected confidence intervals were utilized to justify whether the total effects, direct effects, and indirect effects were significant.

The results of regression weights in the saturated model were presented in the following table. From Table 4.5, it could be seen that all Critical Ratio (C. R.) values of paths were bigger than 1.96 except for teacher→ autonomy and anxiety→ strategy, suggesting that the other ten regression coefficients of direct effects was statistically significant at the .001 level. That is to say, language learning beliefs can significantly directly affect learning motivation. The same thing happened on anxiety to motivation, teacher to motivation, belief to strategy, motivation to strategy, teacher to strategy, belief to autonomy, strategy to autonomy, motivation to autonomy, anxiety to autonomy. As a result, except for teacher→ autonomy and anxiety→ strategy, the structural model in Amos 21.0 supported the other ten hypothesized paths, showing that the supposed interrelationships between any other two variables were founded.

Table 4.5: Regression Weights

	Estimate	S.E.	C.R.	<i>p</i>
motivation <--- belief	.391	.038	10.359	***
motivation <---anxiety	.159	.031	5.145	***
motivation <---teacher	.164	.051	3.226	***
strategy <--- belief	.256	.049	5.274	***
strategy <---teacher	.340	.061	5.608	***
strategy <--- motivation	.188	.050	3.795	***
strategy <--- anxiety	.031	.037	.819	.413
autonomy <---strategy	.572	.076	7.568	***
autonomy <---motivation	.383	.090	4.247	***
autonomy <---anxiety	-.286	.067	-4.250	***
autonomy <---belief	.803	.089	8.975	***
autonomy <---teacher	.155	.112	1.386	.166

The insignificant links of teacher → autonomy and anxiety → strategy in the hypothesized structural model (Figure 2.1) were deleted. Then, the researcher requested AMOS 21.0 to perform bootstrapping on 2000 samples through the use of the Maximum likelihood estimator and to offer bias-corrected confidence intervals for estimating parameter bootstraps with the 95% confidence level. Figure 4.2 was obtained.

Multiple fit indices were used to evaluate whether the default model fitted the data. As presented in Figure 4.2, Chi-square value was 2.588 ($p = .274 > .05$), suggesting that the default model well matched with research data, for the insignificant P-value indicated a good model fit (Wu, 2010). In addition, $X^2/DF = 1.294$ lay in the range of 1-3, suggesting a good fit. Furthermore, other model fit indices like AGFI=.984, GFI=.998, TLI=.993, NFI=.996, RMSEA=.023, and CN=1315.00 showed that the default model in the present study fitted the data well. When AGFI, GFI, TLI, NFI values of the default

model were greater than .90, CN>200, RMSEA value less than .05, it was a good model fit (Wu, 2010).

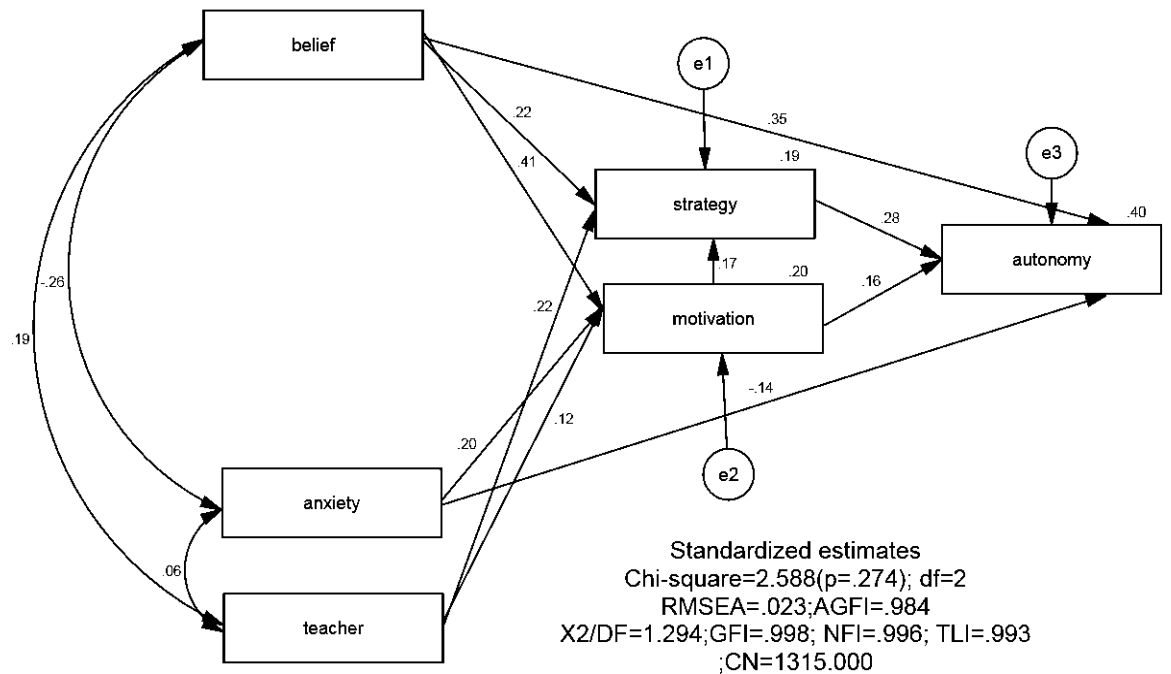


Figure 4.2: Path Analysis Diagram of Different Factors to Learner Autonomy

The researcher summarized the results of standardized total effects, standardized direct effects, and standardized indirect effects of each variable, namely, language learning belief, strategy, motivation, anxiety, and teacher’s role on learner autonomy. In addition, the lower bounds, upper bounds, two-tailed significance of bootstrap confidence by using Bias-corrected percentile method were also presented in the following tables.

Table 4.6: Standardized Direct Effects with Bootstrapping to Check Mediating Effects

Path	Standardized Direct Effects	Bootstrap		<i>p</i>
		Lower Bounds	Upper Bounds	
autonomy<---belief	.348	.274	.413	.001
autonomy<---strategy	.283	.205	.365	.001
autonomy<---motivation	.161	.080	.244	.001
autonomy<---anxiety	-.143	-.212	-.070	.002
autonomy<---teacher	.000	.000	.000	...

Table 4.7: Standardized Indirect Effects with Bootstrapping to Check Mediating Effects

Path	Standardized Indirect Effects	Bootstrap		<i>p</i>
		Lower Bounds	Upper Bounds	
autonomy<---belief	.147	.107	.193	.001
autonomy<---strategy	.000	.000	.000	...
autonomy<---motivation	.048	.021	.084	.001
autonomy<---anxiety	.042	.020	.074	.000
autonomy<---teacher	.089	.056	.128	.001

Table 4.8: Standardized Total Effects with Bootstrapping to Check Mediating Effects

Path	Standardized Total Effects	Bootstrap		<i>p</i>
		Lower Bounds	Upper Bounds	
autonomy<---belief	.495	.428	.554	.001
autonomy<---strategy	.283	.205	.365	.001
autonomy<---motivation	.208	.128	.294	.001
autonomy<---anxiety	-.101	-.171	-.021	.017
autonomy<---teacher	.089	.056	.128	.001

First of all, language learning belief, as an independent variable, can directly affect learner autonomy. Besides, it can indirectly affect learner autonomy through the mediating function of two mediators, namely, language learning strategy and motivation. As presented in Table 4.6, it can be seen that for the standardized direct effects of language learning belief on learner autonomy,

the confidence interval was positive with the lower bound of bootstrap .274 and that of the upper bound .413, not including zero. In addition, the p-value of bootstrap confidence was significant ($p=.001<.05$), suggesting that language learning belief can significantly directly affect learner autonomy with the direct effect .348. Table 4.7 showed that for the standardized indirect effects of language learning belief on learner autonomy, the confidence interval was positive with the lower bound of bootstrap .107 and that of the upper bound .193, not including zero. Moreover, the p-value of bootstrap confidence was significant ($p=.001<.05$), suggesting that language learning belief can significantly indirectly affect learner autonomy with the indirect effect .147. Table 4.8 indicated that for the standardized total effects of language learning belief on learner autonomy, the confidence interval was positive with the lower bound of bootstrap .428 and that of the upper bound .554, not including zero. Besides, the p-value of bootstrap confidence was significant ($p=.001<.05$), suggesting that language learning belief can significantly affect learner autonomy with the total effects .495.

Then, language learning strategy, as a mediating variable in the model, can directly influence learner autonomy. As Table 4.6 indicated that for the standardized direct effects of language learning strategy on learner autonomy, the confidence interval was positive with the lower bound of bootstrap .205 and that of the upper bound .365, not including zero. Moreover, the p-value of bootstrap confidence was significant ($p=.001<.05$), suggesting that language learning strategy can significantly directly affect learner autonomy with the direct effect .283. Table 4.7 showed that language learning strategy did not

have indirect effects on learner autonomy, for the standardized indirect effect was zero. As a result, the standardized total effects of language learning strategy on learner autonomy was that of the standardized direct effects (.283), because language learning strategy did not have indirect effects on learner autonomy, which was further proved by corresponding results in Table 4.8.

Furthermore, language learning motivation, as a mediating variable, can directly affect learner autonomy. Meanwhile it can also indirectly affect learner autonomy through the mediating function of language learning strategy. From Table 4.6, it can be seen that for the standardized direct effects of language learning motivation on learner autonomy, the confidence interval was positive with the lower bound of bootstrap .080 and that of the upper bound .244, not including zero. Moreover, the p-value of bootstrap confidence was significant ($p=.001<.05$), suggesting that language learning motivation can significantly directly influence learner autonomy with the direct effects .161. Table 4.7 showed that for the standardized indirect effects of language learning motivation on learner autonomy, the confidence interval was positive with the lower bound of bootstrap .021 and that of the upper bound .084, not including zero. Moreover, the p-value of bootstrap confidence was significant ($p=.001<.05$), suggesting that language learning motivation can significantly indirectly affect learner autonomy with the indirect effect .048. From Table 4.8, it can be known that for the standardized total effects of language learning motivation on learner autonomy, the confidence interval was positive with the lower bound of bootstrap .128 and that of the upper bound .294, not including zero. Moreover, the p-value of bootstrap

confidence was significant ($p=.001<.05$), suggesting that language learning motivation had significant total effects on learner autonomy with the value of .208.

Next to the last, language learning anxiety, as an independent variable, can directly affect learner autonomy. At the same time, it can indirectly affect learner autonomy through the mediating function of language learning motivation. As shown in Table 4.6, it can be seen that for the standardized direct effects of language learning anxiety on learner autonomy, the confidence interval was negative with the lower bound of bootstrap -.212 and that of the upper bound -.070, not including zero. In addition, the p-value of bootstrap confidence was significant ($p=.002<.05$), suggesting that language learning anxiety can significantly directly affect learner autonomy in a negative way with the direct effect -.143. Table 4.7 revealed that for the standardized indirect effects of language learning anxiety on learner autonomy, the confidence interval was positive with the lower bound of bootstrap .020 and that of the upper bound .074, not including zero. Moreover, the p-value of bootstrap confidence was significant ($p=.000<.05$), suggesting that language learning anxiety can significantly indirectly affect learner autonomy with the indirect effect .042. As Table 4.8 indicated that for the standardized total effects of language learning anxiety on learner autonomy, the confidence interval was negative with the lower bound of bootstrap -.171 and that of the upper bound -.021, not including zero. Besides, the p-value of bootstrap confidence was significant ($p=.017<.05$), suggesting that language learning

anxiety can significantly affect learner autonomy in a negative way with the total effects -.101.

Last, English teachers' role, as an independent variable, indirectly affect learner autonomy through the mediating function of two mediators, namely, language learning strategy and motivation. As presented in Table 4.6, it can be seen that teachers' role did not have direct effects on learner autonomy, for the standardized direct effect was zero. Table 4.7 showed that for the standardized indirect effects of teachers' role on learner autonomy, the confidence interval was positive with the lower bound of bootstrap .056 and that of the upper bound .128, not including zero. Moreover, the p-value of bootstrap confidence was significant ($p=.001<.05$), suggesting that teachers' role can significantly indirectly affect learner autonomy with the indirect effect .089. Consequently, the standardized total effects of teachers' role on learner autonomy was that of standardized indirect effects (.089), because teachers' role did not have direct effects on learner autonomy, which was further proved by corresponding results in Table 4.8.

To conclude, language learning belief, strategy, motivation, anxiety had significantly direct effect on learner autonomy in a decreasing order, whereas teachers' role did not have significantly direct effects on learner autonomy. In addition, language learning belief and teachers' role had indirect effects on learner autonomy through the mediating function of language learning strategy and motivation. Similarly, language learning motivation can indirectly affect learner autonomy through the mediating function of language learning strategy.

Language learning anxiety can indirectly affect learner autonomy through the mediating function of language learning motivation. In sum, language learning belief had the greatest total effects on learner autonomy, followed by language learning strategy, motivation, anxiety, and teachers' role. Though English teachers do not have significant and direct effects on learner autonomy, they can exert influence on it through the mediating roles of language learning strategy and motivation.

4.3.3 Thematic Analysis

In order to explore more factors affecting learner autonomy, the researcher designed one question "What are the factors affecting learner autonomy?" for students, English language lecturers as well as SAC directors. Knowing what kind of factors affect learner autonomy, English language teachers can promote learner autonomy by strengthening or weakening those factors. The interview results were presented as follows.

To the interview question "What are the factors affecting learner autonomy?" the interview results of students are displayed below.

Student 1: Let me think. First of all, I think language learning strategy is a vital factor. For instance, I often employ some listening strategies in my self-study. Before listening, I often scan the item on exam papers as quickly as I can so that I can roughly guess the main content and associate the ongoing content with my own knowledge. While listening, I often concentrate my mind and try to grasp the main points by making use of pronunciation, intonation, grammar, and culture.

Student 2: Well, I think two factors can affect learner autonomy. One is language learning motivation. As a university student, I want to find a high-paid job after graduation, but most employers will ask the applicants to show their scores of College English Test Band 4 or Band 6. As a result, I make great efforts to learn English

language autonomously. The other is learning atmosphere. For example, if two students murmur to each other in the self-study room, then I cannot concentrate myself, and the learning will become very ineffective.

Student 4: In my opinion, students' personal factors count a lot in affecting learner autonomy. For example, my interest in learning English can be dated from my secondary school days when I read a simplified novel named Robinson Crusoe. I was really attracted by the hero Robinson's adventures and then I became interested in learning English in order to read more adventurous English stories. In addition, I think that the ability to put theory into practice is also very important. Since the last semester of the first year in the university, I tried to do some social practice. For example, I went to a primary school in the countryside with my classmates during last summer holiday. There, we taught the kids how to pronounce some English words, how to read English articles, and how to learn English grammar.

Student 6: It seems to me that self-control is very important in this money-oriented society. If you are always attracted by the outside world, you cannot perform very well in your academic study. Besides, learning facilities are very important. For example, if there is something wrong with my computer, then I cannot look for materials or practice my listening comprehension. I will become very irritable

Student 7: In my point of view, individual's factors can influence learner autonomy more than external factors. For example, when I am invited to make a presentation in the classroom, I become sweating because I am afraid that I cannot make myself understood due to my poor spoken English. Besides, there are more than sixty students in our class, and I am scared to make mistakes in terms of pronunciation, or intonation, or grammar. Consequently, I do not like to express myself in public.

Student 8: In my opinion, self-control counts a lot in autonomous learning. Sometimes, I do not want to study hard in my free time. When my roommates go out for singing or dancing at weekend, I will go with them. Gradually, I lag behind. In addition, language learning anxiety will also affect my English learning. You know, I am easily to be nervous. My sense of anxiety increases as an English test is coming especially CET-4, because the certificate of CET-4 is required in job application. If I cannot pass the test, I am afraid that I cannot find a high-paid job.

Student 9: What factors? Let me think. I am just interested in learning English, even though I do not know why. In my free time, I would like to spend a lot of time imitating the intonation and pronunciation of native speakers, and gradually I have made great progress in my

spoken English. Besides, I think where there is a will, there is a way. As we know, Helen Keller lost her sight when she was a little kid. However, she became a well-known writer at last because she never gave up. I think that I will learn English well at last through hard work and suitable use of learning strategies.

Student 11: In my mind, there are many factors affecting learner autonomy. The most important is the workability of learning materials. If it is very difficult to learn the materials, I possibly will give up because it is wasting my time. Secondly, proper use of learning strategies fosters the communication with others. For example, when others cannot understand me, I will use gestures, facial expressions, or voice imitations to make myself understood. Finally, it is consciousness. If a student does not want to learn autonomously, then others' encouragement and supervision will be useless.

To the interview question "What are the factors affecting learner autonomy?"

the interview results of English language lecturers were presented as follows.

Lecturer 3: With regards to factors affecting learner autonomy, I think there are quite a few. First of all, it is students' language proficiency. For students who are good at English, they usually have the strong ability to find out problems in their English study, and then try the best to analyze and solve the problems. Second, it is learning environment. The good learning environment will benefit students' autonomous English language learning. For instance, if one student engages himself/herself in English study, others will follow him/her.

Lecturer 4: Uh, the main factor, I think is university students' self-control. In addition, students' use of language learning strategies is also very important. If students cannot use suitable strategies like listening, reading, writing strategies in their learning, they will get lower scores in various English examinations. Of course, the external factors can also determine the effectiveness of autonomous learning. Those include learning environment, learning atmosphere, class culture, and school culture.

Lecturer 5: Alright, I think, teachers can play a role of teaching assistant. Though it is called autonomous learning, students still need their teachers to instruct them on how to search learning materials, how to make study plans, and how to read quickly and efficiently. Besides, students need to use some strategies to select learning materials according to their English language proficiency, which means that the materials are neither easy nor difficult for them.

Lecturer 6: In my point, students whose English proficiency is good have their own methods of learning English language, that is, they know

how to search learning materials, how to read efficiently, how to do listening comprehension, and how to communicate with others. Beside, students should have the ability to successfully solve learning problems in their study by making full use of Internet information.

Lecturer 7: Well, from my point of view, it is language learning motivation. For many students, their English language learning is motivated by their desire to pass various examinations. For example, students who want to go abroad for further study have to pass IELTS or TOEFL, otherwise they may fail in the application. At last, learning beliefs are very important in students' language acquisition. For students with weak learning beliefs, they will not put a lot of effort and energy in their language study. Hence, I suggest that university authority and English language teachers should work together to enhance students' language learning beliefs.

Lecturer 8: Ok, first of all, I think learning interest plays a very important role in students' autonomous learning, because interest is the best teacher. As a result, university students must find out what their interest is, and try to develop it. Then, a large quantity of interesting learning materials is quite necessary for students, from which students can select suitable materials for their self-study.

Lecturer 9: Uh, yeah, well. I think learning autonomy has a strong relationship with learning motivations and learning strategies. If a student has a strong desire to learn English, I believe, he/she will make full use of all kinds of resources, including teachers' assistance, Internet, and school library. Second, without learning strategies, there is no need to mention learner autonomy. Consequently, in my class, I often introduce some knowledge of language learning strategies.

Lecturer 11: Well, I think, it is language learning motivation. You know, our university is a polytechnic university, so for most science major students, English is an important information media for them. As we all know, English-speaking countries have been at the forefront of computer science and industry. If our students want to keep up with the latest technology and become qualified software engineers, they have to learn English well; otherwise they cannot keep pace with the times. Consequently, the university should bring high-speed Internet to students so as to make everyone learn on the Internet.

Lecturer 13: Eh, in my opinion, language teachers have positive or negative influence on students' autonomous learning ability. For instance, English language teachers can create a good learning environment for students, including using the target language in classroom communication and ask learners to do the same. On the other

hand, if English language teachers do not monitor and supervise students' autonomous learning out-of-class, students' learning autonomy cannot be promoted quickly.

Lecturer 15: Regarding the factors, I think, self-control ability is rather important. As a famous proverb goes "Where there is a will, there is a way". Here, it can be known how important self-control is. A lot of university student have failed in realizing their learning objectives due to the lack of self-control. In addition, learning materials are also very important for students just like construction materials for construction workers. Therefore, I often recommend good movies, TV programs, wonderful novels, and useful websites to my students.

To the interview question "What are the factors affecting learner autonomy?" the interview results of SAC directors were presented as follows.

Director 1: In my eyes, there are four factors that affect learner autonomy. The first one is self-control. For some students in SAC, they do not fulfill their lecturers' assignments, or read English materials, or listen to audios, instead they often watch Chinese movies, or even play computer games. Secondly, students' information literacy is very important. In our center, there is a large quantity of learning materials, so students must have the ability to judge what learning materials they need, how to search the materials, and how to make full use of these materials. Thirdly, English teachers play a significant role in students' autonomous learning. They should often give their students some tasks to fulfill in Self-access centers, so students can come here for fulfilling the assignments. At last, rich learning materials in our SAC can guarantee the effectiveness of students' autonomous learning. Without various learning materials, what do students come here for?

Director 2: From my point-of-view, facilities are very important. For example, some students have laptops, advanced mobile phone, iPhone 6, but some students have few of these facilities. As a result, the former can learn English language more conveniently when compared with the latter. In addition, self-control is also very important. Some students just come to the center for fulfilling their teachers' assignments, or study by themselves, while some come here only for fun. Finally, as one of the major elements of SACs, learning materials are of greatest significance in the promotion of learner autonomy. As a consequence, we try to provide students as many kinds of learning materials as we can, so that students can choose the suitable materials according to their needs.

Director 3: Personally, I think there are two factors that influence students' autonomous English language learning in SAC. One is university regulation. You know, in our university, students are required to learn in SAC for a certain time every week, so they have to learn in the center according to the related regulations. The other is learning software. For example, after our center has bought Juku English writing software, students can get instant feedback on their writing, which will promote their English writing proficiency.

After the careful study of the interview data, both traditional paper and computer were adopted to code the interview data for extracting concepts and categories. From the interviews, some sub-themes were identified in this part, including language learning motivation, language learning strategy, language learning anxiety, teachers' instructions, self-control, learning environment, learning materials, students' information literacy, learning hardware and software. The results of qualitative data analysis are displayed below.

Language learning motivation. Nearly doing everything needs a motivation, so does learning a foreign language. If language learners have strong motivation to learn a foreign language, they will be interested in the whole learning process. Otherwise, they may feel unbearable, sufferable, and cumbersome in their language acquisition process. As a result, the stronger motivation the learners have, the more effort they will put into foreign language learning. Data analysis showed that seven students declared that learning motivations could affect their learner autonomy. The learning motivations that were mentioned by the participants were individual development motivation, immediate achievement motivation, intrinsic interest motivation, information media motivation, and going aboard motivation. For instance, one participant stated: "I want to find a high-paid job after

graduation. ... I make great efforts to learn English autonomously” (Student 2). This implies that EFL learners in today’s China are more concerning their personal development. Due to the wide use of English in the world, some big companies would like to employ applicants whose English language proficiency is quite good. As a result, university students have to pass CET-4 at least, because failure in the exams means poor job prospects, or even a life of regret.

Intrinsic learning motivation also frequently emerged in the participants’ talk, just as a well-known proverb goes that “interest is the best teacher”. When people are interested in what they are learning, they make great efforts to do it: processing the information more efficiently, using more suitable learning strategies, and taking part in more learning activities. One participant claimed: “I am just interested in learning English, even though I do not know why” (Student 9). Her words indicated that learning interests could make students move on and made great progress in their language learning. In addition, English movies, songs, TV series, and novels in an alien country may arouse Chinese EFL learners’ interest to learn English. The classic ones of those materials help one learn English with entertainment, and on the other side, they can offer some life philosophy to the learners. As a result, learning with enjoyment has gained great popularity among Chinese university students. This phenomenon was exemplified by one participant stating: “my interest in learning English can be dated from my secondary school days when I read a simplified novel named Robinson Crusoe. I was really attracted by the hero Robinson’s adventures” (Student 4).

English language lecturers also regarded students' learning motivation as one of the variables that affected their learning autonomy. According to the results, six lecturers maintained that learning motivation was closely related to learning autonomy. Information media motivation was frequently mentioned by English teachers, for learners in information era should be able to search, analyze, and synthesize related useful information to improve their study as well as their comprehensive ability. This information literacy is exactly one of the striking features of learner autonomy (Liu & Jiang, 2009). For example, one lecturer stated: "for most science major students, English is an important information media for them. ... If our students want to keep up with the latest technology ... they have to learn English well" (Lecturer 11).

Going abroad motivation was also frequently mentioned by English language lecturers, because nowadays, many Chinese university students want to go abroad for further study, but language is a barrier for them. In order to apply for a good university successfully, they have to learn English language autonomously in their free time. One lecturer said: "students who want to go abroad for further study have to pass IELTS or TOEFL, otherwise they may fail in the application" (Lecturer 7).

Different from students and English language lecturers, two SAC directors believed that students' learning situation motivation was a decisive factor in learner autonomy. For instance, in order to make full use of SACs, English language lecturers often give their students assignments to fulfill. As a result, students need to go to SACs to fulfill their teachers' assignments. Otherwise, their scores of general performance will be much lower. One director told the

researcher: “students come here for fulfilling the assignments” (Director 1). Similarly, another director mentioned the regulations of the university authority: “in our university, students are required to learn in SAC for a certain time every week” (Director 3). It can be seen that learning motivations mentioned by SAC director were different from that of students and English language lecturers. SAC directors mainly focused on external factors like teachers’ assignments and university regulations, because they were not specialized in English while students and English language lecturers emphasized more on external motivations like examinations or internal motivations like learning interests.

Language learning strategy. Learning strategies for learners is just like fishing skills for fishermen. Oxford (1990) stated that suitable learning strategies could make learners learn a foreign language more easily, quickly, effectively, and independently. Therefore, if learners are capable of reacting to the special learning situation and learn appropriately, they can perform much better. On the basis of qualitative analysis, cognitive strategies that include analyzing, inferring, summarizing, reasoning, organizing, and producing new language, metacognitive strategies which involve making learning plans, self-monitoring, and self-evaluation, memory strategies that are utilized for receiving new information, store and retrieve it, and social strategies that refers to enhancing interaction by asking questions and cooperating with others are frequently appeared in the interviews.

Nine students claimed that language learning strategies could affect learner autonomy. Cognitive strategies are the most frequently used strategies by students who will analyze, summarize, organize the new language, and then use it in practice. For instance, during English listening comprehension, one student mentioned: “Before listening, I often scan the item on exam papers. ... so that I can roughly guess the main content. ... While listening, I try to grasp the main points by making use of pronunciation, intonation, grammar, and culture” (Student 1). Except cognitive learning strategy, students tended to use other kinds of learning strategies in their language learning. For example, another student stated: “when others cannot understand me, I will use gestures, facial expressions, or voice imitations to make myself understood” (Student 11). It can be inferred here that effective language learning strategies contribute a lot to students’ good academic achievements.

Five lecturers argued that using appropriate learning strategies can enhance learner autonomy, thus lecturers often offer some training on learning strategies to their students. The learning strategies in lecturers’ eyes include English reading, listening, communicative and cooperative strategies. One lecturer focused on the importance of learning strategy: “If students cannot use suitable strategies ... they will get lower scores in various English examinations” (Lecturer 4). From the above analysis, it can be concluded that both students and lecturers agreed that language learning strategies could affect learner autonomy greatly.

Language learning belief. As the internal motives, language learning beliefs are the key factors in students' learning process (Lu, 2013). Epistemologically, knowledge and learning are determined by one's belief system. Students' strong learning beliefs can stimulate their activeness and potentiality in language learning. Recently, with the development of language learning practice, more and more people have recognized that it is students' learning beliefs rather than learning theories or knowledge from the outside world that decide their learning behaviours. Six students claimed that language learning beliefs could affect learner autonomy. One participant believed that to improve English language proficiency, one has to work hard and put theory into practice, she said that she would "learn English well at last through hard work and suitable use of learning strategies" (Student 9). Her words were supported by another student who stated: "the ability to put theory into practice is also very important ... There, we taught the kids how to pronounce some English words, how to read English articles, and how to learn English grammar well" (Student 4). In today's China, there are many social activities organized by university authority. For example, a substantial number of university students are volunteered to teach children in underdeveloped areas during the summer holidays. Through this kind of activity, university students can impart their knowledge to the young kids. On the other hand, they learn how to deal with teaching and learning problems in harsh living conditions. Owing to the importance of learning beliefs in autonomous learning, one lecturer suggested: "university authority and English language teachers should work together to enhance students' language learning beliefs" (Lecturer 7).

Language learning anxiety. According to Horwitz (1986), language learning anxiety has three subcategories, i.e., communication apprehension, test anxiety, and fear of negative evaluation. When learners had to make a presentation or communicate with others in a second language, the anxiety they were experiencing was called communication apprehension. Test anxiety stemmed from learners' worry about failing in examinations. Fear of negative evaluation came when learners were very afraid of being evaluated negatively. Eight students argued that language learning anxiety influenced their learning autonomy. According to the analysis of interview data, it was found that test anxiety and fear of negative evaluation were frequently referred by students. One student stated that she became very nervous when asked in the classroom: "when I am invited to make a presentation ... I become sweating ... I am scared to make mistakes" (Student 7). This indicates that Chinese EFL learners regard their teachers as authority in the teacher-centered classroom. Accordingly, they seldom show themselves in the class, and will become nervous or even perspire when invited to make a speech. Another student shared with the researcher his terrible feelings before taking part in CET-4: "My sense of anxiety increases as an English test is coming especially CET-4" (Student 8). This indicated that students with test anxiety were always assuming that they could not perform well, or even fail in exams.

Teachers' instructions. In the information era, the aim of language courses is to raise learners' autonomy, suggesting that teachers should help learners become more independent in their learning process. According to Dam (2011), teachers must promote learners' willingness to take responsibility of plan-

making, monitoring learning progress, and evaluating learning outcomes. In teaching practice, teachers should create a good learning environment for learners. Eight English language lecturers believed that teachers' instructions were very important for the promotion of learner autonomy. One lecturer stated: "students still need their teachers to instruct them on how to search learning materials, how to make study plans, and how to read quickly and efficiently" (Lecturer 5). Her words were supported by another lecturer who stated: "English language teachers can create a good learning environment for students, including using the target language in classroom communication and ask learners to do the same" (Lecturer 13). This means that the role of language teachers cannot be ignored at any time. Without teachers' guidance, students would be off track in their language learning.

Self-control. Benson (2001) regarded learners' ability to control as a crucially important factor in learner autonomy. Self-control can make human beings subdue their impulses to arrive at their goals. If students want to resist outside temptations, they must have strong will to control themselves. The ability of self-control can reflect students' independence, activity, responsibility, and confidence. If one wants to be successful in the study, he/she needs to have the ability to control himself/herself. Five students said that their self-control counted a lot in learner autonomy. One participant stated: "If you are always attracted by the outside world, you cannot perform very well in your academic study" (Student 6). Truly speaking, when young university students leave their parents and start an independent life, they face a lot of temptations like money, pleasure, love, and computer games. As a consequence, one has to control

himself/herself and devote oneself wholly to the study. Another student failed in her study because she could not control herself well: “When my roommates go out for singing or dancing at the weekend, I will go with them. ... I lag behind” (Student 8).

Two directors also stated that self-control mattered a lot in learner autonomy. After longtime observation, SAC directors found that some students could not control themselves well. One director said: “they [students] often watch Chinese movies, or even play computer games” (Director 1). This implies that playing games is the nature of human beings, so young university students are easily addicted to games on the Internet. If the attraction of games is larger than that of English language study, students are prone to enjoy the pleasure from the games. Another director appreciated those who had strong self-control ability: “Some students just come to the center for fulfilling their teachers’ assignments, or study by themselves, while some come here only for fun” (Director 2). As a result, it is expected that those who can control themselves well will be successful in the future, and those who have weak self-control ability will be a failure in the future.

Learning environment. Learning environment has a very wide scope. It can refer to learning hardware, including teaching building, computers, printed paper materials, and Internet speed. It can also refer to software environment, including school culture, various services provided by universities, teachers’ knowledge, learning atmosphere, and good student-student as well as teacher-student relationship. Six students argued that learning environment really

mattered in their autonomous learning. One student said that she could not bear the noisy learning environment: “if two students murmur to each other in the self-study room ... the learning will become very ineffective” (Student 2). Some students can bear the terrible learning environment, while some students cannot, because the bad learning environment will make them feel unease, agitated, irritable, or even angry. Another student talked about the influence of learning hardware: “if there is something wrong with my computer, then I cannot look for materials or practice my listening comprehension. I will become very irritable” (Student 6).

Five English language lecturers also stressed the importance of learning environment in fostering students’ learning autonomy. In different learning environments, English language learners often have different feelings and attitudes. If it is noisy and chaotic, learners cannot concentrate their mind in their English language learning. On the contrary, if it is quite and orderly, learners will be efficient and effective in their English language learning. As a result, one of the main tasks for English language teachers is to “create a good learning environment for students, including using the target language in classroom communication and ask learners to do the same” (Lecturer 13). At the same time, it is necessary to offer students various learning facilities for their autonomous learning, just as one lecturer advised “the university should bring high-speed Internet to students so as to make everyone learn on the Internet” (Lecturer 11).

Learning materials. Learning materials for university students is just like rice for good housewives. Without rice, housewives cannot make good meals. Without learning materials, students cannot learn efficiently and independently. Thus learning materials are one of the key elements in students' learning process. Good learning materials can arouse students' learning interest, make their learning process easier, and develop their learning autonomy. In the information era, learning materials have different kinds of forms: video, audio, text, PowerPoint, paper-printed, etc. Language lecturers are more experienced in searching materials, so their recommendation of good learning materials can save students' time and energy. Five lecturers mentioned the importance of learning materials in students' autonomous learning. One lecturer argued that a large quantity of refresh learning materials was quite necessary for students, because "students can select suitable materials for their self-study" (Lecturer 8). Another lecturer believed that learning materials were very important for students just like construction materials for construction workers, so she often "recommend good movies, TV programs, wonderful novels and useful websites to my students" (Lecturer 15).

Two directors also argued that learning materials can affect learner autonomy greatly. One director thought that rich learning materials could guarantee the effectiveness of students' autonomous learning, because "without various learning materials, what do students come here for?" (Director 1). His words were supported by another SAC director who stated: "as one of the major elements of SACs, learning materials are of greatest significance in the

promotion of learner autonomy” (Director 2). As a consequence, SACs need to provide students with as many kinds of learning materials as they can, so that students can choose the suitable materials according to their needs.

Students’ information literacy. Living and learning in the information age, students are facing the explosion of knowledge. It is obvious that students cannot learn everything during their study at university. Therefore, students should have the ability to decide what information they need, look for related learning materials, give a critique of materials, and make full use of the selected materials. Three English language lecturers agreed that information literacy were necessary to students’ independent learning. One mentioned that students in the information era must have some information literacy so as to “successfully solve learning problems in their study by making full use of Internet information” (Lecturer 6). This information literacy also asks university students not to believe everything provided by others on the Internet, instead they need to evaluate the solutions that they have gotten. However, the truth is that university students’ information literacy is still weak that they cannot make full use of advanced learning facilities to improve their study. One director agreed with this and stated that students who were learning autonomously in SACs must “have the ability to judge what learning materials they need, how to search the materials, and how to make full use of these materials” (Director 1).

Learning hardware and software. Learning hardware refers to various facilities provided to university students, including accommodations,

computers, chairs, and desks. Learning software refers to software installed in computers. All three directors believed that learning hardware and software were necessary to students' autonomous learning. One director's points were very typical: "some students have laptops, advanced mobile phone, iPhone 6, but some students have few of these facilities. As a result, the former can learn English language more conveniently when compared with the latter" (Director 2). In addition to learning hardware, learning software can also help enhance students' autonomous learning in SACs. Another director argued: "after our center has bought Juku English writing software, students can get instant feedback on their writing, which will promote their English language proficiency" (Director 3).

To sum up, the results of qualitative data coincided with the quantitative data. For the quantitative data, it can be concluded that the factors including language learning belief, strategy, motivation, anxiety, and teacher's role could affect learner autonomy. In addition, other factors found from qualitative data analysis could also affect learner autonomy, namely, self-control, learning environment, learning materials, students' information literacy, and learning hardware and software.

4.4 Answering RQ 3: How can Self-Access Centers (SACs) promote learner autonomy?

This question was explored from four aspects in this study: the approaches of promoting learner autonomy through SACs, the effectiveness of autonomous learning in SACs, the existing problems in SACs, and the measures to solve

problems in SACs. Semi-structured interviews with SAC directors and English language lecturers were employed to explore the ways to promote learner autonomy by the means of SACs. Questionnaires and semi-structured interviews were adopted together to testify the effectiveness of the promotion of learner autonomy in SACs, and find out the existing problems in SACs. Finally, the corresponding measures to solve those problems were provided.

4.4.1 The Approaches of Promoting Learner Autonomy through SACs

In this part, the approaches of promoting learner autonomy through Self-Access Centers were explored, which was of great necessity to make full use of SACs. If students' learning autonomy and life-long learning ability are promoted, they can solve various learning problems independently, acquire new knowledge, and deal with complex situations in their future career. The interview data was presented below.

4.4.1.1 Thematic Analysis

To the interview question "What are the facilities and services provided to students in your university?" the interview results of SAC directors were given below.

Director 1: Well, in our center, there are nine computer labs, one consultation room, and one room for reading and talking. It can satisfy 500 students' learning needs in the center. We offer various learning hardware and software to students in our university. In addition, some straining is offered to the students in our university. From the establishment of the center to the present time, it is about ten years. At the very beginning of every semester, we train freshmen on how to use the autonomous learning platform, like searching for lecturers' assignments, downloading learning materials, selecting suitable materials, and doing online tests.

Director 2: Just as you see, our center is quite large, including 600 computers, two large servers, and an autonomous learning platform. For every week, our center opens for 6 days, and 10 hours each day. Furthermore, we let students get access to this center where there is internet. In addition, we upload the online version of all college English textbooks that are used in our university, such as *Twenty-first Century College English* and *New College English*. Besides, there are a lot of online English exercises and tests. Lastly, we try our best to do the routine maintenance. For example, we record the breakdown computers and other facilities, and then ask the technician from the supply company to repair them as soon as possible.

Director 3: Uh, currently, in our center, there are 450 computers, a large server, an autonomous learning platform, various English learning software, and a lot of learning materials. Besides, the center is built inside the university library, so it is very convenient for students to get paper-printed materials. However, the intranet of SAC has limited students' learning place, because they have to go to SAC to make use of the materials. In addition, we ask English language lecturers to upload their own materials to enrich the learning materials in the SAC. Furthermore, we have developed a VOD studio, which contains English movies, instructional videos, English classic music, and online database.

To the interview question "How can this center promote students' learner autonomy in your university?" the interview results of SAC directors were given below.

Director 1: Well, the main task of this center is to create good learning environment for students. Every week, we open for five days, and ten hours each day, so that students can come here to fulfill their teachers' assignments, and choose learning materials according to their interests. Besides, English club often hold English speaking activities here every Friday evening. The person in charge will firstly find out a topic, and then issue it on the notice board. Students who want to participate in this activity can search the related information and come to the forum to discuss with their peers. Through the discussion, students can develop their English speaking power.

Director 2: Our center often holds some English contests. For example, after Juku Writing Software was bought, we have organized several essay-writing contests, in which the software will weed out most compositions. Then, English teachers will grade the left compositions. Finally, our staff in the SAC will walk around now and then. If they find someone playing computer games, they will stop him/her.

Director 3: Uh, there are three approaches to promote students' learning autonomy. The first one is that after each unit, English language teachers will give their students some assignments to fulfill in Self-Access Center, and evaluate learning outcomes through the autonomous learning platform. Secondly, we will invite some experienced language lecturers to teach students on how to learn autonomously in SACs, including how to set up learning objectives, how to make study plans, how to self-monitor and evaluate the learning process. Besides, we offer some technical support to students in SAC. Most our staff are specialized in computer technology. For every work day, there are two SAC staff on duty, so if students in the SAC have some technical problems, they can get timely assistance.

To the interview question "How do you develop students' learner autonomy by the means of Self-access centers?" the interview results of English language lecturers were given below.

Lecturer 1: Well, I think I do not foster students' learning autonomy on purpose. However, I often emphasize the importance of independent learning after class. For example, in order to improve students' English speaking proficiency, I will give them some topics to make dialogues or short plays by themselves.

Lecturer 4: Ok, I often use the following several methods. First of all, I recommend some useful websites to my students for their English language study. Secondly, I will introduce some good learning methods such as English listening skills, reading skills, etc. In a word, I think that English language teacher can act as a guide in students' autonomous learning.

Lecturer 5: As far as I am concerned, I often ask my students to prepare before class, and assign some learning tasks after class for their practice in Self-Access Center. Besides, I often offer various learning materials for my students' self-study, including tests, classic essays, and sample compositions.

Lecturer 7: You know, our faculty asks our English language teachers to offer instructions to students' autonomous learning in the SAC. Every work day, there will be two teachers on duty in the SAC from 2:00-4:00 in the afternoon. I still remember that a student asked me a problem in her exam paper, but actually I did not know the right answer. So I went online and searched for some related information, and finally settled that problem.

Lecturer 8: Well, for me, I often introduce some English listening strategies, reading strategies, and writing strategies to my students so that

they can learn English in the SAC more efficiently. In addition, I try to develop students' interest in learning English language. For example, I often recommend good movies and TV programs to students, because good movies can attract students' attention and teach them some life philosophy as well through telling wonderful and surprising stories.

Lecturer 11: Uh, I often tell my students that they should set up learning objective so as to learn according to it. Usually, before starting the learning of a new unit, I will ask my students to make a dialogue or short play on the basis of the unit topic and perform it in front of classroom.

Lecturer 13: As for me, I try to foster my students' learning autonomy through giving them assignments to fulfill. Then, I often check whether they have finished the assignments with the help of autonomous learning platform. In addition, I often summarize the errors made by students, and tell them how to correct the errors during the class time.

Lecturer 14: To be my students, they have to fulfill the learning tasks in due time. For improving my students' writing skills, I will ask them to write an essay on a given topic every two weeks. After I grade their compositions with the help of Juku Writing Software, I will summarize their writing errors and present them in classroom.

Lecturer 15: Well, I think I can give students some advice on how to learn English language autonomously, so I leave my cellphone number and WeChat number to them at the beginning of a new semester. If my students have some learning problems, they can ask me through the chatting software like Fetion, Wechat, or QQ.

Using thematic analysis, the sub-themes are identified in this part, including creating effective language learning environment, offering a large quantity of learning materials, providing some training for students, organizing various English learning activities, giving assignments to students, offering some instructions for students' autonomous learning in SACs, offering timely technical supports, monitoring and evaluating students' autonomous learning in SACs. The data analysis was presented below.

Creating effective language learning environment. The first and most important function of Self-Access Centers is to create good language learning environment for learners. The environment here includes physical settings and various learning facilities. Gardner and Miller (2002) proposed that SACs should have some specially designed areas like leisure reading area, video and audio booths, talking area, and rooms for special purpose such as consultation room, computer lab, and store room. Various learning facilities could be computers, audio-recorders, videotape players, satellite TV, karaoke machines, and photocopy machine. One director introduced: “In our center, there are nine computer labs, one consultation room, and one room for reading and talking. ... We offer various learning hardware and software to the students in our university” (Director 1). Another director mentioned: “Our center is quite large, including 600 computers, two large servers, and an autonomous learning platform. ... we let students get access to this center where there is internet” (Director 2). Similarly, according to another director, in their center: “there are 450 computers, a large server, an autonomous learning platform, various English learning software, and a lot of learning materials” (Director 3). From the quotes of three directors, it can be seen that SACs have offered the physical settings where students can practice their oral English with their partners, watch movies, read paper-printed materials, and go on line to search the information they need. In addition, various learning software are also provided so that students can record their words, learn with text-based discs, and proofread their writings through Juku Writing software. However, students cannot go online in one SAC, because the school authority is afraid

that students will play computer games, watch TV series, or chat with others online all day long.

Offering a large quantity of learning materials. Learning materials are the foundation of autonomous learning in SACs. Without rich learning materials, autonomous learning will become water without a source or a tree without roots. As a result, to offer rich, interesting, and high-qualified learning materials becomes the main task of most SACs. In addition to electronic learning materials, there are a lot of paper-printed materials, including English newspapers, journals, novels, and reference books. Two directors mentioned that they provided a large quantity of learning materials. One director stated: “We upload the online version of all college English textbooks that are used in our university ... there are a lot of online English exercises and tests” (Director 2). In addition to the materials related to students’ textbooks, some SACs bought lots of learning materials or built the database by themselves. Another director added: “We developed a VOD studio, which contains English movies, instructional videos, English classic music, and online database” (Director 3).

Providing some training for students. For the beginners, they may not know how to use learning software in SACs. Consequently, it is quite necessary to offer some training on the basic operational skills for students and let them know the general structure of resource database and learning platform. Only students clearly know the learning content and learning mode in SACs can they be able to use them for autonomous English language learning. All three

directors claimed that they had provided some training for the beginners. One director stated: “At the very beginning of every semester, we train freshmen on how to use the autonomous learning platform, like searching for lecturers’ assignments, downloading learning materials, selecting suitable materials, and doing online tests” (Director 1). In addition to training on hardware and software, SACs also invited some English language teachers to train students on how to learn English efficiently and effectively, just like another director’s words: “we will invite some experienced language lecturers to teach students on how to learn autonomously in SACs, including how to set up learning objectives, how to make study plans, how to self-monitor and evaluate the learning process” (Director 3).

Organizing various English learning activities. SACs can organize different learning activities for language learners. Generally, there are three types of activities in SACs: workshops, English club, and TV or movie watching. For workshops, its goal is to encourage students to discuss about certain topics, which can be speed reading, writing a resume, making a speech, or conducting a debate. For the English club, it aims for offering opportunities to students for practicing their spoken English out of class. For TV or movie watching, its purpose is to enhance students’ English listening power by the means of entertainment. Two directors said that they had organized English learning activities in their SACs. One director said: “English club often hold English speaking activities here every Friday evening. The person in charge will firstly find out a topic, and then issue it on the notice board. Students who want to participate in this activity can search the related information and come to the

forum to discuss with their peers. Through the discussion, students can develop their English speaking power” (Director 1). Another director mentioned the English writing competition in their SAC: “after Juku Writing Software was bought, we have organized several essay-writing contests” (Director 2). It can be expected that through various language learning activities organized by SACs, students’ English speaking, reading, listening, and writing proficiency can be greatly improved.

Giving assignments for students to do in SACs. The assignments given by teachers occupy a very important position in the whole learning process. After the fulfillment of language teachers’ assignments, students can acquire what they have learnt in class well. Five lecturers gave students assignments to fulfill in SACs. One lecturer mentioned: “before starting the learning of a new unit, I will ask my students to make a dialogue or short play on the basis of the unit topic and perform it in front of classroom” (Lecturer 11). Students then will search the related information on the Internet to make up the dialogue or short play. Otherwise, they cannot perform well at the very beginning of the next class, which will lead to their low scores of the daily performance. Another lecturer stated that she often issued some writing tasks on Juku Writing Software for students to fulfill in SACs: “I will ask them to write an essay on a given topic every two weeks ... I will summarize their writing errors and present them in classroom” (Lecturer 14).

Offering some instructions for students’ autonomous learning in SACs. Among three SACs, two had offered lecturers’ instructions on students’

autonomous learning in SACS. The Foreign Languages Department asked their language lecturers to offer instructions to their students, which contained three types: in-classroom answer session, in-SAC answer session, and online answer session. For in-classroom answer session, language lecturers collected students' learning problems through autonomous learning platform, and then answered them in class. For in-SAC answer session, there would be one or two language lecturers on duty every work day. During that time, students could consult with language lecturers. For online answer session, language lecturers could solve students' learning problems through the chatting software. Six lecturers said that they had offered instructions to students' autonomous learning in SACs. One lecturer shared his experience: "a student asked me a problem in her exam paper ... I went online and searched for some related information, and finally settled that problem" (Lecturer 7). In addition to face-to-face instruction, some lecturers offer instructions to their students through advanced communication tools, just as another lecturer mentioned: "If my students have some learning problems, they can ask me through the chatting software like Fetion, Wechat, or QQ" (Lecturer 15). Various answer sessions can ensure students to receive the instruction from their language lecturers on time, which will further develop their autonomous learning in SACs.

Offering timely technical supports. The rapid development of information technology and education technology make students' language learning in SACs more effective, interesting, and much easier. However, some technical problems will emerge unexpectedly and affect students' autonomous learning

in SACs. All three directors said that they would try their best to solve the technical problems. One director said: “We try our best to do the routine maintenance ... we record the breakdown computers and other facilities” (Director 2). Another director added: “Most our staff are specialized in computer technology. ... so if students in the SAC have some technical problems, they can offer timely assistance” (Director 3). When technical problems are solved immediately, students can continue their study in good moods, otherwise they may feel uneasy and restless, and gradually lose the patience and interest in their language learning.

Monitoring and evaluating students’ autonomous learning in SACs.

English language lecturers should be able to monitor and evaluate learners’ learning process through e-mails, QQ, Wechat, and Fetion, which included setting up learning objectives, making study plans, using learning strategies, and evaluating learning outcomes. Five lecturers said that they had monitored and evaluated their students’ learning in SACs. One lecturer said: “I often check whether they have finished the assignments with the help of autonomous learning platform ... I often summarize the errors made by students, and tell them how to correct the errors during the class time” (Lecturer 13). Besides, SAC directors also asked their staff to monitor students’ autonomous learning in SACs. One director stated: “Our staff in the SAC will walk around now and then. If they find someone playing computer games, they will stop him/her” (Director 2). Due to university students weak ability to monitor their own learning, English language lecturers and SAC

directors' monitor of students' learning process is quite necessary. To some degree, it is the guarantee of students' good academic achievements.

SACs offered different approaches to promote learner autonomy with the collaboration of English language lecturers, whose effectiveness was testified by quantitative data collected from questionnaires and qualitative data collected from interviews. The exploration of those approaches could offer some valuable suggestions for making full use of SACs to promote learner autonomy.

4.4.2 The Effectiveness of Autonomous Learning in SACs

This part aimed to examine the effectiveness of promoting learner autonomy in SACs. University students were adopted as research subjects, because as the users, they clearly knew whether their autonomous learning in SACs was effective or not. Mixed methods were used here to increase the validity of research findings. The results of data analysis are presented below.

4.4.2.1 Descriptive Analysis

The questionnaire items were mainly to investigate students' autonomous learning effects in SACs. As shown in Table 4.9, three-fourth of the participants (75.9%, $M=3.84$, $S.D.=.79$) agreed or strongly agreed that they liked to learn English autonomously in SACs; seventy percent of the participants (70.3%, $M=3.79$, $S.D.=.80$) agreed or strongly agreed that autonomous learning in SACs improved their English language proficiency; 62.9% of the participants ($M=3.64$, $S.D.=.82$) agreed or strongly agreed that

watching English videos, movies, listening to audios or music in SACs could enhance their English listening power; 57.3% of the participants (M=3.55, S.D.=.79) agreed or strongly agreed that reading English materials in SACs could promote their English reading power; only half of the participants (51.7%, M=3.49, S.D.=.81) agreed or strongly agreed that chatting with others in English in SACs could improve their English speaking power; only half of the participants (50.5%, M=3.44, S.D.=.83) agreed or strongly agreed that English writing websites could enhance their English writing power; nearly eighty percent of the participants (79.8%, M=3.90, S.D.=.85) agreed or strongly agreed that autonomous learning in SACs promoted their English language learning autonomy .

According to the results of the effectiveness of autonomous learning in SACs, the item with the highest mean score was “Autonomous learning in SACs promotes my English language learning autonomy” (M=3.90, S.D.=.85). On the contrary, the item “English writing websites can enhance my English writing power” scored the lowest mean (M=3.44, S.D.=.83). The results of this part indicated that Chinese university students thought autonomous learning in SACs was effective, nevertheless they did not often use English writing websites to improve their English writing power. To sum up, SACs were effective in the promotion of students’ learner autonomy.

Table 4.9: The Effectiveness of Autonomous Learning in SACs

Item	Strongly Disagree f (%)	Disagree f (%)	No Comment f (%)	Agree f (%)	Strongly Agree f (%)	N	M	S.D.
I like autonomous learning in Self-access centers.	5 (0.9)	37 (6.3)	96 (16.9)	360 (63.4)	71 (12.5)	569	3.84	.79
Autonomous learning in Self-access centers improves my English language proficiency.	3 (0.5)	32 (5.6)	134 (23.6)	310 (54.5)	90 (15.8)	569	3.79	.80
Watching English videos, movies, listening to audios or music in Self-access centers can enhance my English listening power.	9 (1.6)	37 (6.5)	165 (29.0)	297 (52.2)	61 (10.7)	569	3.64	.82
Reading English materials in Self-access centers can promote my English reading power.	8 (1.4)	39 (6.9)	196 (34.4)	284 (49.9)	42 (7.4)	569	3.55	.79
Chatting with others in English in Self-access centers can improve my English speaking power.	10 (1.8)	44 (7.7)	221 (38.8)	252 (44.3)	42 (7.4)	569	3.49	.81
English writing websites can enhance my English writing power.	10 (1.8)	56 (9.8)	216 (38.0)	248 (43.6)	39 (6.9)	569	3.44	.83
Autonomous learning in SACs promotes my English language learning autonomy.	11 (1.9)	23 (4.0)	81 (14.2)	326 (57.3)	128 (22.5)	569	3.90	.85

4.4.2.2 Thematic Analysis

From quantitative data analysis, it can be known that university students believed that autonomous learning in SACs helped them promote learner autonomy as well as improve their English language proficiency. In order to offer a more holistic and complete picture of the effectiveness of SACs in promoting learner autonomy, the researcher conducted interviews with students. The interview data is presented as follows.

To the interview question “Is autonomous learning in the SAC effective in your English language learning? If yes, in which aspects; if not, why?” the interview results of students are displayed below.

Student 1: Let me think. It’s effective to some degree. In my free time, I often come to SAC reading room to read English newspapers like *China Daily* and *21st Century*. Through reading my favorite articles, I can review my English words, learn some wonderful sentences, familiarize various writing styles, and know some current affairs. A wide range of topics in newspapers can satisfy my reading demands and arouse my learning interests. As a result, reading newspapers has benefited a lot in my reading as well as writing. In addition, there is an English club in SAC. Every Friday evening, they will hold activities for oral practice. I often attend the activities to practice my spoken English. Through the communication with different students, I find that I have improved a lot with regards to my communicative ability.

Student 3: Of course. I have improved my English language proficiency. Here, I mean English listening power. After seeing a lot of English films and English programs, such as *VOA special English*, *Follow Me*, and *This American Life* in SAC, I find that my English listening power has been improved a lot.

Student 4: Yes, it helps me a lot in my English language learning. For instance, I like reading English novels, because I can know different culture and life philosophy. I often choose English novels that cater to my interest, like *The Little Prince*, *The Wonderful Wizard of Oz*, *The Hunger Games*, and *Pride and Prejudice*. After reading the novels, I will take some notes and write down my feelings. Gradually, my English reading proficiency has been improved a lot through reading interesting novels.

Student 6: Uh, yeah, well. I think my autonomous learning ability has been improved a lot. In the past, our English listening and speaking course is taught by our teacher in the classroom, so I just follow the teacher in my learning. However, since last semester, we have to listen autonomously in SACs, while the classroom is mainly for speaking practice. As a consequence, I have to set up learning objectives and make study plans by myself, otherwise I will lose the direction of my learning.

Student 7: Frankly speaking, I do not often come to SAC, because it is far from my dormitory. However, I often take part in speaking activities organized by them, during which I exchange ideas with my partner on some hot social issues. When it happens that my

companion cannot understand me, I often use gestures or other kind of body language to make myself understood.

Student 8: In my opinion, it benefits my English language learning. I often imitate native English speakers' pronunciation and intonation in English programs. Then, I will record my speech by *Apowersoft* and compare my pronunciation and intonation with that of native speakers. If I find something wrong, I will try my best to correct it. The long-time repeated imitation has greatly promoted my oral English. Besides, SACs provide different kinds of testing methods and evaluating approaches so that I can effectively evaluate my learning outcomes. For instance, after I have learnt the new words of a unit, I will take part in a vocabulary test to see if I have mastered the words or not. Then, I will check my answers with the keys and find out my problems. Step by step, my ability to monitor and evaluate my learning outcomes has been promoted.

Student 10: As far as I am concerned, my English writing power has been improved. You know, in SAC, I can use Juku Writing Software that gives the score of my composition immediately. Besides, Juku Writing Software can point out my writing errors in the way of expression, words spelling, grammar, and word collocation. Based on the advice, I can revise my writing. Through a lot of practice, it is unimaginable that one cannot improve one's English writing power. Besides, I did lots of listening exercises in the SAC before CET-4 last semester. After half a year's listening, I have improved a lot in my listening comprehension.

Student 11: Well, just how to say. I believe that "practice makes perfect". At the weekend, I often come to English corner to communicate with my peers. I exchange ideas with my peers on some social issues in English. Day by day, I can speak English fluently. In the speech contest, I even got the second prize. How amazing!

Student 13: Actually, I enjoy the process of fulfilling the assignment. For example, when our English teacher gives us projects to do after class, we will firstly assign the tasks to the concrete student. Someone is responsible for searching materials, someone for arranging the materials, someone for making PowerPoint, and someone for presenting the results. In the process of preparation, our cooperative ability is promoted.

Student 14: Of course. It helps me to some degree. For instance, our English teacher often gives us some questions related to unit topic for discussion. The questions are quite interesting, inspiring, and exploratory. Through the discussion, I can understand the knowledge better, and also learn how to communicate and cooperate with my classmates. I think if one cannot collaborate with others well, he/she cannot adapt to the changing society very quickly. In addition, Juku Writing Software in SAC can give the

score of my composition immediately. The analysis of the strong points and weak points can instruct me to revise my composition. Thanks to that software, my English writing power has been improved a lot

Using thematic analysis, the researcher summarized the sub-themes in this part, including the promotion of students' learner autonomy, the enhancement of students' cooperative ability, the improvement of students' communicative ability, and the improvement of students' English listening power, reading power, speaking power, and writing power. The results of qualitative data analysis are presented below.

The promotion of students' learner autonomy. The biggest advantage of SACs is to develop students' learner autonomy. When learning independently in SACs, students' visual and auditory senses are stimulated by various learning materials, thus their language learning will become efficient and effective. In addition, students' frequent use of multiple technologies in SACs can enhance their information literacy. Furthermore, students have to set up learning objectives, make study plans, determine the learning content, use different kinds of learning strategies, and evaluate their learning outcomes due to the absence of their teachers. As a result, students' learner autonomy has been promoted by learning independently in SACs. Eight students stated that their learner autonomy was promoted through learning autonomously in SACs. One student claimed: "since last semester, we have to listen autonomously in SACs ... I have to set up learning objectives and make study plans by myself, otherwise I will lose the direction of my learning" (Student 6). This indicated that English teachers need to stimulate their students' learning enthusiasm and develop their independence in language learning. In addition, English teachers

should try to change students' learning concepts to make them realize that they are the real owners of language learning. Another student shared her experience of monitoring and evaluating the learning process: "SACs provide different kinds of testing methods and evaluating approaches so that I can effectively evaluate my learning outcomes ... my ability to monitor and evaluate my learning outcomes has been promoted" (Student 8).

The enhancement of students' cooperative ability. As the great educator Confucius said: "When three walked together, there must be one who can teach me." As a new teaching approach, cooperative learning makes learners strengthen their communicative skills, and establish a friendly harmonious relationship under the community rules. Thus, it is one of the key elements of learner autonomy. After language teachers divide their students into several groups and give each group a task to fulfill, the group members need to cooperate with each other to finish the task. In the process of resolving problems, students in a group will interact with each other, help each other, and learn from each other. Seven participants agreed that their cooperative ability had been developed. One student mentioned: "when our English teacher gives us projects to do after class, we will firstly assign the tasks to the concrete student. Someone is responsible for searching materials, someone for arranging the materials, someone for making PowerPoint, and someone for presenting the results. In the process of preparation, our cooperative ability is promoted" (Student 13). Role play is a speaking activity that students put themselves into an imaginary situation, in which a student can imagine himself/herself to be a president, a famous movie star, a millionaire, or a hero.

As a result, students in a group should collaborate with each other well for the wonderful performance. Another student stated: “Through the discussion, I can understand the knowledge better, and also learn how to communicate and cooperate with my classmates” (Student 14). This implied that before learning a new text, language teachers often ask their students to give a presentation in the next class, or practice the pattern drills, or do role plays. In this case, learners have to collaborate with their peers in fulfilling the teachers’ tasks. Thus, students’ knowledge can be consolidated and internalized through the task-based learning activities. This suggests that SACs should organize various interesting learning activities as debates, discussions, and movie watching to make students engaged in these activities.

The improvement of students’ communicative ability. Communicative ability can embody a student’s language skills comprehensively in social activities. Students’ communication with their peers could enhance their critical thinking skills. In addition, students’ communication with their teachers can deepen their understanding of different social phenomenon. Seven participants declared that they had improved their communicative ability. One student mentioned: “there is an English club in SAC ... I often attend the activities to practice my spoken English. Through the communication with different students, I find that I have improved a lot with regards to my communicative ability” (Student 1). Another student said: “When it happens that my companion cannot understand me, I often use gestures or other kind of body language to make myself understood” (Student 7).

The improvement of students' English listening power. This is contributed to CET-4 and CET-6, because the scores of listening comprehension counts more than one third of the whole scores (35%). As a result, if students cannot get higher scores in this part, they cannot pass those two national tests, which would affect their job-hunting after graduation. In addition, listening determines the successful communications with others, because if one cannot understand what others are talking about, the communication cannot move on. Consequently, university students pay special attention to their English listening proficiency and make great efforts to develop it. In most SACs, there are many listening materials for students to practice. Students can select suitable listening materials according to their own needs. Ten students said their English listening power had been enhanced by learning autonomously in SACs. One student stated: "After seeing a lot of English films and English programs, such as *VOA special English*, *Follow Me*, and *This American Life* in SAC, I find that my English listening power has been improved a lot" (Student 3). This was echoed by another student who mentioned: "I did lots of listening exercises in the SAC before CET-4 last semester. After half a year's listening, I have improved a lot in my listening comprehension" (Student 10).

The promotion of students' English reading power. In junior and senior middle schools in mainland China, students spare no effort to get higher scores in examinations, because higher scores can ensure that they get an offer to prestigious universities. In the College Entrance Examination in China, reading matters a lot to students' English scores, so they spend a lot of time promoting it. In addition, reading cannot only promote students' language

proficiency, but can benefit them a lot in their future career. A proverb goes like this, “books are the ladders of human progress.” Most SACs had bought a lot of electronic and paper-printed reading materials, including journals, novels, and magazines. Seven students mentioned their English reading ability had improved a lot through reading. One student claimed: “In my free time, I often come to SAC reading room to read English newspapers like *China Daily* and *21st Century*. ... reading newspapers has benefited a lot in my reading as well as writing” (Student 1). Another student said: “I like reading English novels ... After reading the novels, I will take some notes and write down my feelings. Gradually, my English reading proficiency has been improved a lot” (Student 4).

The development of students’ English speaking power. Speaking English fluently in public is a must in the modern society. It is not an issue of face problems, but a necessary quality of finding a good job and flourishing in one’s career. Actually, the way one makes himself/herself understood by others can determine his/her success. Six students claimed that their English speaking ability was enhanced by learning English independently in SACs. One student stated: “I will record my speech by Apowersoft and compare my pronunciation and intonation with that of native speakers. If I find something wrong, I will try my best to correct it. The long-time repeated imitation has greatly promoted my oral English” (Student 8). Her remarks indicated that imitation played a decisive role in language acquisition, especially the imitation of English pronunciation, intonation, and rhythm. Another student improved his English speaking proficiency through a lot of oral practice: “At

the weekend, I often come to English corner to communicate with my peers ... Day by day, I can speak English fluently” (Student 11).

The development of students’ writing power. Through interviews with SAC directors, it was found that two SACs had bought Juku Writing Software, which can proofread students’ compositions online and give the corresponding scores and remarks at once. After English language lecturers have given students some writing tasks, students who do not have computers will come to the SACs to complete their compositions and submit them to Juku Writing Software. Then, according to the correcting suggestions, students can revise their compositions. In addition, language lecturers will show some sample articles about that theme in class, and introduce some writing strategies to the students. Step by step, students can improve their English writing proficiency. Six students declared that their English writing proficiency was promoted by Juku Writing Software. One student stated: “You know, in SAC, I can use Juku Writing Software that gives the score of my composition immediately. Besides, Juku Writing Software can point out my writing errors in the way of expression, words spelling, grammar, and word collocation. Based on the advice, I can revise my writing” (Student 10). In China, because of the increasing university enrolment, there are too many students in a classroom, so English language lecturers do not have enough time to proofread their students’ writings. Luckily, Juku Writing Software can solve this problem and give students’ immediate feedback on their writing. Another student stated: “Juku Writing Software in SAC can give the score of my composition

immediately. The analysis of the strong points and weak points can instruct me to revise my composition” (Student 14).

In summary, autonomous learning in SACs can promote university students’ learner autonomy as well as their English language proficiency. The results showed that the participants’ cooperative ability had been developed by doing group work, and their communicative ability improved by taking part in activities. Meanwhile, the participants’ English listening proficiency, reading proficiency, speaking proficiency and writing proficiency had been enhanced by doing some listening exercises in SACs, reading a lot of English materials, imitating native English speakers’ pronunciation and intonation, and using Juku Writing Software respectively.

4.4.3 The Existing Problems in SACs

Many universities in the past years have established Self-Access Centers (SACs) to develop students’ independent learning, but there were some existing problems in those centers such as insufficient learning materials, lack of teachers’ guidance, and shortage of manpower (Sun, 2011). Mixed methods were used here to increase the validity of research findings. The six items in questionnaires were about students’ attitudes towards SACs. The interviews with students, language lecturers, and SAC directors were to provide in-depth data about the existing problems in SACs. The results of data analysis are presented below.

4.4.3.1 Descriptive Analysis

The quantitative data was presented in Table 4.10. As shown in the table, 57.3% of the participants ($M=3.46$, $S.D.=.87$) agreed or strongly agreed that the learning environment in SACs was good; nearly three-fourth of the participants (74.0%, $M=3.73$, $S.D.=.78$) agreed or strongly agreed that the learning materials in SACs were sufficient enough for them to learn English; a little more than seventy percent of the participants (71.6%, $M=3.76$, $S.D.=.77$) agreed or strongly agreed that the facilities (eg, language learning software) supplied by SACs were helpful for their English language learning; 56.1% of the participants ($M=3.49$, $S.D.=.86$) agreed or strongly agreed that SACs offered them various ways (eg, seminar, courses) to enhance their language learning; only half of the participants (50.8%, $M=3.49$, $S.D.=.86$) agreed or strongly agreed that they were satisfied with English teachers' instruction in the SAC; only a little more than half of the participants (55.9%, $M=3.44$, $S.D.=.97$) agreed or strongly agreed that the opening hours of SACs were sufficient to meet their needs.

According to the results of the students' attitudes towards SACs, the item with the highest mean score was "The facilities (eg, language learning software) supplied by SAC are helpful for my English language learning" ($M=3.76$, $S.D.=.77$). On the contrary, the item "I am satisfied with English teachers' instruction in the SAC" scored the lowest mean ($M=3.40$, $S.D.=.87$). The results of this part indicated that Chinese university students were satisfied with the facilities (eg, language learning software) in general, but dissatisfied with English teachers' instruction in SACs.

Table 4.10: Students' Attitudes towards SACs

Item	Strongly Disagree f (%)	Disagree f (%)	No Comment f (%)	Agree f (%)	Strongly Agree f (%)	N	M	S.D.
The learning environment in the SAC is good.	14 (2.5)	70 (12.3)	159 (27.9)	292 (51.3)	34 (6.0)	569	3.46	.87
The learning materials in the SAC are sufficient enough to learn English.	5 (0.9)	48 (8.4)	95 (16.7)	366 (64.3)	55 (9.7)	569	3.73	.78
The facilities (eg, language learning software) supplied by SAC are helpful for my English language learning.	6 (1.1)	30 (5.3)	126 (22.1)	339 (59.6)	68 (12.0)	569	3.76	.77
SAC offers me various ways (eg, seminar, courses) to enhance my language learning.	9 (1.6)	71 (12.5)	170 (29.9)	277 (48.7)	42 (7.4)	569	3.49	.86
I am satisfied with English teachers' instruction in the SAC.	12 (2.1)	74 (13.0)	194 (34.1)	251 (44.1)	38 (6.7)	569	3.40	.87
The opening hours of SAC are sufficient to meet my needs.	19 (3.3)	85 (14.9)	147 (25.8)	265 (46.6)	53 (9.3)	569	3.44	.97

4.4.3.2 Thematic Analysis

To find out more problems existing in SACs, the researcher designed one question for English language lecturers “What are the problems when students learn English language autonomously in the Self-Access Center?”, one question for students: “What problems have you met in your autonomous learning in the Self-Access Center?”, and one question for SAC directors “Are there any problems in the operation of the Self-Access Center? If yes, what are they?”

To the interview question “What are the problems when students learn English language autonomously in the Self-Access Center?” the interview results of English language lecturers are displayed as follows.

Lecturer 2: Let me see. I think that the most important thing is that students' autonomous learning ability is not so strong, because in mainland China, the history of autonomous learning is not very long. For most students, they are used to the traditional teacher-fed learning mode, so they learn what the teacher ask them to learn, what the teacher does not ask them to lean, possibly they do not lean. That is to say, the students lack learning autonomy to some degree.

Lecturer 3: Uh, as far as I know, students' ability to control themselves is still weak. For example, after passing College English Test band 4 or band 6, a lot of students will give up learning English. Even if those students come to Self-access centers, they will play computer games, listen to music, or surf on the Internet. So it can be said that in this money oriented society, university students are very utilitarian.

Lecturer 7: To tell you the truth, most computers in our SAC are quite old, so they work very slowly, which will hinder students' autonomous learning in SAC. In addition, the net speed in SAC is slow, which will take students a long time to search the information they need.

Lecturer 9: Well, the learning materials in SAC are not enough for students' autonomous learning. Though there are online versions of all university English textbooks, including *Twenty-first Century College English*, *New College English*, and *New Horizon College English*, they cannot arouse students' interest. Consequently, the university need to invest more to buy some printed English novels, short stories, newspapers as well as some English e-books and videos to meet students' learning needs.

Lecturer 10: Well, some of my students often complain that there are few English language teachers in SAC who will offer some help to those students who need it. You know, in our university, English language teachers are rather busy everyday, because they have to teach at least 14 hours in a week. Besides, all the work in SAC is free for them, so only a few of them are willing to offer instructions to students in their spare time. I think that our university should make some policies to encourage those who are willing to offer instructions to students in SAC.

To the interview question "What problems have you met in your autonomous learning in the Self-Access Center?" the interview results of students are displayed as follows.

Student 3: Ok, I will tell you the truth, but do not laugh at me. Actually, I do not know how to make full use of English language learning software. For instance, SAC has bought Juku writing software, but I do not know how to submit my writing article, how to check

the comments given by the software, and how to revise my work. In my opinion, SAC should offer us some training on how to use the newly bought learning software.

Student 5: Uh, you know, there is no English language teacher in SAC when I practice my English listening comprehension, so I cannot ask her for help when I meet some learning problems. In this case, I will listen again and again. If I still cannot understand, I will write it down, and ask my English teacher during class break.

Student 8: It's embarrassing to say this. I do not know whether it is my psychological problems or other problems, for I do not feel very well to study by myself in SAC. I think there are too many computers in SAC, which will be bad for students' health due to the strong radiation. Every time when I enter it, I feel terrible. I think some beautiful flowers and green plants can be put in SAC to make it more pleasant for autonomous learning.

Student 10: Truly speaking, there are a lot of learning materials in SAC, but they are not suitable for me. For instance, most materials in the SAC are online versions of our textbooks or test-related materials. They are rather cumbersome and cannot arouse my curiosity at all. There should be more interesting English listening and reading materials.

Student 11: Problems? Uh, for example, sometimes I cannot follow the speaker in listening comprehension. However, in this situation, there is no English language teacher in SAC to give me some instructions. Then, I will consult my teacher online through Wechat to get her answers or feedback. Besides, there is no menu-driven page to navigate my material selection, so it is very inconvenient.

Student 13: Ok, one problem I want to mention is that SAC does not offer enough training for us. For example, some students do not even know how to use this autonomous learning platform, like downloading the teacher's assignments, evaluating their language learning outcomes, using learning software, or submitting their assignments. In order to make full use of this center, both SAC and English teachers should offer us some more training on learner autonomy.

To the interview question "Are there any problems in the operation of the Self-Access Center? If yes, what are they?" the interview results of SAC directors are presented below.

Director 1: Just now, I have mentioned that students are always complaining the low net speed. However, we have waited for nearly a year to get necessary investment to buy a larger server after submitting the application form of investment. Besides, there exist some problems in student management in SAC. As you know, this center opens for all students' autonomous learning in the university, which may be about 10, 000 students. As a consequence, we cannot effectively monitor and evaluate students' autonomous learning.

Director 2: Problems? Yes, there are some. The main problem is the management problem. After all, this center serves all year-one and year-two students in this university. When students come to the center together at the end of each semester, there are not enough computers for them to use. In addition, in busy hours, computers run the whole day, causing them wear quickly.

Director 3: The problems in the operation of SAC mainly include the following several aspects: malfunction of the learning platform sometimes, not enough learning resources, not enough guidance from the teachers. In addition, our SAC was set up in 2010. A lot of computers cannot run very well, but we cannot buy more new computers due to the lack of investment. Furthermore, the old computers and facilities cannot be repaired immediately, because there are not enough staff. At last, we will arrange some training for year-one students at the beginning of the new semester, but we cannot ensure every student to be trained, because there are too many year-one students in our university.

After thematic analysis of the interview data, six main subthemes about existing problems in SACs emerged: students' weak autonomous learning ability, insufficient learning materials, few English language lecturers' instructions, not enough training for students, lack of investment from university authority, and management problems. The results of data analysis are presented below.

Students' weak autonomous learning ability. An autonomous language learner should have the ability to set up learning objectives, make study plans, monitor learning process and evaluate learning achievements by himself/herself. However, seven English language lecturers mentioned that

university students' autonomous learning ability was still weak. One lecturer stated: "students' autonomous learning ability is not so strong ... For most students, they are used to the traditional teacher-fed learning mode" (Lecturer 2). Her remarks were echoed by another lecturer who complained about students' lack of self-control: "students' ability to control themselves is still weak ... they will play computer games, listen to music, or surf on the Internet" (Lecturer 3). The weak autonomous learning ability may hinder students from gaining better academic achievements in the future.

Insufficient learning materials. According to the quantitative data analysis of factors affecting learner autonomy, learning materials are one of the decisive factors in students' learning process. Good learning materials are very helpful for students' autonomous learning. There are many forms of learning materials: video, audio, text, PowerPoint, paper-printed, etc. However, ten students complained that most learning materials are computer-based, and some of them were out of date. One student complained: "Most materials in the SAC are online versions of our textbooks or test-related materials. They are rather cumbersome and cannot arouse my curiosity at all" (Student 10). Even though there are many kinds of materials in SACs, the arrangement of those materials is in disorder. Another student complained: "There is no menu-driven page to navigate my material selection, so it is very inconvenient" (Student 11). The students' points were supported by some English language lecturers. For example, one lecturer stated: "the learning materials in SAC are not enough for students' autonomous learning. Though there are online versions of all university English textbooks ... they cannot arouse students' interest"

(Lecturer 9). Thus, it is suggested that university authorities need to invest more to buy some high-qualified learning materials for students' autonomous learning in SACs.

Few English language lecturers' instructions. Lecturers cannot just give lectures to students in the classroom; instead they should be facilitators or advisors to offer some instructions for students' autonomous learning in SACs. However, lecturers' instructions in SACs are far from enough. When interviewing students on teacher's guidance in SACs, nine students claimed that they seldom received their English teachers' instructions when learning independently in SACs. Only two students had received their English teachers' guidance. Two had never received the teacher's guidance. The statement of a student was very representative: "there is no English language teacher in SAC when I practice my English listening comprehension, so I cannot ask for help when I meet some learning problems" (Student 5). This indicated that English language teachers should offer their students some instructions in SACs. Another student complained: "Sometimes I cannot follow the speaker in listening comprehension. However ... there is no English language teacher in SAC to give me some instructions" (Student 11). One English language teacher explained this. According to him, English language teachers were rather busy, for "they have to teach at least 14 hours in a week" (Lecturer 10). In addition, all the additional work in SAC was free. Consequently, only a few English language teachers were willing to offer instructions to students in SACs.

Not enough training for students. The training provided by SACs is quite necessary to university students, because if students do not know how use various learning software in SAC, their autonomous learning will not be efficient and effective. As whether SACs offered some training on autonomous learning for new users, six students mentioned that they did not receive the training on how to use learning software in SACs. One participant said: “SAC has bought Juku writing software, but I do not know how to submit my writing article ... SAC should offer us some training on how to use the newly bought learning software” (Student 3). This was echoed by one director who said that they would arrange some training for freshmen at the beginning of every semester, especially when they bought a new learning software. However, they could not “ensure every student to be trained” (Director 3).

Lack of investment from university authority. In the modern world, investment decides many things. For SAC directors, without investment, they cannot buy new computers, advanced autonomous learning platform, high-qualified materials, and increase Internet speed. All three directors mentioned that one of the biggest problems in SAC was the lack of investment. One director complained: “we have waited for nearly a year to get necessary investment to buy a larger server after submitting the application form of investment” (Director 1). The out-of-date hardware can hinder students’ autonomous learning in SACs. Another director talked about the poor conditions of computers: “A lot of computers cannot run very well, but we cannot buy more new computers due to the lack of investment” (Director 3).

In addition, one English language lecturer also mentioned: “most computers in our SAC are quite old, so they work very slowly, which will hinder students’ autonomous learning in SAC” (Lecturer 7). The excerpts of SAC directors and one English language lecturer indicated the necessity of investment from the university authority.

Management problems. In today’s China, with the increasing enrollment of universities, more and more students come to universities. As a result, SACs should serve more students with the same quantity of computers and SAC staff, which add more burdens to SAC directors. According to the background information of these SACs, there are only four staff on average, including the director. All three directors declared that management problems were one of the serious problems. One director mentioned: “When students come to the center together at the end of each semester, there are not enough computers for them to use” (Director 2). In addition to insufficient computers for students, hardware loss was another serious problem. Another director said: “The old computers and facilities cannot be repaired immediately, because there are not enough staff” (Director 3). So to make full use of the existing computers and other facilities is a big issue for all SAC directors.

The results revealed that there were some existing problems in SACs: students’ ability to take control of their learning is not strong; most learning materials are computer-based, and some of them are even out of date; students seldom receive their English teachers’ instruction; there is not enough training for students; the university authority does not provide enough investment; and management problems are one of the serious problems. The problems

identified through the interview data analysis can assist SAC directors on how to operate their centers well. After the solution of the existing problems, it is hoped that SACs can make greater contributions in the promotion of learner autonomy.

4.4.4 The Measures to Solve Problems in SACs

In order to make full use of SACs to promote learner autonomy, the existing problems in SACs need to be solved. For collecting qualitative data from interviews, the researcher designed one question for English language lecturers “What are your suggestions to solve the problems in SACs of your university?”, one question for students “In order to make full use of Self-Access Center, what should students, teachers, and SAC administrators do?”, and one question for SAC directors “What have you done to solve these problems in the operation of the Self-Access Center?”

To the interview question “What are your suggestions to solve the problems in SACs of your university?” the interview results of English language lecturers are presented below.

Lecturer 1: Ok, I want to focus on the policy of our university. Policy is very important, because it can encourage teachers to do something or discourage them to do something. For instance, the university authority can make a policy to convert teachers’ instructing hours in SAC into their teaching hours so that teachers may feel that their efforts deserve it. Moreover, in order to encourage students to learn actively in SAC, I suppose that university authority can reward those who have done a good job in their English language learning.

Lecturer 3: With regards to suggestions, first of all, I think that the university authority should pay less attention to students’ scores on CET-4 and CET-6, and emphasize more on the promotion of learner autonomy. Moreover, nowadays, students are very utilitarian, for

most of them learn English language mainly for passing English examinations. I think that they should set their eyes in the long run to improve their overall English language proficiency. Also the university authority should make some policies to encourage teachers to actively instruct students' autonomous learning in SACs.

Lecturer 5: Well, let me think. First of all, teachers should pay more attention to those less autonomous students, because those students usually cannot finish the assignments given by the teachers due to their low level of learning autonomy and language proficiency. As a consequence, teachers need to analyze the weakness and strength of those students, and then offer them some personalized instructions for improving their language proficiency.

Lecturer 6: You know, the Internet speed in our university is low, which affect students' autonomous learning a lot, so I think our university should invest more in increasing the net speed. Besides, special funds need to be provided to develop high-qualified online courses so that students can learn those courses in SACs at any time. Finally, the university should support those teachers who adopt novel teaching approaches like flipped classroom, project-based learning, and cooperative learning into their teaching practice. The student-centered new teaching approaches advocate dialogue and communications between teachers and students as well as between students themselves, which will probably lead to the promotion of learner autonomy.

Lecturer 10: University authority has paid much attention to the promotion of learner autonomy, including providing more investment to update old hardware and software, encouraging English language teachers to offer instructions to students' learning in SACs, and offering some training to develop lecturers' information literacy. It should be pointed out that some good and interesting materials cannot be downloaded from the Internet, so SAC should try the best to offer interesting learning materials for students. In addition, SAC should offer some training to students on how to download learning materials, how to use some new learning software, and how to check teachers' assignments on autonomous learning platform.

Lecturer 15: Well, you know, our SAC only opens in the working hours, and closes in the evening. However, most students have free time for learning autonomously in nighttime, because they have classes during the day. My suggestion is that SAC can adjust their opening hours according to students' needs. In addition, the SAC in our university is LAN-based, so students cannot log in at their dormitory. If they want to make full use of learning materials in SAC, they have to come to SAC, which is not convenient for

them. To solve this problem, SAC can try their best to make it accessible to its users anywhere at any time.

To the interview question “In order to make full use of Self-Access Center, what should students, teachers, and SAC administrators do?” the interview results of students are presented as follows.

Student 1: Well, for our students, we have to learn in SACs actively and dependently. Do not take it as a tedious task, just think that it is fun, useful, and beneficial. For English language teachers, they need to mobilize on every front to assist students in learning autonomously. In addition, the assignments that are given by the teachers must be well-designed, targeted, and suitable for students. For SAC managers, I think that they should try their best to repair the mal-functioned computers as soon as possible, and update some learning software when necessary.

Student 2: Uh, for students, the most important thing is that they have to develop their own interests in learning English. After all, English is rather important in their future work. Actually, no matter what we do, we had better develop our interests in it. As far as English teachers are concerned, I hope that they can assign learning tasks to their students according to the latter’s real proficiency. For SAC director, I think that he/she need to arrange the opening hours scientifically. For example, in our university, the students have to leave the center at 12:00 pm, because the staff will go home after work. In this case, the director can assign someone on duty.

Student 4: For students, they need to have correct attitudes to autonomous learning in SAC, and go there as often as they can. In SAC, I usually fulfill my teacher’s assignments, do some exercises, or watch some English movies, which is too boring for me. I think that the center should organize some speaking activities, like English speaking contest, reading contest, and writing contest, so that we can develop our English language proficiency through these activities.

Student 6: Make full use of SAC? As for students, they need to be required to make full use of this SAC, because the university authority has invested a lot of time, money and manpower to build this center. For English language teachers, I think, should give their students some assignments to fulfill, and offer some instructions on autonomous learning in SAC. For SAC manager, they can issue latest information on time, for instance, when they will held speaking contest, when they will invite some language experts to make speeches, what kind of new materials they have brought,

and which computer cannot be used. In addition, they should repair the malfunctioned computers as soon as possible.

Student 8: I think for students, first and foremost, they need to have a positive mindset, keep their mind focused on what they have to learn in SACs. Moreover, if they have to discuss something, please remember not to disturb others. For English language teachers, in my point of view, every week one or two of them can be on duty in SACs. If students have some learning problems, they can ask him/her on time. For SAC staff, I suggest that they should try their best to make the center more beautiful and pleasant. For instance, they can lay some flowers or green plants in the center. When students are tired, they can relax themselves by looking at the flowers or the plants.

Student 9: First and foremost, students should learn actively, not waiting the teachers to encourage or push forward them. Of course, students need to make an evaluation of their needs, and then set up a learning objective and make corresponding study plans to realize the objectives. It is a pity that there are not many chances in SAC to practice my spoken English. If every week our center can organize an activity for contact with some native speakers, how interesting English learning will be.

Student 12: Ok, honestly speaking, SAC is a good place for students' autonomous learning. If students have some learning problems that cannot be solved at once, they should write them down and then ask their English language teachers in class. For English language teachers, they need to solve students' problems as soon as possible, online or face to face. Besides, they should design some challengeable questions for students' learning in SAC. Regarding SAC staff, they are advised to improve the quality of learning resources in SAC. Also, they need to do the routine maintenance to ensure the normal operation of the center.

Student 15: Let me think, well, students should try to explore how to learn effectively and efficiently by themselves. For instance, only through practice can I know how utilize some learning software. For SAC staff, they need to learn some knowledge about English language learning, so that they can offer some constructive suggestions for students' autonomous learning rather than just say that they do not know at all. In addition, SAC should provide some training on how to use the learning software in the center at the beginning of a new semester.

To the interview question "What have you done to solve these problems in the operation of the Self-Access Center?" the interview results of SAC directors were given as follows.

Director 1: To solve the existing problems, the university needs to put more investment to buy learning facilities for students' independent learning. In addition, we try to get fund through two ways: applying fund from university authority and asking for reimbursement from our own faculty. At the same time, we try to develop some language learning software by ourselves to save some money. Finally, most staff in SACs are not majoring in English, so they can do little on the solution of students' language learning problems. In this situation, if one or two English lecturers are on duty every day, they can solve students' learning problems at once.

Director 2: In order to solve the conflict between more students and less computers, we try to open this center as long as possible to meet students' needs. Every week, we open for six days, and ten hours each day. And we let students get accessed to this center where there is internet. For the hardware and software problems, if our staff cannot solve the problems on our own, I will contact the corresponding company to repair the hardware and software problems as soon as possible.

Director 3: Well, we are always trying to solve these problems. For example, we have applied for buying an advanced learning platform that has more functions and richer learning resources. However, we have waited for several months. I think that the university should simplify the application procedure. Second, we ask English language teachers to upload more interesting learning materials for students, because they are the ones who know students' learning needs best. Third, SAC tries to offer some training on how to make full use of learning materials in the center.

Some sub-themes were identified in this part, including gaining more support from university authority, enriching learning materials in SACs, providing more training for university students, offering more English language lecturers' instruction for students in SACs, organizing more learning activities in SACs, and solving management problems with great efforts.

Gaining more support from university authority. The development of SACs cannot be separated from the support of university authority. All three directors and nine lecturers agreed that the university authority can make some

policies to encourage the implementation of autonomous learning and offer necessary funds to buy new computers and other kinds of facilities. Two directors claimed that the university authority should encourage teachers to instruct students in SACs. One director suggested: “The university needs to put more investment to buy learning facilities for students’ independent learning” (Director 1). While the directors emphasized the importance of investment, the language lecturers focused on the university policies. The policies mainly referred to letting lecturers be rewarded materially or spiritually, otherwise they did not have the motivation to offer the service in SACs after class. One lecturer stated the importance of policy, because “It can encourage teachers to do something or discourage them from doing something” (Lecturer 1). This statement was echoed by another teacher who stated: “The university should support those teachers who adopt novel teaching approaches like flipped classroom, project-based learning, and cooperative learning into their teaching practice” (Lecturer 6). Obviously, these student-centered new teaching approaches that advocate communications between teachers and students as well as between students themselves will probably promote university students’ learner autonomy.

Enriching learning materials in SACs. Due to the insufficiency of learning materials, SACs should try to provide as many kinds of learning materials as possible. All three directors said that English lecturers should upload more English learning materials on autonomous learning platform for students. For instance, one director strongly suggested that English language lecturers should upload more learning materials for SACs, because “they are the ones

who know students' learning needs best" (Director 3). Two directors and seven lecturers suggested that university authority should invest more to buy new learning materials for SACs. One lecturer insisted that SAC should try the best to offer more interesting and quality materials, because "some good and interesting materials cannot be downloaded from the Internet" (Lecturer 10). Another lecturer suggested that special funds should be provided to "develop high-qualified online courses so that students can learn those courses in SACs at any time" (Lecturer 6).

Providing more training for university students. Generally speaking, university students' information literacy is not as good as expected. Thus, it is necessary to train them on how to use new learning software. Four lecturers suggested that SACs should offer some training for them, especially when some new learning software were installed. One lecturer advised that SACs should offer some training to students on "how to download learning materials, how to use some new learning software, and how to check teachers' assignments on autonomous learning platform" (Lecturer 10). The statement was supported by a student who also agreed that SAC should "provide some training on how to use the learning software in the center at the beginning of a new semester" (Student 15).

Offering more English language lecturers' instructions for students in SACs. The concept of learner autonomy has become widely accepted only in the recent two decades in mainland China. However, most university students are still accustomed to the traditional way of language learning, so English

language lecturers' support and encouragement are necessary for students' learning in SACs. When students meet some learning problems, lecturers can give them some advice on time. All three directors and ten students agreed that English lecturers' instruction were necessary for students' autonomous learning in SACs. One director said: "If one or two English lecturers are on duty every day, they can solve students' learning problems at once" (Director 1). His suggestions were supported by students. One student hoped that at least one English lecturer was on duty in SACs, so "If students have some learning problems, they can ask him/her on time" (Student 8). Another student suggested that the assignments that were given by the teachers must be "well-designed, targeted, and suitable for students" (Student 2). It should be noted that for some students, they might not be so autonomous so as to fulfill their teachers' assignments on time. As a result, English teachers need to "analyze the weakness and strength of those students, and then offer some personalized instructions to them for improving their language proficiency" (Lecturer 5).

Organizing more learning activities. SACs should organize some group activities to make learners cooperate with their peers and learn from each other. Through negotiation with English lecturers, SACs can provide various activities like workshops, English corner, TV viewing, English contests, and native-speaker contact. Eight students thought that there were only a few autonomous learning activities in SACs. One student complained: "In SAC, I usually fulfill my teacher's assignments, do some exercises, or watch some English movies, which is too boring for me" (Student 4). Another student hoped that she could practice spoken English with a native speaker: "If every

week our center can organize an activity for contact with some native speakers, how interesting English learning will be” (Student 9). This reflected that Chinese university students hoped to practice their spoken English well, but owing to the lack of atmosphere of speaking English, they usually do not have so many opportunities. As a result, if SACs can organize more English learning activities, it will greatly contribute to the improvement of students’ language proficiency.

Solving management problems with great efforts. Various measures should be taken to solve management problems. Staff in SACs should try their best to repair the computer by themselves. If they cannot solve the hardware problems, they should contact computer companies for solution as soon as possible. All three directors said that they and their staff would try their best to solve the problems in SACs. One director mentioned: “In order to solve the conflict between more students and less computers, we try to open this center as long as possible to meet students’ need. ... And we let students get accessed to this center where there is internet” (Director 2). Another director said that they could not buy all of these software, so sometimes they developed the learning software by themselves. For example, one director stated: “we try to develop some language learning software by ourselves” (Directors 1). Even though SAC directors have tried their best to operate SACs, there still exist some problems. For example, one student suggested that SAC should arrange the opening hours more flexibly: “students have to leave the center at 12:00 pm ... the director can assign someone on duty” (Student 2).

According to the research findings, some corresponding measures could be taken to solve the problems in SACs: some policies can be made by university authority to encourage the implementation of autonomous learning; investment should be increased to buy new learning materials, new computers and other kinds of facilities for SACs; learning materials in SACs should be enriched as many as possible; some training on learner autonomy should be offered to students, especially when the new learning software are installed; more English language lecturers' instruction for students in SACs should be offered; more language learning activities need to be organized; and SAC directors and their staff should solve the problems in SACs at their best. Of course, it takes a long time to solve those problems.

4.5 Summary

The results of this research are summarized as follows. First of all, the overall level of university students' readiness for learner autonomy was a little higher than the medium level. With regards to the subcategories of learner autonomy, the participants could make learning objectives according to their own situation, which included short-term, medium-term, and long terms goals. Meanwhile, most participants made study plans to realize their learning objectives. However, some students could not carry out the plans for a long time due to the lack of hard work, self-control, intelligence, and perseverance. Pertaining to using language learning strategies, the most frequently used learning strategies were English writing strategies, followed by reading, speaking, and listening strategies. Nevertheless, the participants did not mention that they adopted communicative strategies, maybe because they

seldom used English after class. Regarding the last category, the results showed that university students in China could monitor and evaluate their learning progress so as to find the problems of their study and take corresponding measures to solve the problems. However, they could not find opportunities to learn English out of class and communicate with their classmates effectively in language learning.

Secondly, language learning belief, strategy, motivation, anxiety had significantly direct effects on learner autonomy in a decreasing order, whereas teachers' role did not have significantly direct effects on learner autonomy. With regards to the total effects, language learning belief could influence learner autonomy most, followed by language learning strategy, motivation, anxiety, and teachers' role. Though English teachers did not have significant and direct effects on learner autonomy, they can exert influence on it through the mediating roles of language learning strategy and motivation. Moreover, qualitative data analysis from semi-structured interviews showed that other factors, including self-control, learning environment, learning materials, students' information literacy, learning hardware and software, could also influence students' learning autonomy.

Finally, the approaches to promote learner autonomy in SACs included creating good language learning environment, offering rich learning materials, providing some training for students, organizing various English learning activities, giving assignments to students, offering some instructions for students' autonomous learning in SACs, offering timely technical support,

monitoring and evaluating students' autonomous learning in SACs. Although SACs were effective in promoting students' learner autonomy as well as their English language proficiency, there still existed some problems, including students' weak autonomous learning ability, insufficient learning materials, few English language lecturers' instructions, not enough training for students, lack of investment from university authority, and management problems. In order to solve those problems, some measures should be taken, including gaining more support from university authority, enriching learning materials in SACs, providing more training for university students, offering more English language lecturers' instruction for students in SACs, organizing more learning activities in SACs, and solving management problems with great efforts.

This chapter presented the results of the data analysis of this research. The next chapter presents the discussion, conclusion, and pedagogical implications for future study.

CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter consists of five parts. First, the results from the quantitative and qualitative data analysis are discussed. Then, there is a summary of the conclusion of this study. Next, the originality of this study was presented. Some pedagogical implications are given on the basis of research findings. The research limitations are given and recommendations for future research are provided.

5.2 Discussion of Major Findings

5.2.1 University Students' Readiness for Learner Autonomy in China

The results of this study which indicated that university students in China could set up learning objectives and make study plans independently are consistent with Tan and Zhang (2015), Wang (2016), Yang (2012), and Yao and Li (2017). Students' English language learning objectives included short-term, medium-term and long-term objectives (Yang, 2012). From the qualitative analysis, it can be known that most university students preferred to set up short-term and medium-term learning objectives rather than long-term learning objectives. This suggests that in today's China, university students are quite utilitarian, where they learn what the society requires; and what the society does not require, they probably do not learn. Consequently, those students only know how to get high scores in English examinations, but do not

know how to use English in practice. It is suggested that students should take all the three kinds of learning objectives into consideration, thus after they have realized their short-term and medium-term learning objectives, their long-term learning objectives can still motivate them to learn English. However, students lacked the ability to carry out their study plans from the beginning to the end. This echoes with results from Yang (2013) who found that students could not put their study plans into practice. Similar results are also found in the study of Gao (2014) who discovered that Chinese university students were not motivated to carry out their study plans. The probable reason may be that, on the one side, many students' self-control is still weak, for they do not know how to refuse outside temptations such as computer games, material pleasures, and various entertaining activities. On the other side, some students think that English may not be frequently used in their future career or life if they do not work in international companies or in foreign countries. Gradually, this kind of pragmatism will frustrate them from going further in their English language study. Hence, it is urgent for Chinese university students to make corresponding study plans to realize their English language learning objectives.

The results indicated that Chinese university students could understand language learning strategies in general and adjust their learning strategies if they found the strategies were not suitable for them, which are in line with Li (2016), Tan and Zhang (2015), Yang (2012), and Yao and Li (2017). This reveals that Chinese university students have a high level of autonomy with regards to the use of learning strategies, because the appropriate use of

learning strategies can make learners learn a foreign language more easily, quickly, effectively, and independently (Oxford, 1990). Nevertheless, the quantitative analysis results showed that the participants used listening strategies the least. This is supported by Yao and Li's (2017) study who also found that less than half of the participants used meta-cognitive learning strategies in their listening comprehension. The probable explanation is that English listening outcome seems to be "intangible", so students cannot exactly position the problems in their English listening comprehension, thus no corresponding methods are taken to solve the problems. Moreover, due to students' low English listening proficiency, they cannot follow the listening materials, let alone use suitable listening strategies to get higher scores. Pertaining to the least use of communicative learning strategies, it can be attributed to two social factors. On the one hand, English education in China today is exam-oriented, teacher-centered, and classroom centered (Gu, 2013), so English teachers often pay too much attention to their students' academic achievements, and offer few opportunities to develop students' communicative ability. On the other hand, the Chinese language absolutely occupies the dominant role in Chinese people's daily communication, while the English language is only used in international conferences, business negotiations, and cross-cultural communication. As a result, students seldom use English after class, not to mention the use of English speaking skills.

The results where university students in China could monitor and evaluate their learning progress so as to find the problems of their study and take corresponding measures to solve the problems are in line with that of Tan and

Zhang (2015). It is further in consistent with that of Ma (2014) who discovered that non-English major students could find out their own mistakes and take corresponding measures to correct the mistakes. This suggests that Chinese EFL learners should monitor and evaluate their learning activities consciously and continuously, including the supervision, inspection, evaluation, feedback, control, and adjustment. However, the results contradict with that of Yang (2013) who found that university students' capability of monitoring and evaluating their learning process was the weakest among all subcategories of learner autonomy. In addition, it should be pointed out that the participants could not find opportunities to learn English out of class and communicate with their classmates effectively in English. Two factors can be attributed to this phenomenon. One is that from primary school to university education, Chinese students have already been accustomed to the traditional teacher-centered approach, so they learn English passively and only speak English when being invited in class. As a result, it is suggested that English language teachers should adopt novel teaching approaches such as flipped classroom, project-based learning, and cooperative learning into their teaching practice so as to provide as many opportunities as they can for students' language practice. The other is that English is not the daily used language in mainland China. Accordingly, Chinese university EFL learners do not have so many opportunities to communicate in English. Hence, it is suggested that language teachers should organize various communicative learning activities as debates and discussions to enhance students' communicative ability.

5.2.2 Factors Affecting Learner Autonomy

To begin with, the results where language learning belief can significantly affect learner autonomy are consistent with results from some previous studies, suggesting that students who had stronger language learning beliefs would exhibit higher level learner autonomy, while those students who had weak language learning beliefs would have lower level of learner autonomy (Guo & Qin, 2009; Melisa, Rahayu, & Susilawati, 2014; Orawiwatnakul & Wichadee, 2017). In addition, language learning belief could indirectly affect learner autonomy through the mediating function of language learning strategy, because it determined what language learning strategies EFL learners utilized. According to Lu (2013), beliefs of applying knowledge and of intrinsic motivation affected the indirect use of learning strategies, while beliefs of extrinsic motivation influenced the direct use of learning strategies. Furthermore, language learning belief had indirect effects on learner autonomy through the mediating function of language learning motivation. Yang (2016) claimed that EFL students' positive language learning beliefs produced strong learning motivations, while their negative language learning beliefs lead to weak learning motivations. The results of qualitative analysis showed that most students believed that they would finally learn English well through their hard work and practice. However, some students thought that it was difficult to learn the English language well, thus they did not actively take part in English language learning activities in class. Consequently, it was impossible for those students to improve their communicative ability. Since language learning beliefs have the greatest total effects on learner autonomy, it is of

utmost importance for English language lecturers to develop their students' positive learning beliefs so as to promote learner autonomy.

In addition, the results that language learning strategy can significantly influence learner autonomy are consistent with results from some studies, suggesting that effective use of learning strategy was the key to develop students' autonomous learning ability and the guarantee of improving students' language proficiency (Nosratinia, Eftekhari, & Sarabchian, 2013; Shi, 2015; Wang & Wu, 2017). This is further in line with results from Xu and Li (2014), and Cheng et al. (2018a) who found that meta-cognitive learning strategies had the highest relationship with learner autonomy. The probable explanation may be that metacognitive strategy which mainly involves making learning plans, self-monitoring, and self-evaluating can make learners take control of their whole learning process, so "the success of language learners depends on their masterful use of metacognitive strategy" (Wen, 1996). In addition, cognitive strategies that consist of analyzing, inferring, summarizing, reasoning, organizing, and producing new language are also frequently utilized by university students, which is supported by Tse (2005) who stated that "cognitive strategies were typically found to be the most popular strategies with language learners" (p.52). Results of qualitative data analysis showed that students with higher levels of learner autonomy tended to make study plans, monitor their learning process, find out solutions for the learning problems, and make summaries of information they hear or read in English. Nevertheless, students with lower levels of learner autonomy were likely to ignore the problems in their study or even give up sometimes. As a

consequence, it is advised that English teachers should offer some instructions on students' use of learning strategy for the promotion of learner autonomy, for "learning strategies are generally signs of learner autonomy" (Oxford, 2008, p.52).

The results from this study where language learning motivation had significant effects on learner autonomy are in line with findings of some previous studies (Cheng et al., 2018b, Ma, 2014; Pu, 2009; Wang & Xu, 2015; Yang, 2013). This is further supported by the results from Liu (2015), Teng and Xu (2015) who found that learning motivation could well predict the variance in learner autonomy. This suggests that students who are fascinated by a foreign language and its culture will be more autonomous to acquire this language. Accordingly, a strong motivation is required to learn a foreign language well, otherwise the whole learning process will be unbearable, cumbersome, and boring. Besides, language learning motivation can indirectly affect learner autonomy through the mediating function of language learning strategy, because language learning strategy could significantly mediate the relationship between learning motivation and learner autonomy (Wang & Wu, 2017). Analysis of qualitative data revealed that learning motivations which students often mentioned were intrinsic interest motivation, academic achievement motivation, going abroad motivation, social responsibility motivation, and information media motivation. Among them, the results that intrinsic interest is the most frequently mentioned motivation echo with results from Cheng et al. (2018b), Teng and Xu (2015), and Yang (2013) that intrinsic interest motivation had the strongest link with learner autonomy. The reason is that

when students are interested in what they are learning, they make great efforts to do it: processing the information more efficiently, using more suitable learning strategies, and taking part in more learning activities. Thus, it is suggested that language teachers should organize various learning activities such as group trips, speech competition, scavenger hunts, and club parties to arouse students' interests in learning English language.

Next to the last, language learning anxiety can negatively influence learner autonomy, which is consistent with results from studies of Kabiri et al. (2018), Liu (2012), Peng (2009), and Tang and He (2015). Similar results are also found in Wu's (2013) study that students' learning anxiety was closely related to their autonomous English language learning in the network environment. In addition, language learning anxiety can indirectly affect learner autonomy through the mediating function of language learning motivation, because students' test anxiety was positively correlated with their instrumental motivations like immediate achievement motivation, individual development motivation, and certificate motivation (Zhou, 2011). The results of qualitative data analysis showed that test anxiety and fear of negative evaluation were frequently mentioned by students. Two factors were discovered to explain this. One is that Chinese EFL learners are used to teacher-centered learning so they often keep quiet in the classroom and become nervous when being questioned. The other is that in the context of exam-oriented education in China, students are rather worried about their exam scores. As a result, their fear of test and negative evaluation may be detrimental to the promotion of learner autonomy. Consequently, English language teachers must acknowledge the debilitating

effect of learning anxiety in foreign language acquisition and try to reduce them in students' language learning process.

Lastly, though English teachers did not have significant effects on learner autonomy, they could indirectly affect learner autonomy through the mediating function of language learning strategy and motivation. This means that simply emphasizing the independence in the development of learning autonomy will probably lead to learners' failure, frustration, and confusion, because this student-centered learning approach also needs language teachers' help. This is in line with some previous studies that focused on the importance of teachers' roles in the promotion of learner autonomy (Alonazi, 2017; Cui, 2017; Sun, 2013; Yan & Wang, 2010). For example, Yan and Wang (2010) stated that teachers were of great importance in training students' meta-cognitive and cognitive strategies so as to promote learner autonomy. Results from Sun's (2013) empirical study showed that training of learning strategy, learner contract, and learning logs offered by English teachers could foster students' learning autonomy. Alonazi's (2017) study indicated that Saudi secondary school EFL teachers played multiple roles to develop their students' autonomy, among which resource-provider was ranked as the highest, followed by classroom manager, consultant, and facilitator. Results from Cui's (2017) study showed that English teachers' mediating function was positively related to learner autonomy. During the interviews, most teachers believed that the role of language teachers in the promotion of learner autonomy could not be ignored at any time, because without teachers' guidance, students would be off track in their language learning. Therefore, they should try to promote

students' learner autonomy, critical-thinking ability, and problem-solving ability.

In addition to the factors mentioned above, some other factors affecting learner autonomy were found through the analysis of the interview data, including self-control, learning environment, learning materials, information literacy, learning hardware and software. The reasons lie in that a) ability of self-control could reflect students' activity, confidence, independence, and responsibility. If students want to be successful in the study, they need to have the ability to exhibit self-control. b) Quite and orderly learning environment will make students' English language learning efficient and effective, while noisy and chaotic learning environment will hinder students' autonomous learning, because they will feel unease, agitated, irritable, or even angry in this situation. c) Effective learning materials can arouse students' learning interest, make their learning process easier, and develop their learner autonomy. d) Information literacy helps students know what information they need, how to look for related learning materials, how to give a critique of materials, and how to make full use of the selected materials. e) Hardware and software are necessary for students' autonomous learning.

5.2.3 Approaches to Promote Learner Autonomy through Self-Access Centers

Results from analyzing the interview data showed that SACs could develop learner autonomy through different approaches, which included creating good language learning environment, offering a large quantity of learning materials,

organizing various English learning activities, giving assignments to students, offering some instructions for students' autonomous learning, doing technical maintenance, monitoring and evaluating students' autonomous learning.

These approaches are in line with that of Hsieh (2010) who summarized that the SAC at a university in Taiwan promoted learner autonomy through tailored services and facilities, theme-based activities, consultations with language lecturers, various learning resources, English learning workshops, and different avenues for watching movies, preparing tests, listening, and reading. Similar results are also found in Sun' (2011) study where SACs could promote students' learner autonomy through strategy training, the creation of learning environment, suppliant of learning hardware and software, and guidance from language teachers. This also matches with Lin's (2013b) study that SACs offered good learning resources, language teachers' instruction, and scientific management. In addition, Choy (2014) found out that the SAC in the University of Hong Kong offered physical space, language advisors, learning resources, virtual English website, training on autonomous learning, and learning activities including writing report, peer tutoring, and discussion seminars to their students. When compared with approaches by SACs in Hong Kong and Taiwan, it is discovered that language lecturers in mainland China tend to promote learner autonomy by means of giving assignments to their students.

Results of the qualitative data analysis indicated that students' learner autonomy was promoted in SACs, including students' ability to set up learning

objectives, make study plans, determine the learning content, use different types of learning strategies, and evaluate their learning outcomes. The findings match with those of some previous studies (Hsieh, 2010; Nasöz, 2015; Marzuki & Saptopramono, 2016; Priyatmojo & Rohani, 2017). For example, results from Hsieh's (2010) study investigating 35 EFL students' learning effects at a SAC in Taiwan showed that learners who frequently utilized SAC behaved more autonomously. Similarly, results from Nasöz's (2015) study indicated that SACs helped students learn independently, and those who used SACs frequently tended to utilize more meta-cognitive strategies than those infrequent users. The results are further supported by the studies of Marzuki and Saptopramono (2016) and Priyatmojo and Rohani (2017) which found that SAC was effective in making students become more autonomous. The probable explanation for students' promotion of learner autonomy is that they have to take charge of their learning due to the absence of their English language teachers.

Results of the quantitative and qualitative data analysis also showed that SACs were effective in the improvement of students' English language proficiency with regards to English listening, reading, speaking and writing fluency. The findings are in line with that of Law (2009) who discovered that all the participants had gained a lot in their language learning in a Self-Access Centre. Similar results can also be found in Javdani, Ghafoori, and Mahboudi's (2011) study where Self-Access Centers had improved students' reading comprehension skills. Zhao's (2015) study also indicated that students' English listening ability, speaking ability, and translating ability had been

greatly improved through the use of learning resources in SACs. In this study, the plausible explanation for the improvement of students' language proficiency is that they do a lot of listening exercises as well as see a lot of English films and English TV programs, read a lot of English materials, imitate native English speakers' pronunciation and intonation, and use Juku Writing Software.

The results from the data analysis that students still had low autonomous learning ability are in line with results from Liu (2017). Similarly results are also found in the study of Tang (2008) who found that students were not well ready for autonomous learning in SACs, because they were not aware of the significance of learner autonomy, not able to make full use of learning resources, and did not have their own learning methods. Similarly, Ye and Li (2012) discovered that SAC users at Yangzhou University in China lacked the knowledge of cognitive and meta-cognitive learning strategies, and were not able to carry out study plans that they had made. In this study, the reason is that students are used to the traditional teacher-fed learning mode, and on the other side, they lack self-control of language learning. As a consequence, those students could not fulfill their language teachers' assignments on time, and some of them even chatted online or played computer games, which waste learning resources and their valuable time. Thus, it is suggested that students should clearly know that they are the real owner of autonomous learning in SAC, and learn how to set up learn objectives, select learning materials, monitor learning process, and evaluate learning outcomes.

The research findings showed that there were insufficient learning materials in SACs, which match with findings of Lin (2013b) who surveyed SACs at eight universities in China and found that the learning resources in those centers could not satisfy learners' needs; the allocation of learning resources was not reasonable; and there was no evaluation system for the construction of learning resources. Furthermore, it is consistent with results from Xia (2014) who pointed out that learning materials in SACs were not new, not authentic and attractive enough for university students' English language learning. This result is also similar to that of Liu's (2017) study that learning materials in SACs were not well organized and managed. Theoretically, rich learning resources in SACs can satisfy EFL learners' needs, but results from data analysis indicated that students were dissatisfied with learning materials in SACs. Two factors are attributed to this phenomenon. One is that the learning materials have not been managed well, because most staff are not experts in English language. The other is that some good and interesting materials cannot be downloaded from the Internet. As a result, university authorities should invest more to buy new learning materials for SACs, and offer special funds to develop high-qualified online courses. Additionally, it should take students' learning needs and teachers' advice into consideration when buying learning materials. Finally, once the learning materials have been bought, the supply companies need to ensure the update of learning materials.

The results that English teachers did not come to SACs to offer instructions for their students are in line with that of Huang and Liu (2010). In addition, results from Liu's (2017) study showed that English language teachers did not

know how to instruct students to learn independently, because they themselves did not have a high level of autonomy. This is further supported by results from Zhang and Deng (2018) who surveyed 50 non-English major year-two students in SAC and found that many English teachers did not offer corresponding instructions on students' learning attitudes, study plans, and learning strategies. There are three probable explanations for this phenomenon in the present study. First of all, English language lecturers have not fully recognized their roles in students' autonomous learning in SACs. Some of them believe that students should be responsible for their own learning. As a consequence, they neglect their roles in helping students to develop good learning habits, have strong learning interests, make study plans, and use proper learning strategies. Moreover, English language teachers are rather busy, for they have many classes in a week and have to grade students' homework in their free time. Lastly, all the additional work in SAC is free, which discourages teachers' enthusiasm to offer instructions for students' autonomous learning.

The findings where there were not enough training offered by SACs for students echo the results in Zhang's (2008) study. This result is similar to Wu's (2016) study with eight non-English major students at a university in China where English teachers did not offer training on autonomous learning strategies to students in SACs. However, SACs cannot train every student because of the large number of students. Hence, it is suggested that SACs should offer some training for university students, especially when some new learning software are installed. For example, after SAC has bought Juku

writing software, it should arrange for some training on how to submit writing articles, how to check the comments, and how to revise the work. At the same time, English language lecturers should offer some training to students on how to set up learning objectives, make study plans, monitor learning process, and evaluate learning outcomes. Finally, teachers are also advised to solve students' learning problems through autonomous learning platform, e-mail, Wechat, QQ, or Fetion.

The findings where there were lack of investment from university authority, and management problems are consistent with results from Ye and Li (2012) who found that there were not enough hardware, poor management of learning materials, and ignorance of language learning strategies in a SAC at a university in China. This is further supported by Choy (2014) who conducted a case study in the SAC at the University of Hong Kong, the results of which revealed that there were some problems in the center: not enough staff to manipulate the learning resources, mal-function of online service system, lack of objectives from senior managements, and little support offered by the SAC. There are three reasons in the present study. To build a Self-Access Center requires a large space, many computers, and a lot of hardware and software to satisfy the learning needs of thousands of students, which will take a large sum of money. Besides, the frequent use of the hardware causes them to wear quickly. Meanwhile, some students may damage the computers intentionally or unintentionally. At last, there are not enough SAC staff, so some learning facilities cannot be repaired immediately. It is advised that the university should invest more to buy new learning facilities for students' independent

learning on the one hand. On the other hand, SAC staff should try their best to manage learning materials and solve the hardware problems as soon as possible.

With the development of Internet and communication technology, Self-access centre comes out with a promising prospect. It is totally student-centered, which can meet different students' learning needs and stimulate their learning activeness and creativeness. However, as a new thing, there exist some problems in the running of SACs. As a consequence, university authorities, SAC managers, and English language teachers need to cooperate with each other in order to manage SACs well so that SACs can achieve the maximum value in the promotion of university students' learner autonomy.

5.3 Conclusion

This study was conducted to investigate learner autonomy among Chinese university students with three objectives: a) to survey university EFL students' learner autonomy in the context of Self-Access Centres (SAC) in Henan province, China, b) to investigate factors affecting learner autonomy, and c) to explore the approaches of promoting learner autonomy through Self-Access Centres (SACs). To arrive at these aims, the mixed methods approach was employed in this study. Then, SPSS 22.0 and AMOS 21.0 were employed to analyze quantitative data, while content analysis and thematic analysis were employed for analyzing qualitative data.

First of all, university students in China were ready for learner autonomy in general. With regards to the subcategories of learner autonomy, the participants could make learning objectives according to their own situations, which included short-term, medium-term, and long-term goals. Meanwhile, most participants made study plans to realize their learning objectives. However, some students could not carry out the plans for a long time due to the lack of determination, self-control, and perseverance. In addition, the most frequently used language learning strategies were through writing, reading, speaking, and listening. Nevertheless, the participants did not mention that they used English to communicate, the reason to which could be because they seldom used English after class. Regarding the last category of students' readiness for learner autonomy, the results showed that university students in China could monitor and evaluate their learning progress to find the problems of their study and take corresponding measures to solve the problems. However, they are not interested in learning English out of class because of their low level of English language proficiency.

Secondly, language learning belief, learning strategy, motivation, anxiety had significant and direct effects on learner autonomy, whereas teachers' role did not have significant effects on learner autonomy. With regards to the total effects, language learning belief could influence learner autonomy most, followed by language learning strategy, motivation, anxiety, and teachers' role. Though English teachers did not have significant effects on learner autonomy, they can exert influence on it through the mediating roles of language learning strategy and motivation. Moreover, qualitative data analysis from the semi-

structured interviews showed that other factors such as self-control, learning environment, learning materials, students' information literacy, learning hardware and software, could also influence students' learner autonomy.

Finally, the approaches to promote learner autonomy in SACs included creating inductive language learning environment, offering rich learning materials, providing some training for students, organizing various English learning activities, giving assignments to students, giving instructions for students' autonomous learning, offering timely technical maintenance, monitoring and evaluating students' autonomous learning outcomes. Although SACs were effective in promoting students' learner autonomy as well as their English language proficiency, there still existed some problems, including students' weak autonomous learning ability, insufficient learning materials, few English language lecturers' instructions, insufficient training for students' use of learning software, lack of investment in SACs from university authorities, and management problems. In order to solve those problems, some measures should be taken, including gaining more support from university authorities, enriching learning materials, providing more training for university students, providing more English language lecturers' instruction for students, organizing more learning activities in SACs, and solving SAC management problems with great efforts.

5.4 The Originality of this Study

Autonomous English language learning has drawn the attention of a large number of experts. However, most of them have focused on the investigation

of university EFL students' learner autonomy in the general context. Different from those studies, this study was conducted at three universities with Self-Access Centers in Henan province, China, the novelty of which was presented as follows.

What is novel about this study was that, first of all, it employed Amos 21.0 to investigate the effects of factors on learner autonomy. The review of previous studies showed that the majority of studies utilized SPSS to analyze effects of factors on learner autonomy. To use SPSS, the researcher only knew which factor could better predict the variance in learner autonomy. However, the employment of Amos 21.0 not only examined the direct effects, indirect effects, and total effects of independent variables, including language learning belief, strategy, motivation, anxiety, teacher's role, on dependent variable learner autonomy, but also explored the relationships among those independent variables themselves.

This study was also original for the construction of a conceptual framework about learner autonomy, in which it identified the causal relationships between independent variables, i.e., factors affecting learner autonomy and dependent variable, i.e., learner autonomy. Also, it pointed out that learner autonomy could be promoted in the context of Self-Access Centers in the information era. This framework may help language linguists better understand the connotations of learner autonomy.

Lastly, the state-of-the-art contribution of this study was that it was the first systematic study to explore the approaches of promoting learner autonomy in mainland China, which may offer valuable advice to university policy-makers, language lecturers, students, and SAC directors on the development of students' learner autonomy. Moreover, this study diagnosed some existing problems in Self-Access Centers, the solutions of which may benefit the operation of SACs in mainland China.

5.5 Pedagogical Implications

First of all, it is of great importance for English language teachers to organize various learning activities for the promotion of learner autonomy. Different learning activities such as movie-watching, speaking, reading, and writing contests can be organized by English language teachers to develop their students' independent learning ability. Moreover, English language teachers need to adopt novel teaching approaches like flipped classroom, project-based learning, and cooperative learning into their teaching methods so as to provide as many opportunities as they can for students' language practice in class and out of class. Provided that students have high level of learning autonomy, they will be able to set up learning objectives, make study plans, determine learning content, use learning strategies, and evaluate learning outcomes by themselves. However, it should be pointed out that "autonomy is achieved slowly, through struggling towards it, through careful training and careful preparation on the teacher's part as well as on the learner's" (Dickinson, 1995, p. 2).

Next, special attention should be paid to university EFL students' individual factors, including language learning belief, strategy, motivation, and anxiety, for these factors are the significant ones that affect learner autonomy. To be specific, English language teachers should try to reinforce their students' learning beliefs, because students with strong learning beliefs will spend more time and energy to learn the English language and explore effective learning methods so as to improve their language proficiency. In addition, it is vitally important for both EFL lecturers and learners to be aware of the significance of language learning strategies in the promotion of learner autonomy. For English language lecturers, they can cultivate their students' ability to use language learning strategies through various learning assignments. For EFL learners, they should know how to use language learning strategies, especially metacognitive learning strategies in their foreign language acquisition. Furthermore, English language lecturers can take some measures to stimulate their students' learning motivations, especially intrinsic interest motivation, because it determines learners' efforts and enthusiasm in participating in learning activities. For instance, lecturers can organize various interesting learning activities such as workshops and discussions to arouse students' interests in language learning. Finally, English language lecturers must acknowledge the detrimental effect of learning anxieties in foreign language acquisition and try to make their students feel less anxious through creating a pleasant language learning environment.

Furthermore, the role of English language teachers should be emphasized in the promotion of learner autonomy in the context of Self-access centres.

Although autonomous EFL learners are expected to take control of their learning in Self-Access Centers, they still need their teachers' instruction to develop their learner autonomy. Generally speaking, teachers should have "personal qualities (being caring, supportive, patient, tolerant, empathic, open, and non-judgmental), a capacity for motivating learners, and an ability to raise learners' awareness" (Voller, 1997, p. 102). To be specific, as facilitators, teachers should help their students raise the consciousness for autonomy, set up learning objectives, and design the teaching plans as flexibly as possible to meet learners' specific needs. As counselors, teachers need to instruct their students on how to achieve their learning objectives through advice, feedback, communication as well as support in the context of Self-Access Centers. As source providers, teachers are described as "experts" or "knower" who can offer high-qualified learner materials to EFL learners, and determine what kind of information is useful. As collaborators, teachers are required to participate in language learning activities with students so that students can fulfill certain learning tasks with the collaboration of their teachers. No matter what kind of roles teachers play in the promotion of learner autonomy, "The decisive factor in fostering the growth of learner autonomy will always be the nature of the pedagogical dialogue" (Little, 1991, p. 175).

Self-Access Centers should be better equipped in promoting university students' learner autonomy as well as their English language proficiency. First of all, SACs should buy some good learning resources in addition to online version of students' textbooks and teachers' recommended materials. For instance, some SACs have bought VOD servers, through which students can

watch English movies, teaching videos, and online learning resources. Secondly, English language lecturers can offer different kinds of instructions to their students in SACs, which include in-classroom answer session, in-SAC answer session, and online answer session. For example, in one SAC, teachers are asked to answer students' questions from 3:00 pm to 5:00 pm, because there will be more students during this time. Thirdly, SACs can organize some group activities such as speaking contest, workshops, and movie-watching to develop students' communicative ability. Group activities can enable learners to learn from each other, help each other, and give each other advice on their study. Finally, SACs should pay special attention to the updating and compiling of learning materials. To be specific, the "student-SAC staff-lecturer" mode can be adopted, in which students can give their need for materials to the SAC staff, and then the SAC staff can feed it back to English language lecturers who will select suitable language learning materials according to students' needs. At last, language learning materials can be uploaded to autonomous learning platform by SAC staff.

The classification teaching needs to be conducted. After year-one students have registered, English teachers can divide them into advanced, intermediate, and elementary groups on the basis of their level of learner autonomy. For the advanced and intermediate group, the English teachers can adopt some novel student-centered teaching approaches to promote learner autonomy, while the traditional teacher-centered approach can be employed to elementary groups, because this educates students according to their English language proficiency. As a result, the autonomous students can actively participate into various

learning activities, freely communicate with the teacher as well as their peers, and frequently cooperate with their partners. On the other hand, English language teachers should pay more attention to those less autonomous students, because those students may not be able to finish the assignments given by their teachers due to their low level of autonomy and English language proficiency. Therefore, teachers need to identify the learning problems those students, and then offer them some personalized instructions to improve their English language proficiency.

5.6 Limitations of this Study

First, the participants only cover the students at three universities with Self-Access Centers in Henan province, China, so the findings are confined to those universities only, and thus by no means are generalized to all universities in China.

Second, this study only examines the causal relationships between factors affecting learner autonomy as a whole and learner autonomy, but does not investigate the correlations between the subscales of those factors and learner autonomy.

Lastly, although this study explores the approaches of promoting learner autonomy through SACs and the effects of those approaches in developing university students' learner autonomy in relation to their language proficiency, it does not measure how effective English language teachers' instructions in SACs are.

5.7 Recommendations for Future Study

This study was conducted to investigate Chinese university EFL students' learner autonomy in the context of Self-Access Centers. It would be meaningful for researchers to survey EFL students' learner autonomy at the universities without Self-Access Centers. In addition, it would be interesting to compare learner autonomy of university EFL students in the context of Self-Access Centers with that of university EFL students in the general context.

Future study is also needed to investigate the relationship between learner autonomy and the subscales of factors affecting learner autonomy. From the review of literature, it is suggested that researchers have not reached the consensus on the correlations between subcategories of motivations and learner autonomy, between subscales of learning strategies and learner autonomy, between different kinds of beliefs and learner autonomy, and between different groups of learning anxieties and learner autonomy.

There are some external factors that affect learner autonomy in addition to teachers, for instance, learning atmosphere, school culture, peer help, learning hardware and software, internet speed, and support from university authority. It would be useful to explore the correlations between the external factors and learner autonomy, and determine whether internal factors could better predict the variance in learner autonomy when compared with that of external factors. If the external factors affecting learner autonomy are recognized, then some corresponding measures can be taken to improve students' autonomous

learning environment, which will further make their autonomous learning effective and efficient.

It would also be helpful to carry out experimental research regarding teachers' role in the promotion of learner autonomy in SACs. The follow-up teaching experiment can last for two or three semesters, so that English language lecturers fully identify whether their roles of strategy training, of organizing various activities, of giving assignments, and of offering instructions in SACs are effective for developing students' learner autonomy in relation to their language proficiency. Hence, English language lecturers, SAC directors, and university authorities can determine offering teachers' instructions as part of the measures to promote learner autonomy in Self-Access Centers.

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APPENDIX A

QUESTIONNAIRE

The objective of this research is to investigate English language learners' perceptions on learner autonomy. All data collected will be used for research purpose only. Your answers will be kept confidential.

Part A. Background Information

Instruction: **Circle** your answer, e.g., ① Male

1. Gender: 1 (Male) 2 (Female)
2. Years of English language learning:
1 (7-8 years) 2 (9-10 years) 3 (11-12 years) 4 (13-14 years) 5 (> 15years)
3. My English language proficiency level:
1 (<60) 2 (60-69) 3 (70-79) 4 (80-89) 5 (≥90)
4. Name of your university _____

Part B Learners' autonomous learning

Legend: option 1=strongly disagree (SD); option 2=disagree (D); option 3=no comment (NC); option 4=agree (A); option 5=strongly agree (SA).

Below are statements that some people have about learning English. Please circle your answer. For example, if you choose **SD** (strongly disagree), then ①.

i) Students' learner autonomy

	Items	S D	D	N C	A	S A
1	I understand the teacher's teaching objectives and requirements.	1	2	3	4	5
2	I know the teacher's purpose of employing some learning activities to improve students' language skills.	1	2	3	4	5
3	I am able to set up English language learning objectives.	1	2	3	4	5
4	I can realize my English language learning objectives.	1	2	3	4	5
5	I make a time plan to study English.	1	2	3	4	5
6	I can make a study plan according to my situation.	1	2	3	4	5
7	I adjust my study plan if necessary.	1	2	3	4	5
8	I understand foreign language learning strategies in general.	1	2	3	4	5

9	I use listening strategies when I practise my listening skills.	1	2	3	4	5
10	I use communicative strategies when I practise my oral English.	1	2	3	4	5
11	I use writing strategies when I write in English.	1	2	3	4	5
12	I use reading strategies when I do English reading tests.	1	2	3	4	5
13	I adjust my learning strategies if I find they are not suitable for me.	1	2	3	4	5
14	I evaluate my learning outcomes in order to find the problems of my study.	1	2	3	4	5
15	I find opportunities to learn English out of class.	1	2	3	4	5
16	I am able to make full use of the available learning resources.	1	2	3	4	5
17	I try to use the new knowledge when I practice my English.	1	2	3	4	5
18	I can cooperate and learn together with my classmates.	1	2	3	4	5
19	I know the reasons why I make mistakes and will take actions to correct them.	1	2	3	4	5

ii) Factors affecting learner autonomy

	Items	S D	D	N C	A	S A
20	I believe that I will ultimately learn English very well.	1	2	3	4	5
21	I think hard work is the key point to learn English well.	1	2	3	4	5
22	I can solve the problems in my English learning.	1	2	3	4	5
23	I think one should rely on oneself to learn English well.	1	2	3	4	5
24	I am gifted at learning English.	1	2	3	4	5
25	I believe that if I keep learning English, I will learn it well sooner or later.	1	2	3	4	5
26	I learn English for speaking English fluently.	1	2	3	4	5
27	I learn English because I like it.	1	2	3	4	5
28	I learn English because I like listening to English music and watch English movies.	1	2	3	4	5
29	I learn English for passing various English examinations.	1	2	3	4	5

30	I learn English in order to find a high-paying job after graduation.	1	2	3	4	5
31	I learn English because it is the most widely used language in the world.	1	2	3	4	5
32	I am afraid that my teacher and classmates will laugh at me when I speak English in class.	1	2	3	4	5
33	I am worried that I cannot pass English exams.	1	2	3	4	5
34	I am afraid of communicating in English with others.	1	2	3	4	5
35	I am disappointed that I cannot concentrate my mind on English language learning.	1	2	3	4	5
36	I am worried to answer teachers' questions when I am not fully prepared.	1	2	3	4	5
37	I am nervous when I cannot understand English listening materials.	1	2	3	4	5
38	I use repetition to remember new English words.	1	2	3	4	5
39	I look for words in my own language that are similar to new words in English.	1	2	3	4	5
40	I review English lessons often.	1	2	3	4	5
41	I try to find patterns in English.	1	2	3	4	5
42	I first skim an English passage then go back and read carefully.	1	2	3	4	5
43	To understand unfamiliar English words, I make guesses.	1	2	3	4	5
44	I read English without looking up every new word.	1	2	3	4	5
45	I try to find as many ways as I can to use English.	1	2	3	4	5
46	If I do not understand something in English, I ask the person to slow down or say it again.	1	2	3	4	5
47	I ask for help from others when I meet with English learning problems.	1	2	3	4	5
48	The role of the teacher is to organize various meaningful learning activities.	1	2	3	4	5
49	The role of the teacher is to create opportunities for students to practise.	1	2	3	4	5
50	The role of the teacher is to help students learn English effectively.	1	2	3	4	5
51	The role of the teacher is to encourage students to learn English independently.	1	2	3	4	5
52	The role of the teacher is to assist their students finding out mistakes and correct them.	1	2	3	4	5

iii) Autonomous learning in Self-Access Centers

	Items	S D	D	N C	A	S A
53	I like autonomous learning in Self-Access Centers (SACs).	1	2	3	4	5
54	Autonomous learning in Self-Access Centers improves my English language proficiency.	1	2	3	4	5
55	Watching English videos, movies, listening to audios or music in Self-Access Centers can enhance my English listening power.	1	2	3	4	5
56	Reading English materials in Self-Access Centers can promote my English reading power.	1	2	3	4	5
57	Chatting with others in English in Self-Access Centers can improve my English speaking power.	1	2	3	4	5
58	English writing websites can enhance my English writing power.	1	2	3	4	5
59	Autonomous learning in SACs promotes my English language learning autonomy.	1	2	3	4	5
60	The learning environment in the SAC is effective.	1	2	3	4	5
61	The learning materials in the SAC are sufficient enough to learn English.	1	2	3	4	5
62	The facilities (eg, language learning software) supplied by SAC are helpful for my English language learning.	1	2	3	4	5
63	SAC offers me various ways (eg, seminar, courses) to enhance my language learning.	1	2	3	4	5
64	I am satisfied with English teachers' instruction in the SAC.	1	2	3	4	5
65	The opening hours of SAC are sufficient to meet my needs.	1	2	3	4	5

****THANK YOU FOR COMPLETING THIS QUESTIONNAIRE****

调查问卷



本研究的目的是调查学生的英语自主学习情况，且所有的调查数据均用于本研究。您的答案将会予以保密。谢谢您的合作与支持！

一、背景信息

说明：请在您所选的答案上打勾，比如说，如果您选择 1 男生，那么 1男生。

1. 性别： 1 男生 2 女生
2. 学习英语时间：
1 (7-8年) 2 (9-10年) 3 (11-12年) 4 (13-14年) 5 (15年以上)
3. 您的英语水平属于：
1 (<60) 2 (60-69) 3 (70-79) 4 (80-89) 5 (≥90)
4. 学校名称: _____

二、学习者的英语自主学习情况

说明：选项 1=强烈反对；选项 2=反对；选项 3=无法确定；选项 4=赞成；选项 5=强烈赞成。

以下为学习者对英语学习所做的论断。请您在所选的答案上打勾。比如说，如果您选择 1=强烈反对，那么 1。

一) 学生的自主学习能力

	选项	强烈反对	反对	无法确定	赞成	强烈赞成
1	我了解老师的教学目的和要求。	1	2	3	4	5
2	我清楚教师在课堂上采取的某项教学活动提高学生语言能力的用意。	1	2	3	4	5
3	我能够自己设定英语学习目标。	1	2	3	4	5
4	我能够实现自己设定的英语学习目标。	1	2	3	4	5
5	我会规划自己的英语学习时间。	1	2	3	4	5
6	我会根据自身情况制定学习计划。	1	2	3	4	5
7	我会根据需要调整自己的学习计划。	1	2	3	4	5
8	我了解一般英语学习策略。	1	2	3	4	5
9	我会有意识地在学习中使用有效的听力策略（例如调动语音，语法，社会文化背景知识以正确理解听力内容等）。	1	2	3	4	5
10	我会有意识地在学习中使用有效的交际策略（在交际中为解决语言障碍，采用手势语等其它方法达到交际目的）。	1	2	3	4	5

11	我会有意识地在 <u>学习中使用有效的写作策略</u> （立意选材、谋篇布局的构思策略）。	1	2	3	4	5
12	我会有意识地在 <u>学习中使用有效的阅读策略</u> （根据不同的课文类型、内容和阅读目的有选择地灵活使用一定的阅读策略）。	1	2	3	4	5
13	我会 <u>调整</u> 不适合自己的学习策略。	1	2	3	4	5
14	我会 <u>评估</u> 自己的学习成绩以便找到不足处。	1	2	3	4	5
15	我会在课外会主动 <u>寻找各种机会</u> 学习英语，练习英语。	1	2	3	4	5
16	我会利用已有的 <u>学习资源</u> 。	1	2	3	4	5
17	我会把新学的知识应用到语言实践中。	1	2	3	4	5
18	我能和同学或者朋友一起 <u>合作学习</u> 。	1	2	3	4	5
19	我在意识到自己的语言错误后，能 <u>找到错误的原因</u> ，并采取相应的措施 <u>更正错误</u> 。	1	2	3	4	5

二) 影响自主学习的因素

	选项	强烈反对	反对	无法确定	赞成	强烈赞成
20	我相信我最终能把英语学好。	1	2	3	4	5
21	我认为后天的努力是学好英语的关键。	1	2	3	4	5
22	我认为自己能够解决英语学习中遇到的困难。	1	2	3	4	5
23	我认为学好英语关键在于自己。	1	2	3	4	5
24	我认为自己有学习英语的天赋。	1	2	3	4	5
25	我认为只要坚持学习英语,水平肯定会提高。	1	2	3	4	5
26	我学习英语是为了说一口流利标准的英语。	1	2	3	4	5
27	我学习英语是因为我对英语感兴趣。	1	2	3	4	5
28	我学习英语是因为我喜欢英语歌曲和英语电影。	1	2	3	4	5
29	我学习英语是为了通过各种英语考试。	1	2	3	4	5

30	我学习英语是为了能在毕业后找到一份满意的工作。	1	2	3	4	5
31	我学习英语是因为它是当今世界上最常用的语言。	1	2	3	4	5
32	讲英语时，我担心老师与同学们嘲笑我所犯的错误。	1	2	3	4	5
33	我担心自己通过不了英语考试。	1	2	3	4	5
34	我害怕用英语与他人进行交流。	1	2	3	4	5
35	在英语课上当我没做准备而要发言时，我会惊慌不已。	1	2	3	4	5
36	不能集中精力学习英语，我就会感到沮丧。	1	2	3	4	5
37	听不懂英语听力材料时，我会感到焦虑。	1	2	3	4	5
38	我会用重复多遍的方法来背诵英语单词。	1	2	3	4	5
39	遇到新词时，我通常回想一下它与汉语中哪些单词相对应。	1	2	3	4	5
40	我经常复习所学过的英语功课。	1	2	3	4	5
41	我注意总结英语句型。	1	2	3	4	5
42	读英语文章时，我会首先快速浏览，然后再回头仔细研究。	1	2	3	4	5
43	遇到不认识的单词或词语时，我就会猜测它们的意思。	1	2	3	4	5
44	读英语文章时，我不会去查阅每个生词。	1	2	3	4	5
45	我试着找出如何学好英语的办法。	1	2	3	4	5
46	在英语对话时，有听不懂的地方，我会请对方再说一次或者说慢一点。	1	2	3	4	5
47	学习英语有困难时，我会向他人寻求帮助。	1	2	3	4	5
48	教师的角色是组织各种有意义的英语学习活动。	1	2	3	4	5
49	教师的角色是给学生创造学习英语的机会。	1	2	3	4	5
50	教师的角色是帮助学生有效地学习英语。	1	2	3	4	5
51	教师的角色是鼓励学生自主学习英语。	1	2	3	4	5

52	教师的角色是帮助学生发现错误，提出适当的改进意见。	1	2	3	4	5
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三) 在自主学习中心中的自主学习

	选项	强烈反对	反对	无法确定	赞成	强烈赞成
53	我喜欢在外语自主学习中心学习英语。	1	2	3	4	5
54	在自主学习中心的学习提高了我的英语水平。	1	2	3	4	5
55	在自主学习中心观看英语视频材料或听英语音频材料提高了我的英语听力水平。	1	2	3	4	5
56	在自主学习中心阅读英语材料提高了我的英语阅读能力。	1	2	3	4	5
57	在自主学习中心用英语和他人聊天提高了我的英语口语水平。	1	2	3	4	5
58	英语写作网站可以帮助我提高英语写作水平。	1	2	3	4	5
59	在自主学习中心的学习提高了我的英语自主学习能力。	1	2	3	4	5
60	自主学习中心的学习环境很有效。	1	2	3	4	5
61	自主学习中心提供了丰富的英语学习资源。	1	2	3	4	5
62	自主学习中心提供的设备（学习硬件、软件等）有利于我的英语学习。	1	2	3	4	5
63	自主学习中心提供了各种途径(包括真实交流、语言练习和创造性实践)来提高我的英语水平。	1	2	3	4	5
64	对自主学习中心中英语教师提供的帮助，我感到满意。	1	2	3	4	5
65	自主学习中心的开放时间能够满足我的英语学习需求。	1	2	3	4	5

****非常感谢您完成本问卷的调查**。**

APPENDIX B

Interview Questions for Students

Part A. Background Information

Instruction: **Circle** your answer, e.g., ① Male

1. Gender: 1 (Male) 2 (Female)
2. Years of English language learning:
1 (7-8 years) 2 (9-10 years) 3 (11-12 years) 4 (13-14 years) 5 (> 15years)
3. My English language proficiency level:
1 (<60) 2 (60-69) 3 (70-79) 4 (80-89) 5 (≥90)
4. Name of your university _____

Part B. Interview Questions

1. Do you know autonomous learning? If you know, how do you understand it?
2. What learning objectives do you set in your English language study? Can you make them come true?
3. What study plans do you make to achieve your learning objectives?
4. What kind of language learning strategies do you employ in your study?
5. How do you monitor your learning process in class and out-of-class?
6. How do you evaluate your English language learning outcomes?
7. What factors can influence your learner autonomy?
8. Can autonomous learning in the SAC improve your English language proficiency? If yes, in which aspects; if not, why?
9. What problems have you met in your autonomous learning in the Self-Access Center?
10. In order to make full use the Self-Access Center, what should students, teachers, and SAC administrators do?

对学生的访谈问题

一、背景信息

说明：请在您所选的答案上打勾，比如说，如果您选择 1 男生，那么 1√男生。

1. 性别： 1 男生 2 女生
2. 学习英语时间：
1 (7-8 年) 2 (9-10 年) 3 (11-12 年) 4 (13-14 年) 5 (15 年以上)
3. 您的英语水平属于：
1 (<60) 2 (60-69) 3 (70-79) 4 (80-89) 5 (≥90)
4. 学校名称： _____

二、访谈问题

1. 你知道自主学习吗？如果知道，你是怎么理解它的？
2. 在英语学习过程中，你给自己设定什么样的学习目标？你能实现所设定的学习目标吗？
3. 你制定什么样的学习计划来实现自己的学习目标？
4. 在语言学习过程中，你通常运用什么样的学习策略？
5. 在课堂上与课下，你是如何监控自己的学习过程的？
6. 你怎样评估自己的英语学习效果？
7. 影响你英语自主学习的因素有哪些？
8. 在自主学习中心的学习能提高你的英语水平吗？如果可以，哪些方面有所提高？如果不可以，为什么？
9. 在自主学习中心学习英语时，你遇到过哪些困难？
10. 要充分利用自主学习中心，学生、教师、中心管理人员应该分别怎么做？

APPENDIX C

Interview Questions for English Language Lecturers

Part A. Background Information

Instruction: **Circle** your answer, e.g., ① Male

1. Gender: 1 (Male) 2 (Female)
2. My highest qualification:
1 (Bachelor of Arts) 2 (Master of Arts) 3 (Doctor of Philosophy)
3. My years of English language teaching _____
4. Name of your university _____

Part B. Interview Questions

1. Do you know autonomous English language learning?
2. Do you introduce the concept of learner autonomy to your students?
How?
3. What are the factors affecting learner autonomy?
4. What is the teacher's role in the promotion of learner autonomy?
5. How do you develop students' learner autonomy by the means of Self-Access Centers (SACs)?
6. What do students do in the Self-Access Center in your university?
7. Have you ever received some training on autonomous language learning?
8. What are the problems when students learn English language autonomously in the Self-access centre?
9. What are your suggestions to solve the problems in SACs of your university?

对英语教师的访谈问题

一、背景信息

说明：请在您所选的答案上打勾，比如说，如果您选择 1 男士，那么 1√男士。

1. 性别： 1 男士 2 女士
2. 最高学历： 1（学士） 2（硕士） 3（博士）
3. 任职英语教师的年限： _____
4. 学校名称： _____

二、访谈问题

1. 您了解英语自主学习吗？
2. 您把自主学习的概念介绍给学生了吗？如何介绍的？
3. 您认为影响学生的自主学习能力的因素有哪些？
4. 教师在培养学生自主学习能力上扮演了什么角色？
5. 您是如何通过自主学习中心来培养学生的自主学习能力的？
6. 学生在自主学习中心是如何开展自主学习的？
7. 您接受过关于自主学习方面的培训吗？
8. 学生在自主学习中心学习时遇到了哪些困难？
9. 您有哪些建议来解决自主学习中心运行中出现的问题？

APPENDIX D

Interview Questions for SAC Directors

Part A. Background Information

Instruction: **Circle** your answer, e.g., ① Male

1. Gender: 1 (Male) 2 (Female)
2. My highest qualification:
1 (Bachelor of Arts) 2 (Master of Arts) 3 (Doctor of Philosophy)
3. My years of being SAC director _____
4. Name of your university _____

Part B. Interview Questions

1. When did your university set up a Self-Access Center?
2. Currently how many staff are there in your centre?
3. What are the facilities and services provided to students in your university?
4. What sort of hardware (eg, computers) and software (eg, language learning software) do you install/place in the center?
5. In your opinion, what factors can influence learner autonomy?
6. How can this centre promote students' learner autonomy in your university?
7. Does the centre offer some training on autonomous language learning to students in your university?
8. In order to make full use of this Self-Access Center, what should the university, school of foreign languages, English teachers and students do?
9. Are there any problems in the operation of the Self-Access Center? If yes, what are they?
10. What have you done to solve these problems in the operation of the Self-Access Center?

对自主学习中心主任的访谈问题

一、背景信息

说明：请在您所选的答案上打勾，比如说，如果您选择 1 男士，那么 1√男士。

1. 性别：1 男士 2 女士
2. 最高学历：1（学士）2（硕士）3（博士）
3. 任职自主学习中心主任的年限：_____
4. 学校名称：_____

二、访谈问题

1. 贵校的自主学习中心是何时建立的？
2. 贵校的自主学习中心目前有多少位职工？
3. 贵校的自主学习中心给学生提供哪些服务？
4. 贵校的自主学习中心提供什么样的硬件（如电脑）和软件（如学习软件）？
5. 依您看来，影响学生的自主学习能力的因素有哪些？
6. 贵校的自主学习中心是如何培养与提高学生的自主学习能力的？
7. 贵校的自主学习中心为学生提供关于自主学习方面的培训吗？
8. 为了充分利用自主学习中心，您认为学校、外语学院、英语教师、学生应该分别怎么做？
9. 贵校的自主学习中心在运行的过程中有困难吗？如果有，是什么困难？
10. 您采取了哪些措施来克服自主学习中心运行中出现的问题？

APPENDIX E

Part A. Factor Analysis of Learner Autonomy

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.908
Bartlett's Test of Sphericity	Approx. Chi-Square	554.471
	df	171
	Sig.	.000

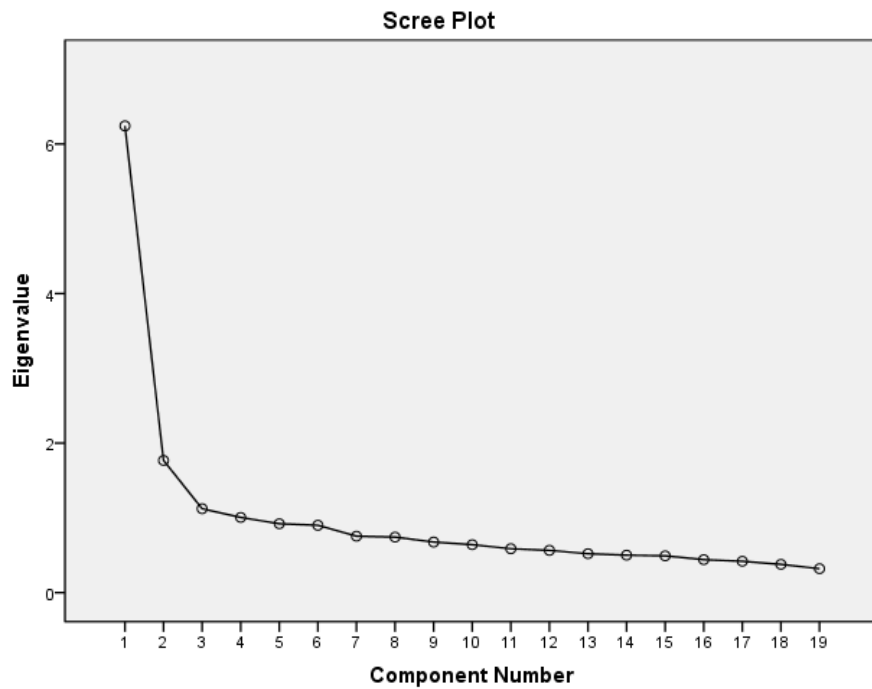
2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Total	Total	% of Variance	Cumulative %	Total
1	6.243	32.856	32.856	6.243	32.856	32.856	4.971
2	1.768	9.303	42.158	1.768	9.303	42.158	3.986
3	1.122	5.908	48.066	1.122	5.908	48.066	3.621
4	1.006	5.293	53.359				
5	.921	4.850	58.209				
6	.901	4.741	62.950				
7	.755	3.972	66.923				
8	.742	3.907	70.830				
9	.677	3.561	74.391				
10	.641	3.375	77.766				
11	.587	3.089	80.855				
12	.566	2.978	83.832				
13	.520	2.737	86.570				
14	.501	2.639	89.209				
15	.491	2.587	91.795				
16	.441	2.322	94.118				
17	.419	2.207	96.324				
18	.378	1.991	98.315				
19	.320	1.685	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

3. ScreePlot of Learner Autonomy



4. Structure Matrix

Item No	Factor 1	Factor 2	Factor 3
Item 06	.800		
Item 07	.794		
Item 05	.669		
Item 04	.663		
Item 03	.610		
Item 01	.568		
Item 02	.556		
Item 12		.810	
Item 11		.789	
Item 10		.720	
Item 09		.658	
Item 13		.650	
Item 08		.563	
Item 17			.771
Item 18			.695
Item 19			.689
Item 15			.649
Item 16			.639
Item 14			.590

Extraction Method: Principal Component Analysis.
 Rotation Method: Oblimin with Kaiser Normalization.

Part B. Factor Analysis of Language Learning Belief

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.778
Bartlett's Test of Sphericity	Approx. Chi-Square	884.248
	df	15
	Sig.	.000

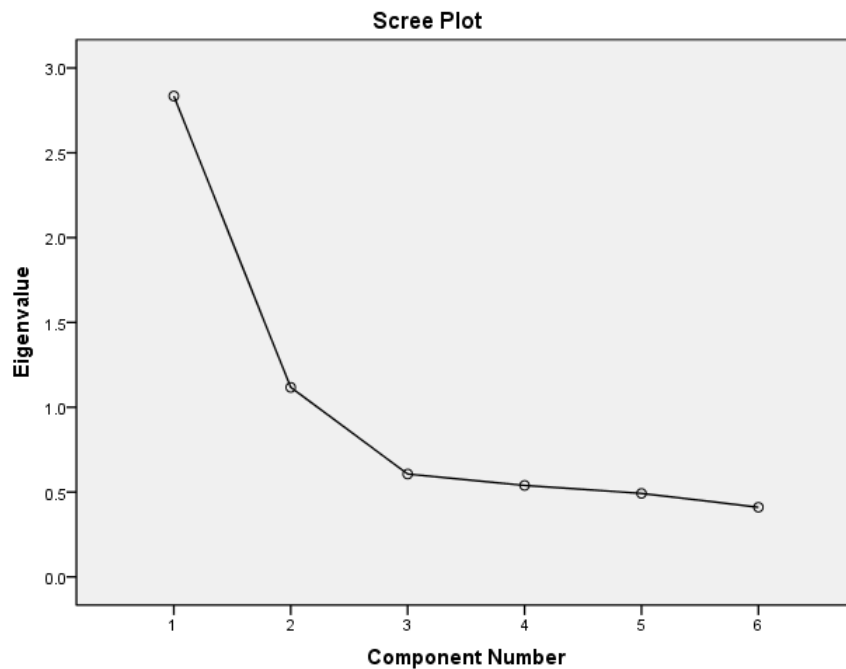
2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Total	Total	% of Variance	Cumulative %	Total
1	2.835	47.245	47.245	2.835	47.245	47.245	2.341
2	1.117	18.618	65.862	1.117	18.618	65.862	2.330
3	.606	10.106	75.969				
4	.539	8.985	84.953				
5	.492	8.206	93.159				
6	.410	6.841	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

3. ScreePlot of Language Learning Belief



4. Structure Matrix

Item No	Factor 1	Factor 2
Item 23	.822	
Item 21	.813	
Item 24	.788	
Item 25		.854
Item 20		.787
Item 22		.786
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.		

Part C. Factor Analysis of Language Learning Motivation

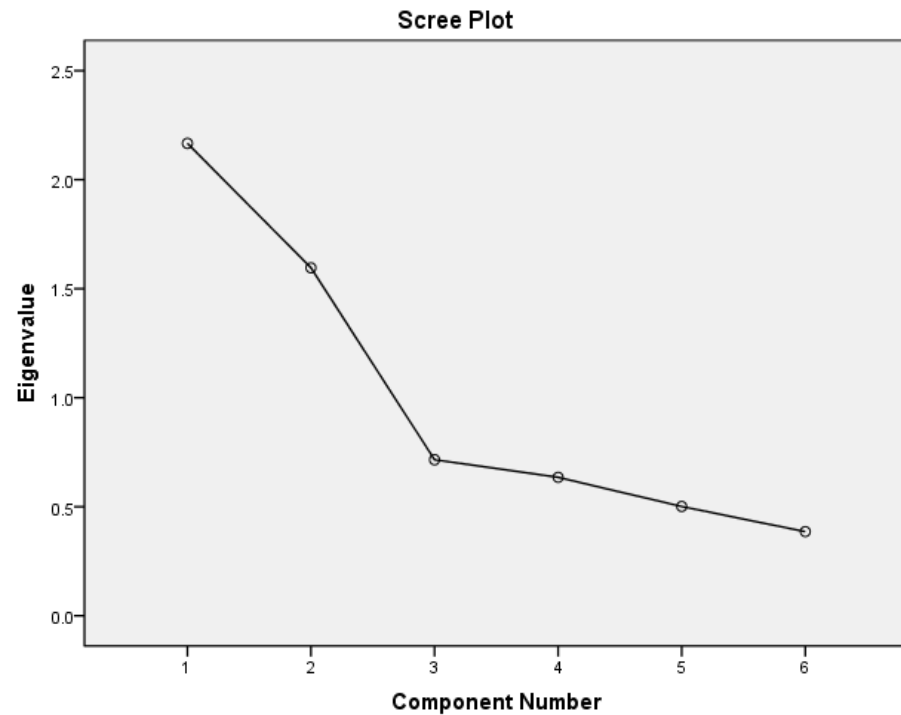
1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.812
Bartlett's Test of Sphericity	Approx. Chi-Square	673.303
	df	15
	Sig.	.000

2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Total	Total	% of Variance	Cumulative %	Total
1	2.167	36.109	36.109	2.167	36.109	36.109	2.083
2	1.596	26.598	62.708	1.596	26.598	62.708	1.733
3	.715	11.925	74.632				
4	.635	10.583	85.215				
5	.501	8.352	93.568				
6	.386	6.432	100.000				
Extraction Method: Principal Component Analysis. a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.							

3. ScreePlot of Language Learning Motivation



4. Structure Matrix

Item No	Factor 1	Factor 2
Item 27	.833	
Item 28	.824	
Item 26	.674	
Item 30		.837
Item 29		.784
Item 31		.596
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.		

Part D. Factor Analysis of Language Learning Anxiety

1. KMO and Bartlett's Test

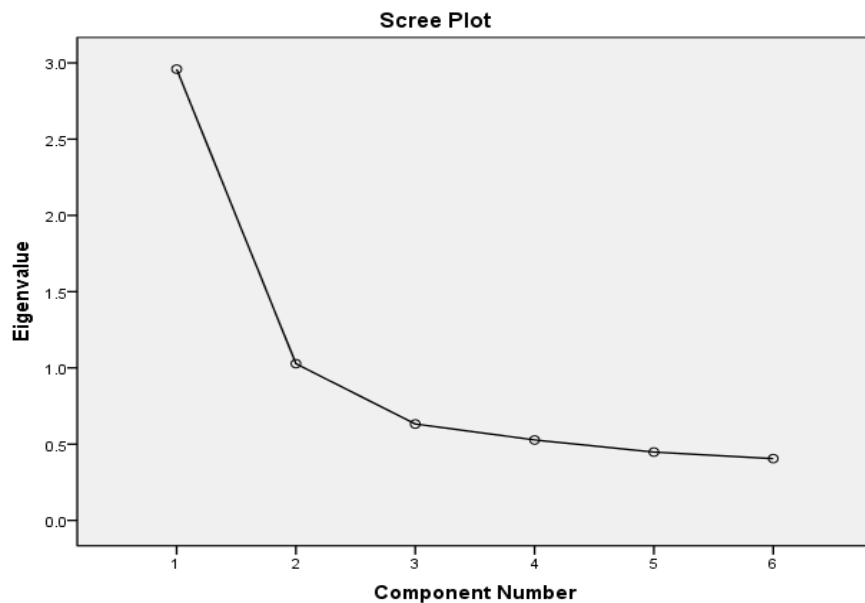
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.803
Bartlett's Test of Sphericity	Approx. Chi-Square	956.170
	df	15
	Sig.	.000

2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Total	Total	% of Variance	Cumulative %	Total
1	2.959	49.321	49.321	2.959	49.321	49.321	2.652
2	1.028	17.128	66.449	1.028	17.128	66.449	2.049
3	.632	10.537	76.985				
4	.528	8.792	85.777				
5	.448	7.468	93.245				
6	.405	6.755	100.000				

Extraction Method: Principal Component Analysis.
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

3. ScreePlot of Language Learning Anxiety



4. Structure Matrix

Item No	Factor 1	Factor 2
Item 34	.828	
Item 32	.778	
Item 35	.766	
Item 37		.881
Item 36		.865
Item 33		.705

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Part E. Factor Analysis of Language Learning Strategy

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.790
Bartlett's Test of Sphericity	Approx. Chi-Square	1179.103
	df	45
	Sig.	.000

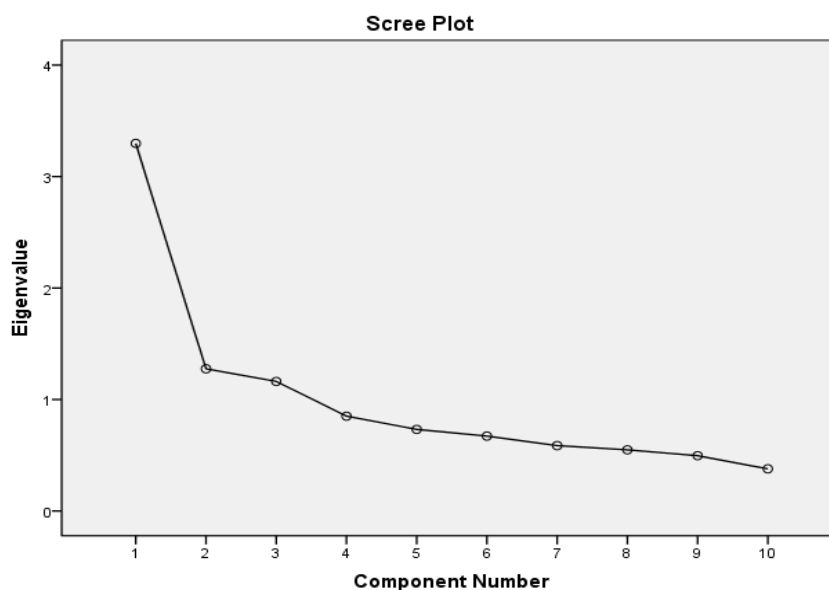
2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Total	Total	% of Variance	Cumulative %	Total
1	3.298	32.975	32.975	3.298	32.975	32.975	2.782
2	1.276	12.759	45.734	1.276	12.759	45.734	1.554
3	1.162	11.624	57.359	1.162	11.624	57.359	2.316
4	.851	8.509	65.867				
5	.732	7.321	73.189				
6	.672	6.719	79.907				
7	.586	5.863	85.771				
8	.549	5.487	91.258				
9	.496	4.962	96.219				
10	.378	3.781	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

3. ScreePlot of Language Learning Strategy



4. Structure Matrix

Item No	Factor 1	Factor 2	Factor 3
Item 38	.873		
Item 40	.868		
Item 44	.822		
Item 39	.765		
Item 42		.786	
Item 41		.704	
Item 45		.683	
Item 46			.739
Item 47			.711
Item 43			.678

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.

Part F. Factor Analysis of Teacher's Role

1. KMO and Bartlett's Test

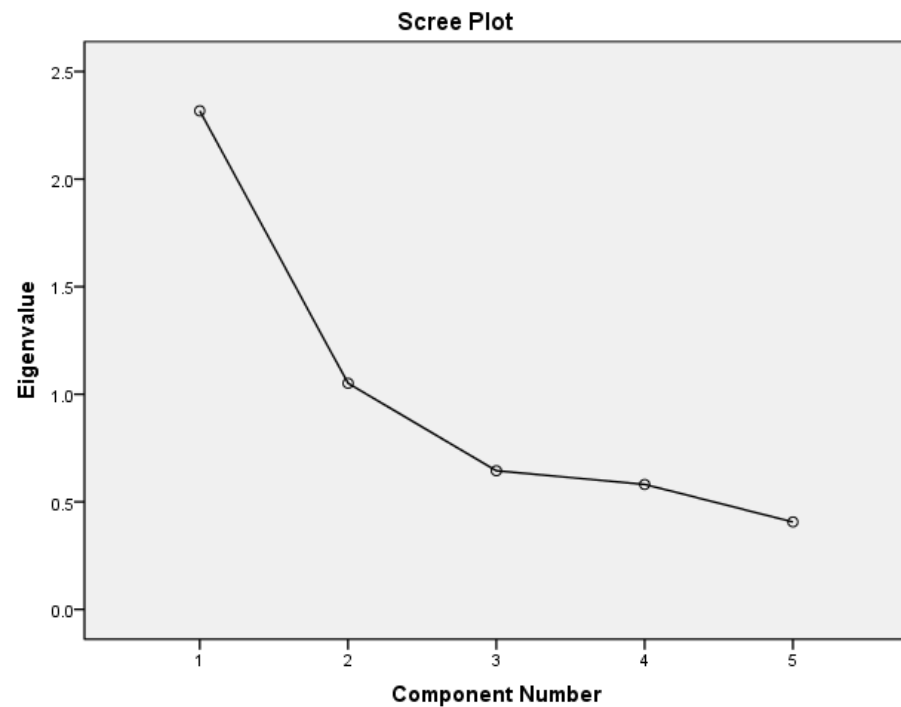
KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.903
Bartlett's Test of Sphericity	Approx. Chi-Square	1106.609
	df	10
	Sig.	.000

2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Total	Total	% of Variance	Cumulative %	Total
1	2.317	46.346	46.346	2.317	46.346	46.346	2.176
2	1.051	21.020	67.366	1.051	21.020	67.366	1.482
3	.644	12.888	80.255				
4	.581	11.618	91.873				
5	.406	8.127	100.000				

Extraction Method: Principal Component Analysis.
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

3. ScreePlot of Teacher's Role



4. Structure Matrix

Item No	Factor 1	Factor 2
Item 51	.837	
Item 50	.807	
Item 52	.791	
Item 49		.813
Item 48		.786
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.		

Part G. Factor Analysis of Students' Attitudes to Autonomous Learning in SACs

1. KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.837
Bartlett's Test of Sphericity	Approx. Chi-Square	616.031
	df	91
	Sig.	.000

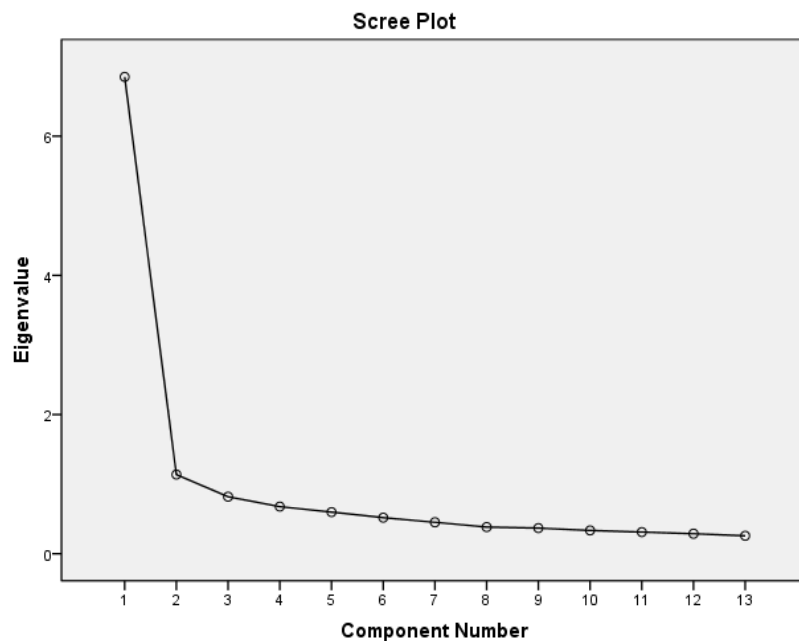
2. Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings ^a
	Total	% of Variance	Total	Total	% of Variance	Cumulative %	Total
1	6.852	52.704	52.704	6.852	52.704	52.704	6.274
2	1.138	8.752	61.456	1.138	8.752	61.456	5.291
3	.819	6.302	67.758				
4	.677	5.207	72.965				
5	.599	4.605	77.570				
6	.519	3.992	81.562				
7	.452	3.479	85.042				
8	.383	2.943	87.985				
9	.369	2.836	90.821				
10	.335	2.578	93.399				
11	.312	2.398	95.797				
12	.288	2.216	98.013				
13	.258	1.987	100.000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

3. ScreePlot of Students' Attitudes to Autonomous Learning in SACs



4. Structure Matrix

Item No	Factor 1	Factor 2
Item 54	.758	
Item 56	.719	
Item 53	.689	
Item 58	.652	
Item 57	.646	
Item 59	.588	
Item 55	.585	
Item 62		.783
Item 63		.782
Item 61		.750
Item 64		.725
Item 60		.658
Item 65		.647
Extraction Method: Principal Component Analysis. Rotation Method: Oblimin with Kaiser Normalization.		