



**INVESTIGATING L2 MOTIVATION SELF SYSTEM AND AUTONOMOUS
ENGLISH LEARNING ABILITY OF SENIOR HIGH SCHOOL
EFL CHINESE STUDENTS**

BY

SHASHA ZHAO

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR**

**THE DEGREE OF MASTER OF EDUCATION IN BILINGUAL EDUCATION
AND ENGLISH LANGUAGE TEACHING
SURYADHEP TEACHERS COLLEGE**

**GRADUATE SCHOOL, RANGSIT UNIVERSITY
ACADEMIC YEAR 2023**

Thesis entitled

**INVESTIGATING L2 MOTIVATION SELF SYSTEM AND AUTONOMOUS
ENGLISH LEARNING ABILITY OF SENIOR HIGH SCHOOL
EFL CHINESE STUDENTS**

by

SHASHA ZHAO

was submitted in partial fulfillment of the requirements
for the degree of Master of Education in Bilingual Education
and English Language Teaching

Rangsit University
Academic Year 2023

Asst. Prof. Denchai Prabjandee, Ph.D.
Examination Committee Chairperson

Asst. Prof. Anchalee Chayanuvat, Ed.D.
Member

Assoc. Prof. Sumalee Chinokul, Ph.D.
Member and Advisor

Approved by Graduate School

(Asst.Prof.Plt.Off. Vanee Sooksatra, D.Eng.)

Dean of Graduate School

July 31, 2023

ACKNOWLEDGEMENTS

While completing this thesis, I would like to sincerely thank my advisor, Associate Professor Dr. Sumalee Chinokul. First of all, from the selection of the topic to the writing of the content of the thesis, she gave me a lot of constructive guidance, carefully explained to me the problems that appeared in the thesis, gave professional guidance and confidence encouragement, I can successfully complete this thesis with the professor's careful guidance and hard correction is inseparable, I would like to express my deep gratitude to Associate Professor Dr. Sumalee Chinokul.

Secondly, I am very grateful to Assistant Professor Dr. Denchai Prabjandee and Assistant Professor Dr. Anchalee Chayanuvat, who gave important directions to my thesis and provided professional guidance during the proposal defense.

Finally, I would like to thank Rangsit University for giving me this opportunity to study and improve myself, and I have grown a lot in the process.

Sasha Zhao

Researcher

6407644 : ShaSha Zhao

Thesis Title : Investigating L2 Motivation Self System and Autonomous English Learning Ability of Senior High School EFL Chinese Students

Program : Master of Education in Bilingual Education and English Language Teaching

Thesis Advisor : Assoc. Prof. Sumalee Chinokul, Ph.D.

Abstract

This research explored the relationship between Chinese high school students' second language motivation self-system (L2MSS) and autonomous English learning ability. This study employed the form of non-experimental correlational study. The researcher collected quantitative data from 134 students and conducted semi-structured interviews with six students to obtain qualitative data to supplement the results of the quantitative data. These data were analyzed quantitatively and qualitatively using descriptive analysis, Pearson correlation and thematic analysis methods. The results of the study revealed that, first of all, in terms of L2MSS levels, high school students' overall L2MSS was in the medium level ($M=3.532$). Secondly, in terms of the level of autonomous English learning ability of high school students, the overall autonomous learning ability was moderate ($M=3.186$). Thirdly, the L2MSS levels and autonomous English learning ability levels of EFL Chinese senior high school studying in Liberal arts and Science program were significantly different. Science students' L2MSS and autonomous English learning ability levels were higher than those of Liberal Arts students. Finally, the Pearson correlation test showed that L2MSS was moderately positively related to autonomous English learning ability among high school students. The qualitative findings based on the semi-structured interviews provided more evidence to support the quantitative data for the connection of the L2MSS and autonomous English learning ability. Finally, this thesis suggests further research on the relationship between L2MSS and autonomous English learning ability, as well as providing some theoretical implications for English language teaching.

(Total 161 Pages)

Keywords: L2 Motivation Self-system (L2MSS), Ideal L2 Self, Ought-to L2 Self, L2 Learning Experience, Senior High School EFL Chinese Students

Student's Signature Thesis Advisor's Signature

TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	i
ABSTRACTS	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	vi
LIST OF FIGURES	viii
CHAPTER 1 INTRODUCTION	1
1.1 Background and rationale of the study	1
1.2 Statement of Problem	7
1.3 Research objectives	8
1.4 Research questions	9
1.5 Conceptual Framework	9
1.6 Scope of the study	10
1.7 Limitations of the study	11
1.8 Significance of the study	12
1.9 Operational definition	13
CHAPTER 2 LITERATURE REVIEW	15
2.1 Research on L2MSS	15
2.2 Research on autonomous learning ability	29
2.3 Research on the Correlation between L2MSS and autonomous English learning	41
2.4 Chapter Summary	45
CHAPTER 3 RESEARCH METHODOLOGY	47
3.1 Research Design	47
3.2 The Population and Sample of this study	47

TABLE OF CONTENTS (Cont.)

	Page
3.3 Research instruments	48
3.4 Data collection process	55
3.5 Data Analysis process	57
3.6 Chapter Summary	61
 CHAPTER 4	
RESEARCH RESULTS	63
4.1 Analysis of Questionnaire results	63
4.2 Analysis of semi-structured interview results	84
4.3 Conclusion	96
 CHAPTER 5	
DISCUSSION AND RECOMMENDATIONS	100
5.1 The Summary of the study	100
5.2 The Summary of the findings	101
5.3 Discussion	102
5.4 Limitation of the study	107
5.5 Pedagogical Implications	108
5.6 Recommendations for further study	109
 REFERENCES	111
 APPENDICES	123
APPENDICES A Questionnaire	124
APPENDICES B Interview Outline	131
APPENDICES C The IOC form to evaluate and comment on the questionnaire	133
APPENDICES D The IOC form to evaluate and comment on the semi-structured interviews	152

TABLE OF CONTENTS (Cont.)

	Page
APPENDICES E Translation of semi-structured interview responses	157
BIOGRAPHY	161



LIST OF TABLES

Table	Page
3.1 Classification of motivation for questions in the questionnaire	50
3.2 Reliability Analysis	54
3.3 The Interpretation of L2MSS mean scores	58
3.4 The Interpretation of autonomous English learning ability mean scores	59
3.5 Categories of semi-structured interview findings	60
3.6 Relationship among research questions, research instruments and data analysis	61
4.1 Overall Descriptive Statistics of L2MSS	64
4.2 L2MSS Level Distribution	64
4.3 Descriptive Statistics on the Ideal L2 Self of High School Students in L2MSS	66
4.4 Descriptive Statistics on the Ought-to L2 Self of High School Students in L2MSS	67
4.5 Descriptive Statistics on the L2 learning experience of High School Students in L2MSS	69
4.6 Overall status of autonomous English learning ability	70
4.7 Distribution of autonomous English learning ability levels	71
4.8 Descriptive Statistics on the Understanding teaching objectives of High School Students	72
4.9 Descriptive Statistics on the Setting learning objectives of High School Students	73
4.10 Descriptive Statistics on the Learning strategy use of High School Students	74
4.11 Descriptive Statistics on the Learning Strategy Monitoring of High School Students	75

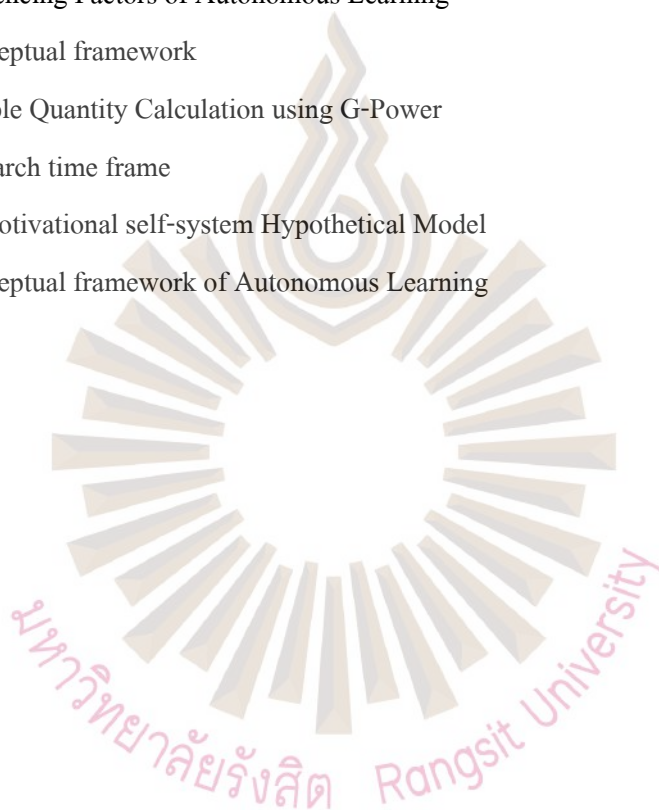
LIST OF TABLES(Cont.)

	Page
4.12 Descriptive Statistics on the Learning Process Management of High School Students	76
4.13 L2MSS levels among EFL Chinese high school students studying Liberal Arts and Science program	79
4.14 Autonomous English learning ability among EFL Chinese high school students studying different academic program	80
4.15 Test for correlation between L2MSS and autonomous English learning ability of EFL Chinese high school students	81
4.16 Test for correlation between L2MSS dimensions and autonomous English learning ability	82
4.17 Correlations between L2MSS dimensions and dimensions of autonomous English learning ability	83



LIST OF FIGURES

		Page
Figure		
1.1	Proportion of the population using English in the world	2
1.2	Flipped classroom teaching activities	5
1.3	Influencing Factors of Autonomous Learning	6
1.4	Conceptual framework	10
1.5	Sample Quantity Calculation using G-Power	11
1.6	Research time frame	11
2.1	L2 motivational self-system Hypothetical Model	19
2.2	Conceptual framework of Autonomous Learning	30



Chapter 1

Introduction

In the context of the rapid development of economic information globalization, each learning stage has increasingly strict requirements for learners' autonomous learning. Senior high school students nowadays, especially the students in the third grade of senior high school (Grade 12 students), are facing the pressure of college entrance examination, mastering autonomous learning has become one of the important skills that individuals should have in the learning process. The research results of autonomous learning in China and other countries are often closely related to students' learning motivation. Therefore, in order to improve senior high school students' autonomous learning ability, it is very important to study the relationship between motivation and autonomous learning.

This chapter describes the research background and rationale, research objectives, research questions, basic concepts, research scope, research limitations and significance. It also provides a conceptual framework and operational definitions.

1.1 Background and Rationale of the Study

In this chapter, the researcher will explore the background and rationale for this study as follows: 1) the need for promoting autonomous English learning ability; 2) The English curriculum standard forcing the autonomous English learning ability; and 3) possible connection of learners' L2 motivation self-system and autonomous English learning ability.

1.1.1 The Need for Promoting Autonomous English Learning Ability

English has become a universal language in the world and it is the main language for business, advanced technology, communication, and socialization. As shown in

Figure 1.1 on proportion of the population using English in the world, about 750 million people in the world use English as their mother tongue and second language. Another 750 million people master and use English as a foreign language, which means that about 20% of the world's population uses English (Getie, 2020).

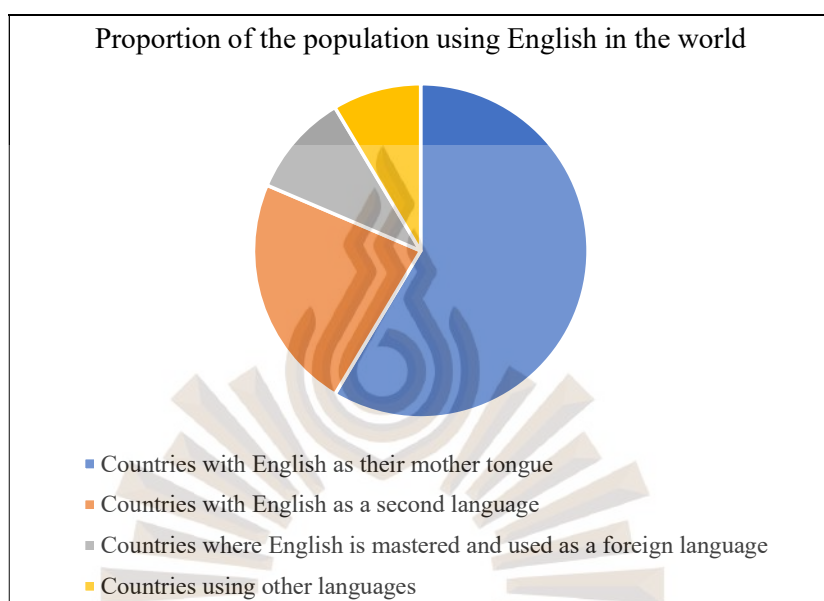


Figure 1.1 Proportion of the population using English in the world

Source: Getie, 2020

In China, English as a foreign language plays an important role in all stages of Chinese learners' learning. At the same time, English education in China is increasingly demanding on learners' English listening, speaking, reading and writing, which requires students not only to actively receive and learn from the knowledge taught by teachers in the classroom, but also to develop the habit of autonomous learning at the learning stage, so that they can learn more knowledge and master more English skills.

With the background of the global economic information era, the speed of knowledge updating is accelerating, and the requirements for talents are becoming higher and higher. Autonomous learning ability has become an important measure for people to pursue and improve their self-knowledge. Autonomous learning ability is an alternative learning method for surviving in the current global society. With students as

the main body of learning, students make their own decisions, are not subject to the control of others, and are not subject to external interference. Through reading, listening, research, observation, practice and other means, individuals can get continuous changes of knowledge and skills, methods and processes, improvement and sublimation of emotions and values (Benson, 1996). In today's era, autonomous learning is a very important requirement, and the ability of autonomous English learning ability has become one of the necessary abilities for survival and development. Therefore, education should not only focus on the teaching of knowledge, but also on the cultivation of learners' awareness of autonomous learning (Qu, 2022).

However, in the traditional teaching mode, teachers are the main body of teaching activities, learners can only passively accept knowledge, and lack the awareness of autonomous learning (Koehler, Mishra, Akcaoglu & Rosenberg, 2013). In the traditional passive teaching mode, learners may lack interest in English learning and may be unwilling to actively participate in English learning activities, especially Chinese third grade of senior high school students, who may encounter the pressure of college entrance examination, may be overwhelmed with class assignments and may be limited by the knowledge and skills taught by teachers in the classroom. It is necessary to strengthen learners' English learning motivation and improve their ability to learn English or engage in learning activities autonomously after and/or out of class.

In other words, autonomous learning ability can change the focus of teaching from teachers' knowledge to learners' active knowledge acquisition, breaking the traditional phenomenon of students' passive acceptance of knowledge. Students may need to use English beyond the classroom context. Therefore, "how to improve learners' awareness and ability of autonomous learning" needs to be fully explored in research.

1.1.2 The English Curriculum Standard Forcing the Autonomous English Learning Ability

In China, the English Curriculum Standards mentions that “teachers should pay attention to cultivating students’ autonomous learning ability and cooperative learning ability in the actual teaching process”. It emphasizes the important value of English autonomous learning (Wang & Luo, 2019). Therefore, after accepting the knowledge taught by teachers, learners should develop the habit of autonomous learning and establish the awareness of autonomous learning, so that they can learn more language knowledge and master more English practical skills in the future.

In response to the teaching goal of cultivating students’ “autonomous learning ability”, high schools across China have begun to take various actions to respond to this policy. The basic order of teaching has changed from “teaching before learning” to “learning before teaching” to improve students’ autonomous learning ability in English. However, to a certain extent, it is impossible to improve students’ English autonomous learning ability in a real sense if they study independently only at a fixed time every week. This measure is fundamentally insufficient.

Additionally, some scholars, in other countries, in their research also suggested how to promote students’ autonomous foreign language learning ability. For example, Al-Harbi and Alshumaimeri (2016) mentioned in their research that flipped classroom strategy (Figure 1.2) was used as the teaching model for Saudi middle school students in the English classroom, which fundamentally changed the traditional “teaching and learning” model, and letting students control their learning was a revolutionary concept behind the flipped classroom strategy. This has greatly improved students’ autonomous English learning ability.

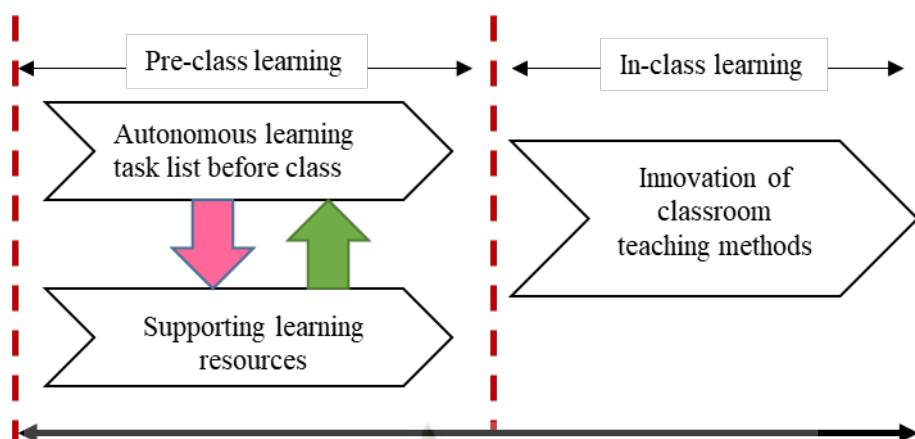


Figure 1.2 Flipped classroom teaching activities

Source: Al-Harbi & Alshumaimeri, 2016

1.1.3 Possible Connection of Autonomous English Learning Ability and Learners' L2 Motivation Self-System (L2MSS)

In the 1980s, based on the concept of humanistic psychology, scholars put forward the concept of autonomous learning in the field of pedagogy. Holec (1981) took the lead in defining autonomous learning as “the ability of learners to be responsible for their own learning” (Lou, 2021). Since then, educators have carried out extensive research around autonomous learning, and achieved rich results. Scholars first discussed the concept and definition of autonomous learning at the theoretical level.

Since then, scholars have devoted themselves to exploring the factors that affect autonomous learning at the empirical level, such as those shown in Figure 1.3: i.e., learner beliefs, self-efficacy, motivation, etc. Among them, learning motivation has always been the focus of research in the field of autonomous learning, and is also considered to be one of the important affective factors affecting language learning.

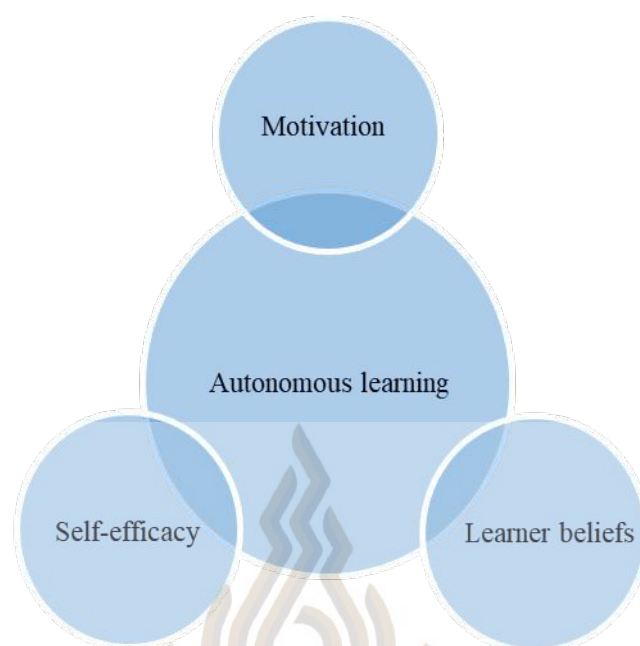


Figure 1.3 Influencing Factors of Autonomous Learning

Source: Chen, 2022

Today, with the accelerating trend of globalization, different cultures are merging with each other, and cultural boundaries are becoming increasingly blurred. The defects of Gardner's classical motivation model are becoming increasingly prominent. Motivation research based on the framework of "integrative motivation" in the context of globalization is also questioned (MacIntyre, Dewaele, Macmillan & Li, 2019). Many scholars have been trying to make up for the deficiencies of traditional motivation models in the construction of new motivation theories.

Dörnyei, based on the "Possible Selves Theory" and "Self-discrepancy Theory" in social psychology, created a new motivation theory for second language learning, namely the "L2 Motivational Self System" theory (hereinafter referred to as L2MSS) (Lashari, Umrani & Buriro, 2021). This theory holds that the traditional "integrative motivation" does not have universal adaptability in the context of globalization. In particular, English has become the most widely used language in the world. Most learners are in a foreign language learning (EFL) environment rather than a second language learning (ESL) environment (Altay, I., & Altay, A., 2019). Compared with integrative motivation, the "ideal second language self" in L2MSS is more adaptable

to relevant research in the context of foreign language learning (EFL). Dörnyei and AL-HOORIE (2017) mentioned that the theoretical paradigm of second language learning motivation developed in the past 25 years is mainly based on English as the target language.

1.2 Statement of Problem

Motivation research conducted in a foreign language learning environment within the framework of L2MSS theory can explain and verify some contradictory results obtained from the traditional motivation model. L2MSS theory expands the theoretical category of language learning motivation and extends the research direction of second language motivation. This theoretical perspective has also been verified by some scholars (Qin & Yang, 2022; Martinović & Burić, 2021), but the main ideas and core concepts of this theory are not yet mature and perfect, and need to be deeply explored and verified in the research of second language motivation related to different cultures, different research objects, and other learning influencing factors.

With the continuous reform of English education in senior high schools, English accounts for 20% of the total score in the college entrance examination. In China, as a group of high school students who are studying hard and are about to enter the university, their motivation to learn English is strong (Zhang & Kim, 2013). It is not enough to rely on the English knowledge taught by teachers in the classroom. Therefore, it is urgent to develop their English autonomous learning ability to improve their English learning level. In essence, learner autonomy is the psychological overview of learners' learning process and learning content, understanding the characteristics and development rules of students' learning psychology in the learning process, and understanding the characteristics and main laws of students' foreign language learning motivation in the learning process, which can truly cultivate students' foreign language learning ability. Therefore, in the study of improving students' autonomous learning behavior, second language motivation has become a crucial factor.

At the same time, as a global language, English still plays an important role in education and teaching at all stages in China, and Chinese students' English learning is generally in a foreign language learning environment, rather than a second language learning environment (Wang, Chen & Zhang, 2021). Among them, gender, arts and science, and English learning level are important factors affecting L2MSS and autonomous learning ability (Liu & Thompson, 2018). Irgatoğlu (2021) mentioned that the level of L2MSS is different in terms of gender and English learning performance of high school students. Fotiadou (2017) concluded that gender and academic achievement have an important impact on learner autonomy. Therefore, it has become an urgent need to explore the correlation and mutual influence of gender, arts and science, and English learning level on senior high school students' second language motivation self and foreign language learning autonomy in order to meet the needs of cultivating students' autonomy in the process of English teaching in senior high schools. Therefore, it is feasible to adopt L2MSS theory as the basis of this study. Therefore, the researcher takes senior three students in Wuhe County, Anhui Province as the research subject, adopts the L2MSS theoretical framework, explores the correlation between L2MSS and autonomous learning ability of senior high school students, and puts forward corresponding teaching suggestions. L2MSS theory is a hot topic in the field of language learning motivation. However, many previous studies on autonomous learning and second language motivation have been carried out separately by many scholars, and the research on the correlation between them is relatively few, especially the research on senior three students.

1.3 Research Objectives

This research is aimed at 1) exploring the level of learners' L2 motivation self-system (L2MSS) and autonomous English learning ability of EFL Chinese senior high school students, 2) exploring the difference of the Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students studying Liberal Arts and Science program, and 3) examining the correlation

between L2MSS and autonomous English learning ability of EFL Chinese senior high school students.

Based on the findings, it is hoped that some suggestions and implications can be put forward for the promotion and improvement of Chinese senior high school students' English learning motivation and autonomous English learning ability.

1.4 Research Questions

The specific research questions are as follows:

1.4.1 What are the levels of Learners' L2 Motivation Self System of EFL Chinese senior high school students?

1.4.2 What are the levels of autonomous English learning ability of EFL Chinese senior high school students?

1.4.3 Are there any difference of the Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students studying Liberal Arts and Science program?

1.4.4 Are there any relationship between Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students?

1.5 Conceptual Framework

Figure 1.4 displays the conceptual framework of this research study to explore the level of L2MSS and autonomous English learning ability of EFL Chinese senior high school Students and to examine the relationships between the two variables.

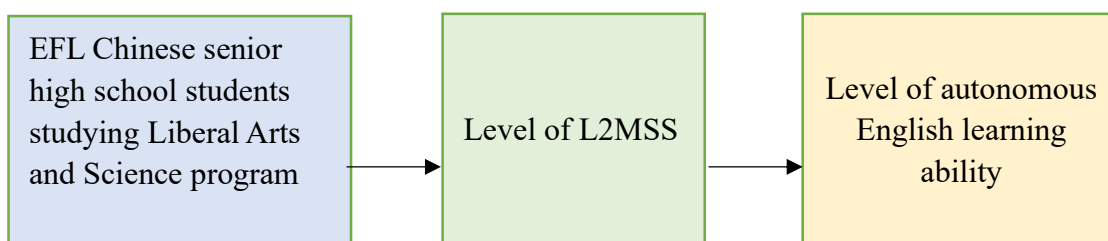


Figure 1.4 Conceptual framework

Source: Shasha Zhao, 2023

1.6 Scope of The Study

1.6.1 Contexts of the Study

This research has been carried out in Wuhe County Senior High School in Anhui Province. It is a modern full-time high school carefully built according to provincial demonstration standards. This high school has a complete English teaching system, with the total numbers of 75 classes, 3,776 students and 276 teachers. Due to the implementation of the college entrance examination education reform in Anhui Province, the third grade of senior high school is the last class division system of liberal arts and sciences. There are 18 science classes in the third grade of senior high school, which are 1-15 classes and 25-27 classes respectively. Among them, 25-26 classes are experimental classes, the other classes are ordinary classes, and 9 liberal arts classes are 16-24 classes.

1.6.2 Population and Sample of the Study

The population of this study is the total of 1,418 third grade of senior high students from 27 classes at Wuhe County Senior High School. These students have a certain ability to learn English independently. The researcher used G Power formula to determine the most suitable sample for the study allowing degree of error at 0.05 and set a goal of achieving 0.95 Power ($1-\beta$ err prob), the result showed that it was 134 students. Then three classes have been selected by random sampling (class 12, 13 and

17). Each class has about 50 students, totaling about 134 Chinese students, 134 questionnaires have been distributed.

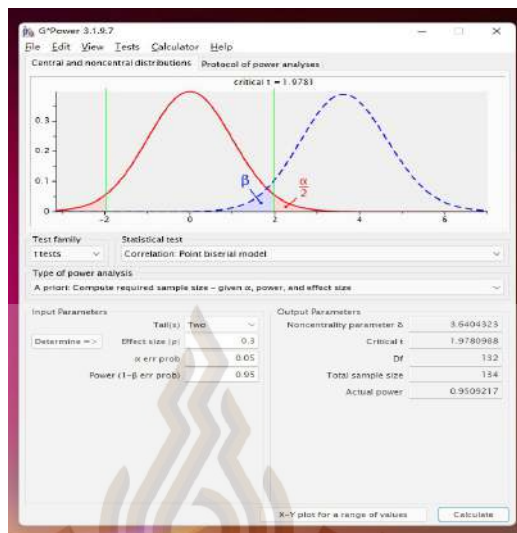


Figure 1.5 Sample Quantity Calculation using G-Power

Source: Beck, 2013

1.6.3 Research Time Frame

The data of this study was collected in the first semester of 2023 for about one month. The total research process is about four months. The following is the time schedule of this study.



Figure 1.6 Research time frame

1.7 Limitations of the Study

After a series of investigations and studies, the researcher has made continuous analysis and correction. Although the researcher has obtained the corresponding research results in this study, there are still some limitations in this study at a deeper level as follows:

1.7.1 The study population and the sample are targeted at senior high school students at Wuhe County Senior High School. The findings can then be applied only with this school.

1.7.2 This study is conducted based on a correlation study to examine association of L2MSS and autonomous English learning ability, and does not intend to explore the predictive and explanatory role between the two, nor does it pay attention to the sequential relationship between the two.

1.8 Significance of the Study

For teachers: This study takes the students of Wuhe County High School in Anhui Province as the research object, summarizes the main overview of the second language motivation self-system and learner autonomy of the high school students in the process of English learning through questionnaires and interviews, and can draw the differences of L2MSS and learner autonomy of EFL Chinese senior high school students. Therefore, teachers should not only realize the importance of L2MSS, but also strengthen the high school students' understanding of the importance of the ideal second language self, so as to use the future guidance of the ideal second language self to assist teaching and learning. This study, to a certain extent, makes a corresponding supplement to the existing research, also provides a new reference for English learning in the field of motivation, and also provides a certain theoretical basis for the research of English education in senior high school, and provides valuable enlightenment for teachers in teaching.

For researchers: This study empirically verifies the appropriateness of L2MSS in a foreign language learning environment like China. First of all, the motivation theory makes up for the deficiencies of previous relevant theories to some extent. At the same time, the research of outstanding scholars in China and other countries shows that the theory is also applicable to the environment where English is a foreign language. For example, Dörnyei pointed out in his research that "L2MSS" theory is applicable to the

research framework of English learning motivation in English environment. At the same time, it can also effectively explain some contradictory results of the empirical research on integrative motivation and instrumental motivation. Research in China, Li & Liu (2021) also confirmed that the theory of L2 motivational self-system is effective for Chinese English learners.

Secondly, it also provides empirical basis and reference for exploring the current situation of L2MSS of Chinese senior high school students and the correlation between L2MSS and autonomous learning ability.

1.9 Operational Definition

L2 Motivational Self-System refers to the theory of “L2 motivation self-system”, which is based on “possible self-theory” and “self-difference theory”, which mainly covers three main aspects. They are “ideal second language self”, “ought-to second language self” and “second language learning experience”. The main feature of this theory is that it begins to reorganize and explain second language motivation in the social context of English as a global language. It focuses on the process and dynamic changes of motivation research. In this study, the L2MSS questionnaire of Liu Zhen (2012) was used (See Part II of Appendix A). Liu Zhen designed a questionnaire based on the research of Dörnyei and Papi (2010), and made some modifications according to the English learning of Chinese high school students.

Autonomous English learning ability is an ideal goal, and an unconstrained learning (Masouleh & Jooneghani, 2012). Learners can be responsible for their own learning ability in their own learning process, including learning methods, learning objectives, etc., and can evaluate and monitor their own learning ability in five aspects: learning objectives, learning contents, learning methods, learning processes, and learning effects. In this study, the autonomous learning ability questionnaire of Jinfen Xu (2004) is adopted (See Part III of Appendix A), and the researcher has modified the

questionnaire to some extent according to the specific situation of EFL Chinese senior high school students' English learning.

Chinese senior high school students refer to the age group of 16-18 years old students who are studying at Wuhe County Senior High School in Anhui Province in the first semester of the academic.



Chapter 2

Literature Review

In this chapter, based on the literature review method, the researcher has provided the relevant theories and research background of this study through reading, by collecting and sorting out relevant literature using the network, library and other tools. In this chapter, the researcher mainly focuses on L2MSS theory and research in China and other countries, autonomous learning theory and research in China and other countries, and the correlation between second language learning motivation and autonomous learning.

2.1 Research on L2MSS

This section focuses on the theoretical connotation of L2MSS, and reviews the relevant theoretical research of L2MSS in China and other countries.

2.1.1 Theoretical Connotation of L2MSS

Motivation theory has always been concerned in the research field of second language teaching, and it has also been the research focus of experts and scholars in China and other countries. In foreign language teaching. Motivation is also of great research value and has a certain impact on the achievements of foreign language education. On the other hand, it is also the source of foreign language learning and a continuous driving force in the process of foreign language learning.

The concept of L2MSS theory starts from the study of learners' "self" in social psychology. Its main theoretical basis is the "possible-selves theory" (Markus & Nurius, 1986) and the "self-discrepancy theory" (Higgins, 1987). The "possible-selves theory" holds that learners have three "possible selves": (1) The self that individuals

want to achieve in the future; (2) The self that individuals think they can achieve in the future; (3) The individual is afraid and does not want to be himself. The “possible-selves” is the guide of the future self, which promotes the development of individuals from the present state to the future state, and emphasizes the dynamic development of people. On the one hand, the “possible-selves” provides motivation for the behavior of realizing the future self; on the other hand, the “possible-selves” also provides a basis for evaluating and explaining the true self.

Dörnyei (2005) believed that, in general, the “possible-selves” expressed the individual’s pursuit and good wishes for the future state. However, the “possible-selves” comes from the individual’s internal imagination and may not be realized. The “possible-selves” is also vulnerable to changes caused by external factors and is unstable (Meevissen, Peters & Alberts, 2011).

Higgins’ “Self-discrepancy Theory” believes that individual self-discrepancy is constructed from three elements: “ideal self”, “ought self”, and “actual self”. “Ideal self” refers to some ideal characteristics that individuals hope they can have and the ideal state that they can achieve. “Ought self” is a characteristic that individuals think they should have under the influence of external environment. “Actual self” refers to the individual’s attitude and assessment of self-status, which is the characteristic that the individual thinks he actually has. The theory holds that both the “ideal self” and “ought self” belong to the future self, which can guide individuals from the current actual self to the future possible selves. Higgins believes that when there is a difference between an individual’s actual self and his future self, the individual experience will stimulate the corresponding motivation in order to narrow the difference, which can promote the individual to realize his future self.

Dörnyei (2005) introduced “ideal self” and “ought self” into the field of L2 motivation, and renamed them “ideal L2 self” and “ought-to L2 self” respectively (Martin, 2022). L2MSS theory highlights the guiding role of the future self. Its theoretical core lies in that when learners have a high ideal second language self-image or ought-to second language self-image and hope that they can master the

second language in the future, learners will have a strong motivation to learn the second language well in order to realize the possible future second language self-image, narrow the gap between the actual second language self and the possible second language self, and achieve the ideal second language state. The theory holds that L2MSS consists of the following three elements: “ideal L2 self”, “ought-to L2 self” and “L2 learning experience”.

(1) The ideal L2 self refers to the ideal second language state and level that learners strive to pursue and hope to achieve in the future. The ideal second language self is a positive desire from the heart of the learner. The more positive the ideal second language self-image of the learner is, the stronger the learning motivation will be. Dörnyei believes that the traditional integrative motivation stems from learners' recognition of the target language cultural environment and hopes to integrate into the target language community (Ghanizadeh & Rostami, 2015). However, under the background that English has become an international language, the defects of integrative motivation are increasingly obvious, which can no longer explain learners' motivation in foreign language environment. The attitude of learners towards English becoming an international language should be paid more attention. Most learners do not integrate into the target language community, nor do they intend to emigrate, but are only interested in the target language culture, or hope to achieve some success with the help of the target language. At this time, learners' learning motivation is an internalized instrumental motivation, also known as Promotion Instrumentality (Gardner, 2001). Therefore, the theory holds that the ideal second language self is influenced by both integrative motivation and instrumental motivation.

(2) Ought-to L2 Self refers to some characteristics that learners think they should have in their second language learning based on their responsibilities and obligations to meet their social environment, such as the expectations and requirements of their family, friends and teachers, or to avoid some negative results. Among them, parents are the most important influencing factors. Learners hope to master the second language skillfully, just to meet the expectations and requirements of others and passively fulfill their own responsibilities and obligations. At this time, the main

motivation of learners is external instrumental motivation, also known as prevention instrumentality (Ametova, 2020).

At the same time, Martin (2022), a scholar, mentioned in his research that by understanding parents' attitudes towards language learning and how they affect children's learning motivation, research shows that parents' views on the importance of foreign language learning will have a great impact on children's foreign language learning motivation (Dörnyei, 2010). Therefore, in this study, parents' influence is classified as an external influence on learners' motivation. To sum up, this study should combine the ought-to L2 self with preventive instrumental motivation and family influence.

(3) L2 Learning Experience refers to the learners' current learning experience, which is mainly related to their previous learning experience, and the influence of the past on the present, and is related to their past second language learning experience and learning environment, such as their past successful or unsuccessful second language learning experience. Successful second language learning experience makes learners feel more self-efficacy, thus strengthening their confidence in second language learning. However, the failure of learning experience will seriously affect the students' self-confidence, fear and anxiety about second language learning. Therefore, learning self-confidence, learning anxiety and fear are important factors that affect motivation related to second language learning experience (Dörnyei, 2019). To sum up, the model of the theoretical hypothesis of L2 motivational self-system is shown in the Figure 2.1.

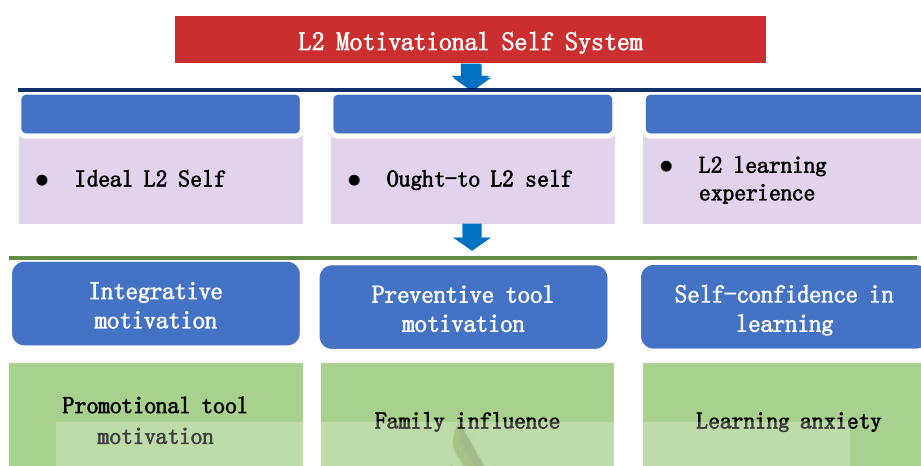


Figure 2.1 L2 motivational self-system Hypothetical Model

Source: Martin, 2022

L2MSS theory makes up for the shortcomings of traditional integrative motivation and instrumental motivation, emphasizes the dynamic, complex and situational nature of motivation, and comprehensively explains the essence of motivation. This theory holds that “integrative motivation” is only applicable to relevant research in the target language environment, that is, the second language learning environment (Alzubaidi, Aldridge & Khine, 2016); The “ideal L2 self” is more suitable for the relevant research in the sociolinguistic environment, that is, the foreign language learning environment (Wight, 2015). Under the background that English has gradually become the universal language in the world, the empirical research based on L2MSS has become the focus of motivation research.

2.1.2 L2MSS Research in China and Other Countries

The research on L2MSS in China and other countries is mainly divided into the following three aspects: (1) the relationship between the three elements of L2MSS: ideal L2 self, ought-to L2 self, and L2 learning experience; (2) The influence of L2MSS on expected learning effort; (3) The correlation between L2MSS and other variables.

(1) The relationship between the three elements in L2MSS.

In terms of the relationship between the ideal L2 self and the ought-to L2 self, the two possible selves, most scholars have concluded that there is a positive correlation between them (for example: Peng, 2015; Lee, J., & Lee, K., 2021; Ghapanchi, Khajavy & Asadpour, 2011; Arslan & Çiftçi, 2021).

On the relationship between the ideal L2 self and the ought-to L2 self, the two possible selves, and the L2 learning experience, the research results of Saito (2018), Kormos (2011), Dörnyei (2019) also show that the ideal L2 self has a positive impact on the L2 learning experience. Saito (2018) studied how 108 senior high school students could improve the comprehensibility of their second language (L2) speeches according to different motivations, emotions and experience profiles in the English as a Foreign Language (EFL) classroom. It is mentioned that the learning mode of students is mainly related to their emotional state (anxiety and happiness), followed by their motivation tendency (clear vision of their ideal future self). Students' anxiety and weak ideal second language self are negatively correlated with their performance at the beginning of the project, while students' happiness and greater ideal second language self are positively correlated with their performance (Saito, Dewaele & In'nami, 2018).

Dörnyei (2019) mentioned that the theoretical focus in the L2 motivational self-system is usually focused on two future self-guides, which represent the possible (ideal and ought-to) self. In addition, he also demonstrated the third major dimension of the structure of second language learning experience. It is also proposed that the third factor is not secondary in importance. Empirical research shows that the ideal second language self has a positive impact on second language learning experience. Second language learning experience is not only a powerful predictor of various criteria, but also often the most powerful predictor of motivational behavior.

Al-Hoorie (2018) believed that both the ideal L2 self and the ought-to L2 self were significantly positively correlated with the L2 learning experience. In the relationship between the ideal L2 self and the ought-to L2 self and the L2 learning experience, Papi (2010) actively tested a theoretical model containing the ideal second

language self, the ought-to second language self and the second language learning experience, as well as English anxiety and the expected effort to learn English in Dörnyei's (2005, 2009) L2 motivational self-system. 1011 Iranian high school students completed a questionnaire specifically for Iran. Using AMOS version 16.0, structural equation modeling was run to analyze the proposed model. The study found that all variables in the model contributed significantly to the expected effort. However, the ideal second language self and second language learning experience reduced students' English anxiety, while the ought-to L2 self significantly made them more anxious.

In order to more clearly demonstrate the relationship between ideal L2 self, ought-to L2 self and L2 learning experience, Zhao, Xiao & Zhang (2022) studied the relationship between L2MSS and international attitudes and the sustainable development of second language proficiency in the era of COVID-19. To solve this problem, they investigated 156 English majors in China and analyzed their response data with structural equation model. The results show that the ideal second language self has a positive predictive effect on the second language learning experience, while the ought-to L2 self has a negative predictive ability. International posture has a positive impact on the ideal second language self and second language learning experience, while it has a negative and insignificant impact on the ought-to L2 self. Second language learning experience and ideal second language self-have a positive impact on second language proficiency, while the ought-to L2 self has a negative impact on second language proficiency. The results of this study not only contribute to the promotion of L2MSS, but also deepen the understanding of possible contextual variations of L2 motivation, and the uniqueness of the sustainable development of Chinese English majors during the COVID-19.

Brady (2019) believed that there was no significant relationship between the ought L2 self and the L2 learning experience.

Regarding the relationship between the ideal L2 self, the ought-to L2 self, the L2 learning experience and the students' achievement. Subekti (2018) studied 56 Indonesian undergraduates who participated in the biotechnology English course. The

research results showed that the ideal L2 self and L2 learning experience had no significant relationship with the achievement, and the ought-to L2 self was negatively correlated with the achievement.

Nitta (2015) and Jiang (2015) believed that there was an interaction between the three elements of L2MSS. Their research believed that learners' ideal L2 self was a dynamic development. Under certain conditions, the ought-to L2 self could be transformed into a part of the ideal L2 self. Yang (2011) proved that learners' ought-to L2 self can be transformed into their ideal L2 self. However, as the Asian students in this study proved, they reinterpreted the role of perceptual learning styles in learners' ought-to L2 self, ideal L2 self-creation and maintaining their motivation in second language behaviors. Statistical analysis shows that learners' perceptual learning styles (i.e. visual, auditory and kinesthetic styles) are significantly related to their ideal L2 self and motivational second language behaviors. Although Chinese students are more likely to show positive L2 behaviors than other students, their ideal L2 self-level is significantly lower than that of Swedish students. Through the relationship between learners' perceived learning styles and L2 motivational behaviors based on the L2 motivational self-system, this study provides evidence to prove that the transformation of the ought-to L2 self into the ideal second language self plays a key role in creating and maintaining L2 motivation (Jiang & Dewaele, 2015).

Therefore, the relationship between the three internal elements of L2MSS is controversial, so in the future research, scholars need to conduct empirical research and verify it from different perspectives, different research methods, and different research objects.

(2) The influence of L2MSS on expected learning effort.

The impact on learners' expected learning effort has always been a hot topic in L2MSS research. In this regard, scholars have carried out many motivational studies in a variety of cultural environments, and their findings have all verified that the ideal second language self can effectively predict learners' expected level of effort in second

language learning. Moskovsky (2016) and Li (2021) believed that L2MSS could predict learners' expected learning efforts, but had little impact on actual learning behavior or actual learning effect. Subekti (2018) has studied the influence mechanism of L2MSS on second language learners, and his research has reached the same conclusion, that is, there is a certain relationship between L2MSS and expected learning effort, but the expected learning effort of learners may not be able to convert into actual learning behavior, which has little impact on learners' actual performance. Li (2014) established an equation model to clarify that both ideal L2 self and L2 learning experience have a positive impact on learners' L2 learning efforts.

Khan (2015) used Dornyei's (2009) L2 motivational self- system as a theoretical framework to find out the relationship between the second language self (ideal and ought to) and students' expected efforts to learn English as well as their scores (scores obtained in the formal examination). The participants of this study were female students (18-20 years old) from the Saudi Foundation. The analysis of quantitative and qualitative data showed that, the ideal second language self has a significant impact on the level of motivation for learning English and their formal second language achievement, while the ought-to L2 self only has a significant impact on the level of motivation of participants, that is, their expected effort to learn English (standard measurement).

Takahashi (2020) made an empirical comparison between autonomous learning theory and L2 motivational self-system. The researcher examined the relationship between learners' motivation structure, learners' second language learning efforts and second language proficiency. The research proved that there is a structural relationship between the motivation structure of these two theories and learners' self-reported efforts. In addition, although the L2 motivation self-system predicts the expected learning efforts, leading to second language proficiency, the power of the ideal second language self is far weaker than that of the second language learning experience.

(3) The correlation between L2MSS and other variables.

The scholars also explored the relationship between the system and other variables from the L2MSS perspective, such as liberal arts and science, gender, English learning level, language learning anxiety, self-efficacy, etc.

Huang (2019) conducted a comparative analysis of the learning motivation of college students majoring in science and engineering and liberal arts on the basis of the second language motivation self-system theory. The study found that the second language learning motivation of students majoring in science and engineering is greatly influenced by the second language learning experience and the ought-to second language self. The second language learning motivation of students majoring in liberal arts is greatly influenced by the second language learning experience and the ideal second language self. Therefore, when teaching, teachers can adopt different teaching strategies according to different student groups.

The correlation between liberal arts students' learning behavior and ideal second language self is greater than that of science students; The correlation between science students' learning behavior and ought-to second language self is greater than that of liberal arts students. Glory and Subekti (2021) investigated the fear of negative English evaluation of Indonesian high school science learners, which is a second language anxiety structure, a second language motivation structure, and belongs to the ought-to second language self. The study found that there is a positive correlation between the fear of negative English evaluation of science learners and the ought-to second language self, but the correlation is relatively weak.

Hill and Apple (2013) mentioned that in order to enhance the motivation of science and engineering students to learn English, international cooperation should be carried out through effective use of English to penetrate into the research, development and production of all science and engineering (S&E) fields.

Apple, Fallout and Hill (2020) explored that science, technology, engineering and mathematics (STEM) students in colleges and universities in Japan hope to pursue careers in the fields of science and technology. By strengthening their motivation to

learn English as a second language (L2), they can improve the ability of science students to learn L2, and also improve their ability to communicate globally after employment. Results/discussion: The ANOVA results show that students have a strong impression of the need for English for their future career goals in the field of science and technology, which is measured by “the correctness of the second language self”, but the ideal second language self-level is low, which is a variable to measure the image of future fluent English users. In the regression analysis, Ought to L2 Self predicted that the TOEIC score was low; On the contrary, ideal L2 self-predicted higher TOEIC scores. These contradictory results show that Japanese science and engineering students are striving to improve the English skills required for future STEM-related communication and have strong motivation for English learning.

Liu and Thompson (2018) proposed that ideal self has been proved to be the most significant and powerful motivating factor in L2MSS. When interacting with other factors such as gender and English learning level, it is also most likely to produce group differences. Research shows that girls have more positive ideal second language selves than boys, and girls have higher L2MSS intensity. As for the ought-to self, the only significant result found is the interaction with the participants' English learning level. Contrary to the results of ideal and anti-ought-to selves, the participants with lower level have stronger English ability.

Huang (2017), in an empirical study on the relationship between the second language motivational self-system and English learning effectiveness, examined the differences of gender differences in the three dimensions of the second language motivational self-system. The results showed that gender is one of the reasons that affect the second language motivational self-system, and the second language motivational level of girls is generally higher than that of boys. There is a positive correlation between the ideal self of second language motivation and English learning level, that is, the higher the ideal self-level of second language motivation, the easier it is for students to achieve higher English scores, but there is no obvious correlation between the ought-to self of second language motivation and English learning level.

Swatevacharkul (2021) explored the interaction between L2MSS construction and English learning level. The research results show that L2MSS can motivate senior high school students in Thailand's learning environment, especially the ideal L2 self and L2 learning experience. In the eyes of students, it may be contrary to teachers' views. When there are opportunities to use English in and out of the classroom, English learning is meaningful. This will increase the ideal L2 self- motivation and more positive L2 learning experience, which in turn will promote in-depth learning and help improve English learning level.

Pattiya and Chaiyasuk (2022) investigated the role of second language motivational self-system (L2MSS) in English learning level of Thai high school learners and English learning success of Thai high school students. L2MSS consists of the ideal second language self, the ought-to second language self and the second language learning experience. Participants included 120 12th grade students who were selected from four typical EFL classes in a local middle school by random sampling. The data were collected through questionnaires and in-depth interviews to determine the views of Thai senior high school students on the second language motivation self-system in terms of English learning level and English learning success. The results of the questionnaire show that the ideal second language self is the most important factor, followed by the second language learning experience, and the ought-to second language self is the least important factor. In addition, the interview results show that students with high English learning level and students with low English learning level seem to have the same goal in learning English. Further research should be carried out to investigate the acquisition/learning process of two groups of participants and participants in different educational backgrounds.

In addition, Magid and Chan (2012) verified the relationship between L2MSS and motivating language learners to learn English. The research results in the two pioneering programs show that these two programs can effectively motivate participants to learn English, thus improving their English learning level, and by strengthening their vision of ideal second language self, making their goals more clear and more specific, and enhancing their confidence in language learning.

For example, Safdari (2021) studied the second language motivational self-system (L2MSS), which provides a new way to motivate language learners by introducing the concepts of possible self, vision and image. The results of this study show that the vision-based motivation intervention program is very effective in improving the motivation attributes of Iranian learners' English learning level.

Yang (2012) put forward the hypothetical relationship between foreign language anxiety, three components of Schumann's (1978, 1986) cultural adaptation theory (assimilation, preservation and adaptation), two aspects of Dornyei's (2005, 2009) L2 motivational self-system (ideal L2 self and ought-to L2 self) and sociodemographic variables in Taiwan EFL context. Multivariate regression analysis revealed the prediction of foreign language anxiety by four variables: second language self, preservation, English listening comprehension practice time and self-perceived English level. The study found that the ideal L2 self and the ought-to L2 self-interact with each other, and at the same time reduce the anxiety of language learners in foreign language learning and improve the teaching significance of foreign language learning.

Pan & Zhang (2021) found that many motivational factors (for example, ought-to L2 self, ideal L2 self, motivational behavior) were related to foreign language learning anxiety, and the mean and variance were all related with time. Huang (2014) explored the relationship between language anxiety and self. Self refers to an individual's (a) self-confidence, (b) language self, second/foreign language self or identity formed in the process of second or foreign language learning, or the combination of first language self and second/English self. When learners are unable to express their thoughts in the target language, and learners feel the loss of L1 identity, limited or broken, this may be the generation of language anxiety. At the same time, the author mentions that language anxiety is a kind of experience, and this unique emotion or experience may be related to the anxiety of feeling limited, broken, incompetent, having another person or having different personalities in the target language. From the research on language anxiety and second or foreign language learning, it can be

found that lack of self-confidence of language learners may lead to language anxiety, which is difficult to improve language achievement.

In addition, scholars also believe that L2MSS not only directly affects variables related to language learning, but also may play a mediating role among language learning variables to affect learning behavior. Shih & Change (2018) explored the relationship between L2MSS and multiple variables. This study used structural equation modeling to test a hypothesis model, which took L2 motivational self-system, family influence, L2 learning anxiety and self-efficacy as potential variables in the context of foreign language learning. The results confirmed the effectiveness of the substantiation model in these students. In addition, the results show that the ought-to L2 self-led to a higher level of anxiety, while the ideal L2 self and L2 learning experience reduce the level of English learning anxiety.

Through a series of intermediary analysis, Demirdöken (2022) explored the mediating role of English learning motivation and self-confidence between oral English anxiety and English self-efficacy. A confirmatory factor analysis was conducted, and the PROCESS macro (model 6) was run to test the multiple mediating effects of English learning motivation and self-confidence. The results of CFA show that the fitting index of the adjusted scale is acceptable. In addition, the study found that English learning motivation and self-confidence play a multiple intermediary role between English self-efficacy and oral English anxiety.

Linh & Hien (2022) mentioned that L2MSS has a positive impact on self-efficacy in speech and motivational behavior in online emergency classes. Amirian, Shayanfar & Rezazadeh (2021) investigated the interrelationship between EFL teachers' mentality, self-efficacy and emotional experience and Iran EFL learners' willingness to communicate (WTC) and L2 motivational self-system (L2MSS). The participants in this study are 100 Iranian teachers and 501 students from the same EFL teachers. They are both male and female students randomly selected from high school. In order to achieve the purpose of this study, teachers were asked to complete four questionnaires to measure their implicit theories of intelligence, efficacy and emotional experience,

including their burnout symptoms. Learners were asked to complete two questionnaires to measure their willingness to communicate and their second language motivation self-system. The results of structural equation model (SEM) reveal the significant structural relationship between all variables. The results also show that motivation is the most direct predictor of communication willingness. WTC is also indirectly related to teachers' implicit theory, sense of efficacy and emotional experience through the intermediary effect of L2MSS.

Therefore, to sum up, scholars in China and other countries have given mature research results on the theory of second language motivational self-system under different research backgrounds. The researcher will also propose the connotation of the theory of second language motivational self-system, and mentioned that the research on L2MSS in China and other countries is mainly divided into the following three aspects: (1) the interrelationship among the three elements of ideal second language self, ought-to second language self, and second language learning experience in L2MSS. (2) The impact of L2MSS on the expected learning effort. (3) The correlation between L2MSS and other variables, such as liberal arts and science, gender, English learning level, language learning anxiety, self-efficacy, etc.

2.2 Research on Autonomous Learning Ability

As for the concept knowledge of autonomous learning ability, interesting research outputs have been initiated by educational researchers in China and other countries have given different opinions. Take for example, the Figure 2.2 has been conceptualized for autonomous learning to associate with level of active learning, spontaneous learning, self-education, self-regulated learning, self-supervised learning, self-evaluation and reflection, etc.

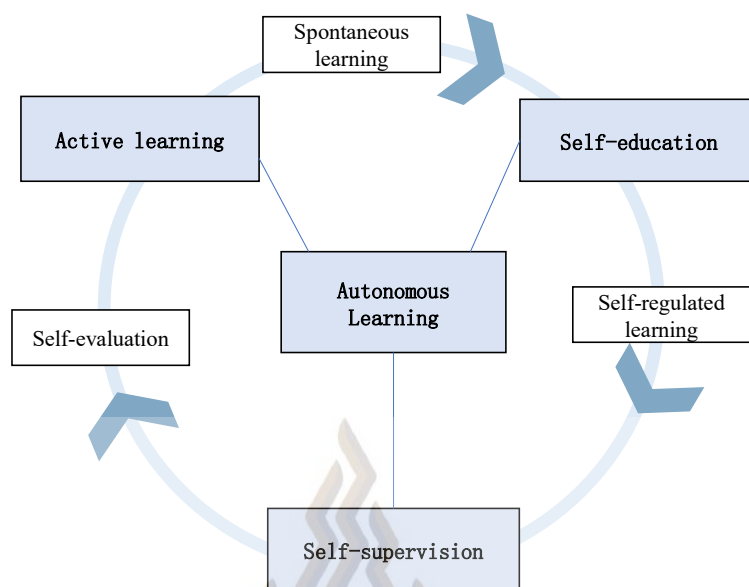


Figure 2.2 Conceptual framework of Autonomous Learning

Source: Cullen, 2019

This section focuses on the theoretical connotation of autonomous learning, and reviews the relevant research on autonomous English learning in China and other countries.

2.2.1 Theoretical Connotation of Autonomous Learning

In the fifties and sixties of the 20th century, the traditional psychological school, namely the “psychoanalytic school” that only took sick people as the research object, regarded people as the victims of instinct, and the “behaviorist school” that regarded people as physical and chemical objects, began to be questioned. Humanistic psychology began to rise. The representative figures were Maslow (1908-1970) and Rogers (1902-1987), which focused on the study of personality. Humanistic psychology emphasizes that learners are the main body of learning activities, and advocates learners’ autonomous learning and spontaneous learning (Cullen, 2019).

Humanistic psychology focuses on teaching methods and processes, and emphasizes the importance of learners’ self-evaluation, not just learning results. This

theory takes cultivating learners who can adapt to changes and know how to learn as the teaching goal. Only learners actively and independently choose learning materials, establish learning methods suitable for themselves, and carry out independent learning is meaningful learning. The theory of autonomous learning has also absorbed the relevant concepts of constructivism. Constructivists pay more attention to how learners build knowledge based on their original experience, psychological structure and beliefs, emphasize the subjectivity, sociality and situational nature of learning, and emphasize that the acquisition of knowledge depends on learners themselves rather than teachers. Therefore, the teaching model under the framework of constructivism theory is different from the traditional teaching model, and the role of teachers changes from the leader of learning to the facilitator of learning (Suhendi, 2018).

The concept of autonomous learning has gradually emerged since the 1960s. The main schools are David Garden & Lindsay Miller (1990), Holec (1981), Jeffries (1910), etc. The concept of autonomous learning is relatively complex and formed early. So far, there is still no unified definition. In the field of foreign language teaching, Henri Holec (1981) took the lead in exploring the concept of autonomy. He believed that autonomous learning is that learners can be responsible for their learning ability in their own learning process, that is, learners can deeply understand learning objectives, actively choose learning materials and methods suitable for themselves, and can evaluate and monitor. His theory mainly covers learning objectives, learning contents, learning methods, learning process and learning effect (Yildiz & Yucedal, 2020).

After Henri Holec put forward his relevant concepts, some excellent scholars abroad have also begun to explore and study autonomous learning behavior. For example, Little (1991) believes that autonomous learning is a process of independent thinking for learners, and learners should make decisions and implement independent behavior. This view emphasizes the importance of independent and critical thinking for autonomous learners (Benson, 1996).

Dickinson (1993) pointed out that autonomous learning is both an attitude to language learning and an ability to learn independently. Learners can set their own learning goals and monitor their own learning strategies. Nunan (1995) believed that autonomous learners should have the ability to determine their own learning goals and create learning opportunities based on these goals, and stressed the importance of setting self-goals in autonomous learning.

Clifford (1999) believed that autonomous learning is a potential self-learning behavior. The study pointed out that if we want to encourage autonomous learning in universities, staff need to develop new teaching concepts and new skills, because they change from the role of knowledge experts to the role of facilitators, and students need to develop new learning strategies, from passive learners to autonomous learners. Pemberton & Pierson (1996), and others also defined the concept of autonomous learning from different perspectives.

Although foreign researchers have different emphasis on autonomous learning, it is clear from their research that they have affirmed the positive role of autonomous learning in the learning process. Autonomous learners have the ability to choose suitable learning methods to complete the learning tasks set by teachers or learners themselves, so as to achieve the established learning objectives. These findings well prove that learner autonomy is an important aspect of foreign language learning.

Under the continuous influence of foreign excellent scholars' research in this field, many excellent Chinese scholars have also begun to make a lot of investigations and analysis on the theory of autonomous learning. The proposal of "autonomous learning" in China, on the one hand, reflects the new achievements of the study of China's learning field, on the other hand, it raises a series of new and fundamental issues for the current education and teaching reform in China.

As a global language, English is one of the compulsory subjects for the college entrance examination in China, and its score is relatively high. It is a necessary skill for senior high school students to develop in the future. Therefore, the requirements

for senior high school students' English learning are becoming higher and higher. Therefore, senior high school students' English learning motivation is becoming stronger and stronger. The English knowledge taught by teachers in class is limited, so students are required to have stronger autonomous learning ability. Moreover, the issue of "autonomous learning" has been established as an important research content by the national educational science "Ninth Five-Year Plan", which shows its importance and its broad consensus in the theoretical circle (Zhou, Wu, Zhou & Li, 2020). Therefore, it is necessary to cultivate the habit of autonomous English learning, deepen its research, and clarify its connotation, position and significance in the process of education.

For example, Chinese scholar Lai and Wang (2012) believed that autonomous learning includes attitude, ability and environment. Therefore, autonomous learning is a long-term and dynamic development process, not a static one. Once autonomous learning achieves its goal, it will continue to develop forever. Du (2020) proposed that autonomous learning behavior is that students can make their own summary, analysis and management of learning plans in the process of learning analysis and management. In this learning process, learners can make corresponding changes to their learning attitudes and psychological conditions according to their learning objectives and learning plans. In this whole process, learners have autonomy, initiative and consciousness for learning.

Cheng (2000) believed that autonomous learning has the following three meanings. First, autonomous learning is an internal mechanism that dominates learning, which is composed of learners' attitudes, abilities and learning strategies. That is, learners' ability to guide and control their own learning, such as the ability to set learning objectives, the ability to choose different learning methods and learning activities for different learning tasks, the ability to monitor the learning process, and the ability to evaluate learning results. Second, autonomous learning refers to the control of learners over their learning objectives, learning content, learning methods and learning materials. Generally speaking, it is the degree to which learners make free choices in these aspects. From another perspective, it is the degree of autonomy

given to learners by the educational mechanism (educational administration, syllabus, schools, teachers, textbooks). Third, autonomous learning is a learning mode, that is, learners develop and complete specific learning objectives according to their own conditions and needs under the macro-control of the overall teaching objectives and under the guidance of teachers.

Yang and Cheng (2019) believed that “autonomous learning” is the active construction process of self-design, self-management, self-regulation, self-test, self-evaluation and self-transformation in the aspects of learning objectives, processes and effects.

In China, Pang Guowei summarized and put forward the systematic concept of autonomous learning behavior ability. In his theoretical research, the definition of autonomous learning is mainly divided into horizontal and vertical aspects. The horizontal dimension refers to all aspects or links of learning, that is, students can make correct choices and control according to various contents of learning in the process of learning, while the vertical dimension refers to all links of learning. More specifically, learners can formulate learning plans and learning objectives according to the learning content before learning, and in this process, they can make specific changes and adjustments to learning methods and learning plans according to the specific learning content (Liu, 2016).

At the same time, after reading and analyzing the research of scholars in China and other countries, it can be seen that the scholars seem to have different opinions and differences on the accurate concept of autonomous learning behavior ability. Whether scholars define autonomous learning as ability, behavior or attitude, scholars agree that the definition of autonomous learning behavior is almost from learning content, learning method, learning process, self-monitoring and self-evaluation are analyzed and studied. Autonomous learning emphasizes that learners are responsible for their own learning behaviors. This study adopts Xu Jinfen's point of view. She believes that autonomous learning, especially English autonomous learning, means that learners consciously transform teachers' teaching goals into their own learning

goals, including short-term goals and long-term goals. Then learners make corresponding learning plans according to their learning objectives, use multiple learning strategies in the learning process, monitor the use of learning strategies, and finally comprehensively monitor and evaluate their English learning process (Xu & Liu, 2019).

2.2.2 Research on Autonomous English Learning Ability in China and Other Countries

After the theoretical connotation of autonomous learning has been fully discussed and studied, the research of autonomous learning has begun to turn to the factors that affect autonomous learning and how to improve learners' abilities.

In terms of the factors affecting autonomous learning, relevant research has been fully explored. A large number of empirical research results show that liberal arts and science, gender, English learning level, social environment, teachers, motivation, are important factors that affect autonomous learning.

With regard to the enthusiasm of students in autonomous English learning, some studies have found that there are great differences between arts and science students. The author uses questionnaires and interviews to investigate the autonomous English learning ability of students of different majors in multi-disciplinary fields. The study found that there are significant differences in the autonomous English learning ability of students of different majors. The autonomous English learning ability of liberal arts students is stronger than that of science students, and the influence of majors on autonomous learning ability is 24.2% (Chen, 2022).

Yao (2016) investigated the current situation of web-based autonomous English learning, especially for science students. With the development of computer and Internet technology, web-based autonomous English learning has increasingly become an important part of college students' learning process. Web-based autonomous learning is based on humanism and constructivism. It combines autonomous learning

with network technology and opens up a new way for college English learning. For science students whose mother tongue is not English, it is more important to master English. Because many science graduates have difficulties in English-related work, they should strengthen their autonomous English learning ability.

Olaya (2018) discussed that integrating autonomous learning into college students' learning process can improve their English performance. The participants in this study are 25 engineering students from a public university. The study found that activities based on engineering technology can be regarded as the starting point of integrating autonomous learning into college English education.

In China, since the end of the 1990s, nursing majors in medical colleges and universities have gradually changed from only science students to both arts and science students. Up to now, most of the nursing majors in medical colleges and universities in China have implemented the enrollment mode of both arts and science students, but there are also some problems in the independent study of arts and science students. Taylor, Lillis and LeMone (2011), through relevant surveys, found that liberal arts students can achieve the same level of learning autonomy as science students after strategy adjustment. However, to fully understand the differences in learning autonomy of liberal arts and science students majoring in nursing, it is necessary to explore their differences in learning autonomy and influencing factors.

Lu (2013) explored the differences in learning autonomy between students of different genders from multiple perspectives, and selected 129 students from the College of Science and Food Industry to participate in the study. The English class adopts the teaching method of autonomous learning for one semester. Through the questionnaire and interview results, it can be seen that in the process of autonomous learning in EFL learning environment, the two genders do have (different) characteristics, and girls have stronger learning autonomy than boys. This study allows us to understand how gender differences affect students' learning autonomy.

When learners have a high degree of autonomy in English learning activities, their English learning level will be greatly improved. Abdel Razeq (2018), through a semi-structured interview, examined the relationship between autonomous learning and English learning level of fourth-grade non-native English majors, as well as the role of teachers in developing the autonomous learning level of these non-native English students from the perspective of students. The results show that, in general, non-English majors enjoy a high degree of autonomy in some activities from the beginning to the middle, and teachers have the responsibility to guide and train students on how to learn autonomously and improve their autonomy, thus improving their English learning level.

Ghorbandordinejad and Ahmadabad (2016) investigated the relationship between learning autonomy and English learning level of third-grade students in a city in northwest Iran, and evaluated the learning autonomy of 400 students (187 males and 213 females) using the autonomy questionnaire. Participants' final English test scores are also used to measure their English learning level. Pearson's results showed that there was a strong correlation between learner autonomy and English learning level ($r=.406$, $n=400$, $p<0.01$). The stronger learner autonomy, the higher English learning level.

According to the theory of autonomous learning, Liu (2016) studied the effectiveness of English autonomous learning of junior high school students, and discussed strategies to improve students' English autonomous learning ability. The teaching experiment between two classes of Grade 8 in a key school in Henan Province of China aims to improve students' English learning level through the training of autonomous learning strategies. The research results show that the students of Class 1 have higher evaluation on autonomous learning than the students of Class 2 who study in the traditional way. The experimental results show that the training of autonomous learning strategies can improve students' autonomous learning ability and English learning level.

Khotimah, Mustofa & Ubaidillah (2019) distributed a set of questionnaires to 283 third grade students from 10 middle schools in Java Province, Indonesia. Through data graph analysis, it was found that most students can learn independently in English classes, and have a good understanding of the importance of autonomous learning, while emphasizing the importance of teachers' cognitive attributes of autonomous learning.

Chinese scholar Ou (2017) reviewed 133 articles published in Chinese Mainland from 2006 to 2016 and selected from major journals on language education. 39 research results on language learner autonomy also showed that learner autonomy was significantly correlated with learning environment and teachers.

In recent years, Chinese foreign language education scholars had also begun to pay attention to research on students' learning autonomy. Therefore, the researchers followed the research trend and compared students' learning engagement in English classrooms with students in other languages, aiming to provide reference for English teaching practice, research, and reform in China. Zhang (2022) compared the similarities and differences between English majors and non-English majors in English classroom learning engagement, and believed that the significant factors affecting the emotional, cognitive and behavioral engagement of the two groups of students in English classroom were different. The researcher believed that the construction of intelligent learning environment played an important role in improving learners' models, realizing emotional interaction, and mining learners' autonomous learning behaviors. Research had found that the combination of traditional artificial feature extraction methods and machine learning for learner emotion recognition was complex and inefficient. DL, as an important technology in artificial intelligence, took raw images as input and trained sample sets to enable learners to engage in autonomous learning, which could effectively improve learners' autonomous learning ability.

Kormos and Csizer (2014) explored the influence of motivation factors and self-regulation strategies on autonomous learning behavior. The researchers developed a new questionnaire for Hungarian learners and sent it to middle school students,

college students and adult language learners. Their structural equation model shows that effective time management, actively seeking learning opportunities and enhancing learning motivation are necessary for promoting autonomous learning of traditional learning resources.

In addition to the above factors, learners' beliefs, self-efficacy, learning strategies and other factors have also gained extensive attention. Cotterall (1995) believed that learners' beliefs could promote learners' autonomous language learning. This research involved the development and management of a questionnaire on learners' language learning beliefs. Factor analysis of the respondents' responses to the questionnaire found that there were six dimensions as the basis for the answers, and explored the hypothetical relationship between each dimension and autonomous language learning behavior. The research concluded that learners' beliefs have a great impact on autonomous learning.

Tabrizi and Saeidi (2015) explored the relationship between English learners' self-efficacy, learning autonomy and English listening comprehension ability. The results showed that there was a positive correlation between Iran EFL learners' listening self-efficacy beliefs, listening learning autonomy and English listening comprehension ability. Therefore, it is suggested to establish self-efficacy and learning autonomy in English listening comprehension, which is crucial to ensure EFL learners' success in English listening comprehension.

Bai, Tian & Ding (2020) aims to study the autonomous learning behavior of college students in blended learning. In this study, multiple linear regression was used to answer five hypotheses. The results show that learning motivation and academic self-efficacy can effectively predict college students' autonomous learning behavior.

In order to explore the relationship between self-efficacy, motivation and English autonomous learning of Chinese learners, Li and Park (2021) collected data on self-efficacy, motivation, English autonomous learning and English learning level of 1605 college students from eight universities in southern and northern China through

questionnaires. Participants were divided into three groups according to their achievements in English autonomous learning: low group (LSG), medium group (MSG) and high group (HSG). Descriptive statistics, one-way ANOVA, ANOVA, correlation analysis and regression analysis were used to analyze the data. The results show that English autonomous learning is closely related to self-efficacy and motivation. Among the motivational components, second language learning experience and ideal second language self are more closely related to English autonomous learning. In addition, the results of regression analysis confirmed that self-efficacy, second language learning experience, ideal second language self and integration have a positive predictive effect on English autonomous learning, and English autonomous learning has a significant predictive effect on Chinese learners' English learning level. Finally, some suggestions are put forward to effectively improve Chinese students' English autonomous learning and English learning level, and some suggestions are put forward for future research.

Railton and Watson (2005) discussed a special method to design "structured autonomy" as a core media research module in the first year of the university. The study believed that the concept of autonomy needs to be seen as a core component of learning, teaching and learning strategies. In addition, an integrated approach to these factors will also help provide freshmen with a more comprehensive first year experience. It is easier for freshmen to integrate into the disciplines they are learning and effective learning practices, so as to improve their autonomous learning ability.

Therefore, teachers should take effective learning strategies as an important link to guide learners' autonomous learning. Zhang (2014) found that compared with mastery goals, mastery performance goals can stimulate learners' awareness and behavior of autonomous learning. Based on the autonomous inquiry model, this study summarizes the construction of English learning goal orientation of Chinese students according to data analysis. In addition, it also discusses the relationship between learning goal orientation and language teaching in the context of English as a foreign language. The results show that the performance of English teaching can be significantly improved under the autonomous learning mode.

In terms of improving learner autonomy, Shor (1988) systematically and comprehensively discussed the application of strategies to cultivate learner autonomy at the theoretical and practical levels from the classroom perspective. With the continuous development of information technology, Baru, Tenggara and Mataram (2020) explored how to improve learners' autonomous learning of English as a foreign language as a school using electronic multimedia. This is a qualitative research case using data triangulation, and finally confirmed that the use of multimedia assisted teaching can help improve students' autonomy in the learning process.

To sum up, the research on autonomous English learning has been relatively mature, not only showing a diversified trend, but also shifting from theoretical research to specific teaching practice.

2.3 Research on The Correlation Between L2MSS and Autonomous English Learning

L2 motivation, as an important factor affecting learner autonomy, has been fully explored in relevant studies in China and other countries. On the relationship between the two, scholars' conclusions are controversial.

With the outbreak of the COVID-19, the Ministry of Education of China immediately studied and judged the situation and made a decisive decision. On February 4, 2020, it issued the Guiding Opinions on Doing a Good Job in the Organization and Management of Online Teaching in Ordinary High Schools during the Period of Epidemic Prevention and Control, and decided to fully implement online teaching in high schools. With the support of emerging technologies, China's education mode is also changing, and learning mode has become more autonomous and informal. Various online resources have promoted autonomous learning. As early as 2016, some researchers mentioned that when using online resources, it is very important to first understand the motivation of autonomous learners. However, there is little knowledge about the factors that affect autonomous learning (such as the

behavior and motivation of informal learners). The research results show that when helping learners understand how to use online learning resources, learners' motivation factors and the autonomous learning aspects of informal learning are improved (Song, 2016).

In the era of faster information and knowledge updates, learners' autonomous learning ability has become increasingly important and even considered one of the key factors for teaching success. Although project-based learning is widely adopted in high school education around the world, learners' motivation seems to be a relatively small area in the process of adopting autonomous learning strategies. The researchers conducted an experiment on 70 participants to test the role of motivation in autonomous learning strategies in competitions. Using a questionnaire survey method, the results showed that: 1) teams with high motivation have better application of autonomous learning strategies in competitions; 2) Students who use more autonomous learning strategies score higher in the competition results; 3) There is a significant correlation between the three stages of autonomous learning and competition results; 4) All seven types of autonomous learning strategies are significantly correlated with competition outcomes (Zhou & Bao, 2018).

Aripova (2021) mentioned that teaching and learning a foreign language not only required mastering all theoretical rules and skills, but also the important role of motivation in improving student's performance. Especially, it was committed to the role of motivation in improving learners' autonomous learning ability. The researcher had also proposed some methods to motivate learners to fully participate in the learning process. The research results indicated that the preparation of students for autonomous learning was a multifaceted and generally complex process, which was a product of the psychological activities of teachers and students. Autonomous learning meant that students must first possess the knowledge and skills they needed to learn. This was a system that meant consolidating knowledge learned in the classroom, utilizing acquired skills, and independently consolidating knowledge to enhance self-directed learning. The knowledge acquired during the learning process was the foundation for organizing and implementing autonomous learning.

Spratt, Humphreys & Chan (2002) believed that motivation could affect autonomous English learning. When it comes to the influence of motivation on autonomy in language learning, it was often considered to be a complex relationship. In many of these cases, motivation preceded autonomy. This study aimed to assess students' readiness for autonomous learning, in their language learning, by examining the perceptions of their responsibilities, and their teachers, their confidence in their ability to operate autonomously and their assessment of the level of motivation to learn. The researcher investigated learners' autonomy practices in the form of extra-curricular activities for learning. The findings found that motivation plays a key role in learners' autonomy and the researcher concluded that motivation is a key influence on learners' autonomy and therefore, teachers may strive to ensure motivation before they train students to become autonomous.

Dickinson (1995) mentioned describing autonomy as a learning attitude and a learning ability for autonomous learning. Then, cognitive motivation was defined and two motivational theories were proposed, the intrinsic/extrinsic motivational theory. This theory claimed that learners who were interested in learning tasks and outcomes for their own benefit (intrinsic) were more likely to become more effective learners than rewards. The development of intrinsic motivation was: firstly, learners perceived the learning environment as "informative" rather than "controlling" - that was, the environment supported learners to provide feedback through information rather than evaluation. The second was the autonomy support of the learning environment, as it promoted learner autonomy. Research had shown that there was a large amount of evidence from cognitive motivation research that suggested that the conditions for learning success and motivation were that learners were responsible for their own learning, able to control their own learning, and perceived their learning success or failure, attributed to their own efforts and strategies, rather than factors beyond their control. As applied linguistics describes, these conditions were a feature of learner autonomy.

Many studies had examined the impact of autonomous learning on motivation, and there were few research methods that combined theory with practice. This study

mentioned that autonomous learning could improve students' motivation and performance in foreign language learning, and proposed methods for teachers to improve students' quality. Learners used the motivation of autonomous learning choices in the classroom, while teachers addressed this gap by outlining specific teaching concepts. Learner autonomy could enhance students' motivation to learn the language. This study lasted for two semesters, with a total of 108 college students participating in intermediate and advanced German language courses for autonomous learning. The framework had been implemented. Use self-assessment surveys to collect data, self-directed learning surveys, and reflective statements explaining positive factors, as well as the impact of autonomous learning choices on students' learning motivation (Chalupa and Haseborg, 2014).

Pollard (2015) explored how to cultivate learner autonomy from the perspective of stimulating learning motivation. This study focused on the Web 2.0 portal for language learners. The portal discussed is Lang-8, which is similar to the blog platform and also provides functions similar to social networking services. This research allowed 12 Korean participants to participate in Lang-8 as part of the writing course of credit university. The research results showed that the use of Lang-8 had a positive impact on the motivation level of the participants. Through receiving different corrective feedback, they obtained a positive experience and contacted a portal that allowed participants to learn autonomously.

Chalupa and Haseborg (2014) proposed a method to improve students' motivation by using autonomous learning choices in the classroom. The study was conducted in two semesters. 108 college students participated in intermediate and advanced German courses, in which an autonomous learning framework was implemented. Using self-assessment survey, autonomous learning survey and reflective statement to collect data, the research results show that autonomous learning choices have a positive impact on students' motivation.

However, from the perspective of L2MSS, there is still a lack of research on the correlation between L2MSS and autonomous learning. Kormos (2014) explored the

relevance of L2MSS and autonomous learning among different groups of English language learners. The vision of future success in the ideal L2 self-concept can not only serve as a driving force for learning efforts, but also guide students to manage learning more effectively and take responsibility for learning. Its research results show that the ideal L2 self-have the highest relevance to autonomous learning ability, the ought-to L2 self-have less influence on autonomous learning.

Kristmanson, Lafargue and Culligan (2013) believed that among the three elements of L2MSS, L2 learning experience had a greater impact on learner autonomy. Research questions focus on learners' experience of language combination and its potential role in promoting learner autonomy. Focus group interviews were conducted to collect data on the experience and views of L2 learning. The research results show that L2 learning experience has a greater impact on learner autonomy. The influence of ought-to L2 self on autonomous learning ability is less significant.

Kim (2009) took four Korean adult ESL students as research objects. Based on Vygotsky's socio-cultural theory, the relationship between L2 motivation theory and L2 motivational self, system participants held short-term visas and lived in Toronto for about 10 months to learn English. The research results show that in order to promote ESL learning of second language learners, students should transform their ought-to L2 self into ideal L2 self, which provides a favorable environment and teaching inspiration for autonomous learning.

2.4 Chapter Summary

This chapter elaborates the theoretical and empirical research on L2MSS in China and other countries, and the theoretical and empirical research on autonomous English learning in China and other countries. Finally, this chapter discusses the correlation between L2 learning motivation and autonomous English learning with specific cases.

To sum up, it can be seen that second language motivation and autonomous learning are both hot topics in second language learning research in recent years.

Although a lot of research has been carried out and fruitful results have been achieved in these two aspects, in actual research, most of them are studies on the impact of motivation on autonomous learning, but the research on the impact of specific dimensions is not accurate enough. At the same time, a large number of studies mainly focus on the impact of motivation on learning autonomy. However, there is a lack of research on the relationship between second language motivation and the latest theory of second language motivation and students' learning autonomy. And the relevant research in China and other countries also failed to reach conclusive agreement on the concepts. In addition, many studies were also carried out around college students and graduate students, and there were fewer documents conducted to explore comprehensive analysis of autonomous English learning combined with L2MSS of senior high school EFL Chinese students. Therefore, this thesis targets to fill the research gap by exploring the relationship between learners' second language motivation self-system and autonomous English learning ability of senior high school EFL Chinese students, and the main factors that affect Chinese students' English learning motivation and autonomous learning. Therefore, it is necessary to carry out more research on the relationship between L2MSS and autonomous English learning ability of Chinese high school students. At the same time, this is hoped to provide the teachers with pedagogical implications for promoting the students' motivation and autonomous learning ability in English as the students are in the turning point of their higher education studies and started to think about their future careers.

Chapter 3

Research Methodology

This chapter describes the methods used for research, including research design, research population and samples, research instruments, the effectiveness and reliability of research tools, data collection procedures and data analysis techniques.

3.1 Research Design

In this non-experimental, correlational study, the researcher had investigated the relationship between the Learner's L2 Motivational Self System and autonomous English learning ability of EFL Chinese senior high school students. The design of this research was appropriate and could well examine the strength and nature of the relationship between L2MSS and autonomous English learning ability. The correlation study mentioned in the thesis was also appropriate, because the purpose of this study was not to establish the causal relationship between variables (Calafato, 2020). On the contrary, this study aimed to determine whether there was a statistically significant relationship between L2MSS and autonomous English learning ability. According to Calafato (2020), this study was a good indicator of whether the subject matter of the study was worth further investigation. In other words, if this study is statistically significant, then further research may be necessary to test the relationship between these two variables at a deeper level. In addition, interview data were collected to supplement the findings for the association of the variables.

3.2 The Population and Sample of This Study

3.2.1 Population and Sample

The population of this main research were 1,418 third grade of senior high students from 27 classes at Wuhe County Senior High School. The sample of this main study were 134 students from class 12, class 13, class 17. There was a total of 44 Liberal arts students and 90 Science students. And calculated based on the appropriate sample size set up the degree of error at the level of 0.05 and set a goal of achieving 0.95 Power ($1-\beta$ err prob) suggested by G Power software. These students had good autonomous learning ability. English was an important subject in the college entrance examination and also a required subject. The school had a complete English teaching system.

As for the semi-structured interview, a total of 6 interviewees had been selected for semi-structured interviews to understand the situation of students' L2 motivation self-system and autonomous English learning ability. To ensure that the key informants represent diverse samples group of students, 2 students had been randomly selected from the representatives of the students whose grades of English scores in the mid-term examination were high, medium and low.

3.3 Research Instruments

The main research instruments for this study were questionnaires and semi-structured interviews. The former was used for quantitative analysis, to be specific, a correlational study. The latter was used as a supplement research tool to elicit more in-depth qualitative data to supplement the findings in the quantitative analysis.

3.3.1 Questionnaires

The questionnaires were employed to explore the level of L2MSS and autonomous English learning ability and examined the relationship of the two variables. It consists of three parts:

The first part was about the basic information of the students, such as gender, grade, background of liberal arts and science, and their English scores in the midterm exam. The second part was the L2MSS questionnaire, and the third part was the autonomous English learning ability questionnaire.

The L2MSS questionnaire (see Part II of Appendix A) was a questionnaire designed by Liu Zhen (2012) and based on the research of Dörnyei and Papi (2010), and some modifications had been made according to the actual situation of Chinese English learners. For example, the researcher had added items such as grade and mid-term English scores in the basic information section of the questionnaire. According to L2MSS, the motivation part of the original questionnaire was reorganized into three parts: ideal L2 self, ought-to L2 self and L2 learning experience. The questionnaire contains 25 items, including 6 items of ideal L2 self; There were 11 items in ought-to L2 self; The L2 learning experience consisted of 8 items. The questionnaire used the Likert six level scale, with options from 1 to 6, assigned 1-6 points respectively. See Table 3.2 for details.

The questionnaire on autonomous English learning ability (see Part III of Appendix A) adapted the autonomous learning ability questionnaire of Xu Jinfen (2004). There were 30 items in this questionnaire. The understanding of teaching objectives and requirements included 3 items (1, 2, 3); The formulation of learning objectives and plans included 5 items (4, 5, 6, 7, 8); Effective use of learning strategies included 5 items (9, 10, 11, 12, 13); Monitoring the use of learning strategies included 7 items (14, 15, 16, 17, 18, 19, 20); Learning process management included 10 items (21, 22, 23, 24, 25, 26, 27, 28, 29, 30). This questionnaire used the Likert five level scale, with options from 1 to 5, assigned 1-5 points respectively.

Table 3.1 Classification of motivation for questions in the questionnaire

	Content of the questionnaire	Title No.
Ideal L2 self	<p>我常想象,自己学好英语后在国外生活并用英语和当地人交流。</p> <p>I often imagine that I would live abroad and communicate with the local people if my English is good enough.</p>	2
	<p>我常想象另一个自我:将来我能用英语与别人交流。</p> <p>I often imagine another self: I can communicate with others in English in the future.</p>	4
	<p>我常想象另一个自我:能像英语本族语者一样用英语与人交流。</p> <p>I often imagine another self: being able to communicate with people in English like native speakers.</p>	9
	<p>我常想象另一个自我:将来能用英语和外国朋友或同事交流。</p> <p>I often imagine another self: I can communicate with foreign friends or colleagues in English in the future.</p>	10
	<p>我希望自己能像那些以英语为母语的人一样(如说话、做事、生活等)。</p> <p>I hope I can be like those native English speakers (such as speaking, doing things, living, etc.).</p>	16
	<p>我常想象另一个自我:能用英语流畅地写 Email 或写信。</p> <p>I often imagine another self: I can write emails or letters fluently in English.</p>	25
	我认为学习英语重要,因为英语对我将来找好工作	1

Table 3.1 Classification of motivation for questions in the questionnaire (Cont.)

	Content of the questionnaire	Title No.
Ought-to L2 self	有帮助。 I think it is important to learn English because it will help me find a good job in the future.	
	我认为学习英语重要的原因之一是：我尊敬的人认为我应该学好英语。 One of the reasons I think learning English is important is that people I respect think I should learn English well.	3
	学习英语之所以必要是因为我周围的人希望我学。 The reason why learning English is necessary is because people around me want me to learn it.	5
	学习英语重要，因为精通英语将来可以帮我增加收入。 Learning English is important, because mastering English can help me increase my income in the future.	7
	我学习英语是为了获得同学、老师、家人或老板对我的认可。 I study English in order to gain the recognition of my classmates, teachers, family members or bosses.	8
	学习英语很重要，因为它能帮我达到既定目标（如获得文凭或奖学金）。 Learning English is very important because it can help me achieve my goals (such as obtaining a diploma or scholarship).	11
	我认为学习英语重要，因为能够使用英语是受过良好教育的标志。 I think it is important to learn English, because being	12

Table 3.1 Classification of motivation for questions in the questionnaire (Cont.)

	Content of the questionnaire	Title No.
	able to use English is a sign of good education.	
	我认为学习英语重要, 因为学好英语可以帮助我获得更高的社会地位。 I think it is important to learn English, because learning English well can help me get a higher social status.	13
	我认为学习英语重要, 因为要是我懂英语, 别人就会更加尊重我。 I think learning English is important, because if I understand English, others will respect me more.	15
	如果我英语学得不好, 会令别人失望。 If I don't learn English well, I will disappoint others.	18
	我必须学习英语以免被父母或老师责怪。 I must learn English to avoid being blamed by my parents or teachers.	23
L2 learning experience	我希望英语的课时能更多一点。 I hope there will be more English classes.	6
	我喜欢英语课的气氛。 I like the atmosphere of English class.	14
	我觉得学习英语很有趣。 I find learning English very interesting.	17
	我喜欢上英语课。 I like English classes.	19
	我喜欢英语教材。 I like English textbooks.	20
	我期待上英语课。 I'm looking forward to my English class.	21

Table 3.1 Classification of motivation for questions in the questionnaire (Cont.)

	Content of the questionnaire	Title No.
	学英语时，我觉得时间过得很快。 When learning English, I think time passes quickly.	22
	我享受学习英语的过程。 I enjoy learning English.	24

The second part of the questionnaire adapted the L2MSS questionnaire of Liu Zhen (2012), which had been tested for reliability and validity. The overall Cronbach Alpha reliability coefficient was 0.928, and had been used and verified in many articles in China, which was reliable. The third part of the questionnaire adopted Xu Jinfen's (2004) autonomous English learning ability questionnaire. The reliability and validity of the questionnaire had been tested. The overall Cronbach Alpha reliability coefficient was 0.912, which had also been verified by many researchers in China. It is highly reliable and can be used for further analysis. The language of the questionnaire is in Chinese and the content is adequate for the sample of this study.

The researcher invited three experts specializing in foreign language teaching and language assessment to examine the validity of these questions, as the current questionnaire was adapted from the research questionnaire of Liu Zhen and Xu Jinfen. First, the researcher prepared a question statement and questionnaire checklist, to what extent these items were relevant to the research question, and to what extent they were clear and understandable. Then, the researcher invited three experts who meet these criteria: 1) These experts have more than 5 years of foreign language teaching experience, are relatively mature in second language motivational self-system research, and have a good guidance on students' autonomous English learning ability; 2) They graduated with at least a Master of Arts or Master of Education degree in foreign language teaching or related fields; And 3) They have rich experience in second language motivational learning and autonomous learning. The researcher had prepared and sent invitations to three experts, submitted a questionnaire list to the experts, prepared a verification form (IOC form) that needs to be signed by the experts after

receiving their comments and suggestions, retrieved the form completed by the experts, and used the comments and suggestions to adjust the content of the questionnaire (For the questionnaire, see Appendix C, IOC Form). The questionnaires were sent to three experts from Ocean University of China, and Hefei Preschool Teachers College for Item Objective Congruence (IOC), the IOC results were 0.94.

In order to ensure the reliability, the questionnaire was sent to 40 Chinese high school students to pilot test the instruments.

Table 3.2 Reliability Analysis

	Cronbach's Alpha	Items
L2MSS	0.915	25
Autonomous English Learning Ability	0.937	30

Analysis showed that the Cronbach's Alpha value of L2MSS was 0.915, and the Cronbach's Alpha value of autonomous English learning ability was 0.937. The reliability of both scales above 0.9 indicates that both scales were very reliable and could be used for the research.

3.3.2 Semi Structured Interview

The semi structured interview content included questions related to the students' L2 motivation self-system and autonomous English learning ability. There were five interview questions in total and students were asked to give their honest answers to all questions in Chinese (see Appendix B). The interview aimed to provide a chance to elicit more detailed and in-depth data from a conversation with students so as to help the researcher gain more information to explain the association of the variables.

To validate the semi structured interview questions, the researcher checked the content validity-- the extent to which the instrument measures what to be measured--of

these questions by inviting 3 experts who were well qualified to evaluate and provided the comments for the study. The form of Item Objective Congruence (IOC) was created and used to seek evaluation and suggestions from the experts so as to gain acceptable types and nature of questions. The IOC Index was used as the basis for screening the item quality. In each item, the experts were asked to determine the content validity score: The score = 1, if the expert is sure that this item really measured the attribute. The score = -1, if the expert is sure that this item does not measure the attribute. The score = 0, if the expert is not sure that the item does measure or does not measure the expected attribute. The qualified items should have the IOC equal to or greater than 0.50 (See appendix D, IOC form for interview questions). The interview questions were sent to three experts from Ocean University of China, and Hefei Preschool Teachers College for Item Objective Congruence (IOC), all the three experts agreed on the item with the total index of item-objective congruence (IOC) at 0.81.

In order to ensure the reliability of semi-structured interviews, the interview content was evaluated by two raters, who were English teachers with over 5 years of experience in English teaching. Both raters studied the L2MSS and autonomous learning ability theme content, internal code based on keywords, and recorded the results as numbers. Then, the coded data was analyzed, with results of 0.91 and 0.93 respectively, this indicated that the interview content had good reliability and could be used for the research.

3.4 Data Collection Process

The process of data collection was the basic part of data statistics and the precondition of data analysis. When collecting data, the researcher must ensure the authenticity and integrity of the data source. Because the data source will affect the overall data quality, the researcher should also pay attention to the consistency, accuracy and security of the data source.

3.4.1 Questionnaires

The researcher was a part-time teacher at Wuhe County High School and had obtained permission from the school committee. The researcher distributed questionnaires to 134 respondents and interviewed 6 volunteers.

In order to ensure the validity and authenticity of the questionnaire data, the researcher took about 15 minutes to explain before students answered the questionnaire. Students should make themselves fully understand the questions in the questionnaire. If they had any questions that they did not understand, they should immediately ask the teacher to get more effective answers. The researcher also told the English teacher in advance that the questionnaire was just a status survey. The English teacher reminded the students that the questionnaire had nothing to do with their academic achievements. There was no correct or wrong answer, their answers would also be kept confidential.

Participants completed these three parts of the questionnaire within 30 minutes. These three parts would be the basic information, the L2 motivation self-system questionnaire for senior high school students and the autonomous English learning ability questionnaire for senior high school students (see Appendix A).

3.4.2 Semi-structured Interview

After collecting the questionnaire data, the researcher asked the English teachers of each class for their students' English performance, and randomly selected 2 interviewees from the high, medium and low scores of the mid-term English test to ensure that students at each English level could be interviewed. A total of 6 interviewees were randomly selected for semi-structured interviews. The interview was conducted during self-study on Saturday night, which did not occupy students' class time. The researcher invited the interviewees to the school restaurant for face-to-face communication. In order to encourage students to relax and talk freely, the researcher prepared small gifts such as drinks and snacks.

During the interview, the researcher recorded the respondents' thoughts in detail. At the end of the interview, the interviewees were invited to supplement the omission of interview notes. The interview records were used to analyze students' English learning motivation and autonomous learning, and to some extent, the questionnaire results could be supplemented and verified. Finally, the research questions were analyzed and discussed one by one based on the questionnaire and interview results, and the corresponding conclusions were summarized to provide some inspiration and suggestions for students and teachers in the regulation of English learning motivation and the cultivation of autonomous English learning ability.

3.4.3 Ethical Considerations

The researcher prepared a consent form for the sample group to sign. The participants knew the nature and purpose of the study. They had been informed about the procedures and how they were required to get involved. Each participant's research data and opinions would be kept confidential and used only for this study, not for any other purposes. The recorded information would be kept minimum and that the data would be kept only for 1 year for the research to be completed. Before the data collection, the researcher had obtained approval from the Research Ethics Committee of Rangsit University on April 8, 2023.

3.5 Data Analysis Process

3.5.1 Statistical Data Analysis

The researcher entered the questionnaire data into Excel, and then adjusted the order of the questions to classify each dimension. Then use Excel to calculate the mean value of each item, the mean value of each dimension. Finally, the encoded data was input into SPSS 26 software. In the process of data analysis, the researcher first reported simple descriptive statistics on the results of the two questionnaires, calculated the maximum, minimum, average, standard deviation and variance, and

difference significance test to explore the overall status and dimensions of high school students' L2 motivation self-system and autonomous English learning ability.

Secondly, using independent sample t-tests, analyze the differences in L2MSS and autonomous English learning abilities between Chinese high school Liberal arts and science students.

Thirdly, Pearson correlation analysis was used to explore the correlation between L2MSS and autonomous English learning ability, and the correlation between the three dimensions of L2MSS and each dimension of autonomous English learning ability.

In order to quantify students' L2MSS and autonomous English learning ability, the researcher used the interpretation procedure of Liu Zhen (2012) and Xu Jinfen (2004). The following criteria to interpret the mean scores of L2MSS and autonomous English learning ability as illustrated in Table 3.4 and Table 3.5 which was presented in the form of a six-level Likert scale, the main characteristics of the data in this study mainly included the mean (M) and standard deviation (Std. D) of the variables.

Table 3.3 The Interpretation of L2MSS mean scores

Likert scale	Answers	L2MSS Level	Score
1	Strongly Disagree	Lowest	1.0-1.4
2	Most Disagree	Very Low	1.5-2.4
3	Disagree	Low	2.5-3.5
4	Basic Agree	Moderate	3.6-4.1
5	Most Agree	High	4.2-5.0
6	Strongly Agree	Highest	5.1-6.0

The average value was used as the evaluation value for each question item, and the average value was divided into three levels. This questionnaire adopts the Likert six level scale format, and the level division criteria are as follows: when $M \geq 4.2$, it indicates that L2MSS is at a high level. When $3.5 < M < 4.2$, it indicates that L2MSS is

at a moderate level; When $M \leq 3.5$, it indicates that L2MSS is at a low level which is presented in the form of a five-level Likert scale.

Table 3.4 The Interpretation of autonomous English learning ability mean scores

Likert scale	Answers	Autonomous Learning Level	Score
1	Strongly Disagree	Lowest	1.0-1.4
2	Disagree	Low	1.5-2.4
3	Not sure	Moderate	2.5-3.4
4	Agree	High	3.5-4.4
5	Strongly Agree	Highest	4.5-5.0

The means are divided into three levels, and the criteria are as follows: when $M \geq 3.5$, it indicates that the autonomous English learning ability is at a high level; when $2.5 \leq M \leq 3.4$, it indicates that the autonomous English learning ability is at a medium level; and when $M \leq 2.4$, it indicates that the autonomous English learning ability is at a low level.

The score of each item indicated the students' L2MSS and autonomous English learning ability. The higher the score, the higher the students' L2MSS and autonomous English learning ability, and the lower the score, the lower the students' L2MSS and autonomous English learning ability.

3.5.2 Thematic Analysis

To analyze the data, the researcher used Creswell's (Creswell, 2012) six steps of data analysis in qualitative research:

Step 1 the researcher randomly selected two students from each of the high, middle and low English scores in the midterm exam and organized semi-structured interviews with a total of six students, where the interview language was Chinese and the answers to all interview questions were translated into English and recorded.

Step 2 the researcher read all the interview data.

Step 3 the researcher coded the data (see Table 3.5 for coded keywords).

Step 4 the researcher categorized the semi-structured interviews into four categories based on the different coding keywords: 1) Ideal L2 self. 2) Ought-to L2 self. 3) L2 learning experience. 4) Autonomous English learning. Finally, based on different categories, four themes were identified.

Step 5 based on the results of the interview analysis, the researcher concluded that the four themes with L2MSS and autonomous English learning ability are related.

Step 6 finally, the researcher interpreted and analyzed the meaning of the four themes (see section 4.2 for details).

Table 3.5 shows the categories of the semi-structured interviews, and the key words used in the coding process.

Table 3.5 Categories of semi-structured interview findings

Category	Codes Keywords
Ideal L2 self	Strong motivation for L2 learning; Ideal L2 self learning reaches the level I often imagine; The goal to be achieved in Ideal L2 self level; Desiring to pursue an ideal L2 self state;
Ought-to L2 self	Some characteristics that learners think they should have; In order to achieve the Ought-to L2 proficiency; The expectations and requirements of parents, teachers and friends; Influence of external environment;
L2 learning experience	Successful L2 Learning Experience; Unsuccessful L2 Learning Experience;

Table 3.5 Categories of semi-structured interview findings (Cont.)

Category	Codes Keywords
	Positive L2 Learning Experience; Negative L2 Learning Experience;
Autonomous English learning	Understanding teaching objectives; Clear learning objectives; Effective learning strategies; Learning strategy monitoring; Learning process management;

3.6 Chapter Summary

This chapter introduces the research methods, and details the research design, research instruments, reliability and validity of research instruments, data collection procedures and data analysis procedures. The following is the relationship between research questions, research instruments and data analysis.

Table 3.6 Relationship among research questions, research instruments and data Analysis

Research Questions	Research Instruments	Data Analysis
1. What are the levels of Learners' L2 Motivation Self System of EFL Chinese senior high school students?	A Questionnaire on L2MSS of Senior High School Students	◆ Descriptive Statistical Analysis ◆ Variance Analysis
2. What are the levels of autonomous English learning ability of EFL Chinese senior high school students?	A Questionnaire on Autonomous English Learning Ability of Senior High School Students	◆ Descriptive Statistical ◆ Analysis ◆ Variance Analysis
3. Are there any difference of the	A Questionnaire on L2MSS and Autonomous	◆ Descriptive Statistical Analysis

Table 3.6 Relationship among research questions, research instruments and data Analysis (Cont.)

Research Questions	Research Instruments	Data Analysis
Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students studying Liberal Arts and Science program?	English Learning Ability of Senior High School Students	<ul style="list-style-type: none"> ◆ Variance Analysis ◆ Independent sample T-test ◆ Pearson correlation analysis
4. Are there any relationship between Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students?	A Questionnaire on L2MSS and Autonomous English Learning Ability of Senior High School Students	◆ Pearson correlation analysis
	An Interview on L2MSS and Autonomous English Learning Ability of Senior High School Students	◆ Content Analysis

Chapter 4

Research Results

Based on the results of data analysis, Chapter 4 will answer the four research questions raised in Chapter 1. Firstly, the researcher will report descriptive statistical data on the overall situation and the specific situation of each dimension of L2MSS among EFL Chinese High School Students. Secondly, the researcher will report descriptive statistical data on the overall situation and the specific situation of each dimension of autonomous English learning ability among EFL Chinese High School Students. Thirdly, the researcher will report independent samples T-test data on the difference of the Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students studying Liberal Arts and Science program. Finally, the overall correlation between L2MSS and autonomous English learning ability of EFL Chinese high school students was explored, as well as the correlation of each dimension.

4.1 Analysis of Questionnaire Results

4.1.1 Research Question 1

What are the levels of Learners' L2 Motivation Self System of EFL Chinese senior high school students?

To answer this research question, this section used Descriptive Statistics, Variance Analysis, and other methods to analyze questionnaire data. Firstly, the researcher will describe the overall situation of L2MSS among Chinese high school students. Secondly, the researcher will describe the specific situation of each dimension of L2MSS among Chinese high school students.

1) Analysis the Overall Situation of L2MSS among Chinese High School Students

In this section, the researcher will elaborate on the overall situation of Chinese high school students' L2MSS and the specific situation of the three dimensions of L2MSS (ideal L2 self, ought-to L2 self, and L2 learning experience). The main characteristics of the data in this study mainly include the mean (M) and standard deviation (Std. D) of the variables. The average value is used as the evaluation value for each question item, and the average value is divided into three levels. This questionnaire adopts the Likert six level scale format, and the level division criteria are as follows: when $M \geq 4.2$, it indicates that L2MSS is at a high level; When $3.5 < M < 4.2$, it indicates that L2MSS is at a moderate level; When $M \leq 3.5$, it indicates that L2MSS is at a low level. Specifically, the higher the average value, the higher the L2MSS level.

Table 4.1 Overall Descriptive Statistics of L2MSS

	N	Min	Max	M	S.D.
Ideal L2 self	134	1.00	6.00	3.6878	1.40969
Ought-to L2 self	134	1.00	5.82	3.3020	.87982
L2 learning experience	134	1.00	6.00	3.1446	1.20012
L2MSS	134	1.00	5.40	3.5322	.71200
Valid N (List Status)	134				

Table 4.2 L2MSS Level Distribution

		Frequency	Percentage	Effective percentage	Cum. Pct
Effective	Low-level	26	19.4	19.4	19.4
	Medium-level	42	31.3	31.3	50.7
	High-level	66	49.3	49.3	100.0
	Total	134	100.0	100.0	

According to Table 4.1, it can be clearly seen that the mean value of L2MSS reaches 3.5322, which is higher than 3.50, indicating that the overall performance of L2MSS is at a moderate level. Table 4.2 shows the distribution of L2MSS among 134 subjects at low, medium, and high levels. Among them, high-level learners are the majority, accounting for 49.3%, while low-level learners are the least, accounting for only 19.4%.

In each dimension of L2MSS, the mean value of the ideal L2 self is about 3.69; the mean value of the ought-to L2 self is about 3.30; the mean value of the L2 learning experience is about 3.14. Among them, the mean value of ideal L2 self is the highest, while the mean value of L2 learning experience is the lowest. This shows that in the L2MSS study, high school students have the highest ideal L2 self-level, it can be seen that most of the high school students in this study have a positive inner desire to learn English and hope to reach the ideal level of English learning. The stronger this inner desire, the more learners want to narrow the gap between real and ideal self, therefore they will have a high-intensity learning motivation. However, it should be noted that its standard deviation is about 1.41, which is the largest in the three dimensions, which means that among the high school students, the ideal L2 self-level is different.

The mean value of ought-to L2 self is slightly lower, below 3.5, reaching a low level. Its minimum standard deviation is about 0.88, indicating that high school students generally believe that they will have some motivation to learn in order to meet the expectations of their parents, teachers, and friends and to avoid negative outcomes, but their motivation to learn is not strong.

The mean value of second language learning experience is about 3.15, which is at the lowest level among these three dimensions. As mentioned in Chapter 1, high school students are about to face the college entrance examination and have independent English learning ability, and most of them have more positive second language learning experience, have gained some satisfaction and sense of achievement in their previous learning experience, and have built up some learning self-confidence (Zhang & Kim, 2013). A minority of high school students have failed English learning

experiences and lack English learning self-confidence. Table 4.1 shows that there is still a gap between the level of high school students' second language learning experiences and their ideal second language selves. Therefore, teachers should pay attention to enhancing students' self-confidence in learning English and carry out relevant motivational and praise activities while conducting classroom teaching.

2) Analysis the specific situation of each dimension of L2MSS among Chinese High School Students

Table 4.3 Descriptive Statistics on the Ideal L2 Self of High School Students in L2MSS

Questionnaire item	Detail	Mean	SD
Q4	I often imagine another self: I can communicate with others in English in the future.	4.231	1.66
Q10	I often imagine another self: I can communicate with foreign friends or colleagues in English in the future.	3.873	1.61
Q25	I often imagine another self: I can write emails or letters fluently in English.	3.761	1.81
Q9	I often imagine another self: being able to communicate with people in English like native speakers.	3.634	1.75
Q2	I often imagine that I would live abroad and communicate with the local people if my English is good enough.	3.612	1.79
Q16	I hope I can be like those native English speakers (such as speaking, doing things, living, etc.).	3.015	1.74
Mean scores of the 6 items		3.688	

The ideal L2 self refers to the parts of the ideal self that are related to L2, which is the desires and goals that learners strive to achieve (Dörnyei, 2005). Table 4.3

showed that the average value of ideal L2 self was 3.688, the ideal L2 level was at a moderate level based on the agreed criteria. The top three statements in this element are: “I often imagine another self: I can communicate with others in English in the future”. “I can communicate with foreign friends or colleagues in English in the future” and “I can write emails or letters fluently in English”.

Table 4.4 Descriptive Statistics on the Ought-to L2 Self of High School Students in L2MSS

Questionnaire item	Detail	Mean	SD
Q11	Learning English is very important because it can help me achieve my goals (such as obtaining a diploma or scholarship).	4.448	1.47
Q1	I think it is important to learn English because it will help me find a good job in the future.	4.172	1.69
Q7	Learning English is important, because mastering English can help me increase my income in the future.	4.015	1.64
Q13	I think it is important to learn English, because learning English well can help me get a higher social status.	3.552	1.62
Q23	I must learn English to avoid being blamed by my parents or teachers.	3.47	1.70
Q8	I study English in order to gain the recognition of my classmates, teachers, family members or bosses.	3.440	1.43
Q3	One of the reasons I think learning English is important is that people I respect think I should learn English well.	3.425	1.59

Table 4.4 Descriptive Statistics on the Ought-to L2 Self of High School Students in L2MSS (Cont.)

Questionnaire item	Detail	Mean	SD
Q18	If I don't learn English well, I will disappoint others.	3.216	1.46
Q12	I think it is important to learn English, because being able to use English is a sign of good education.	3.134	1.70
Q15	I think learning English is important, because if I understand English, others will respect me more.	2.85	1.54
Q5	The reason why learning English is necessary is because people around me want me to learn it.	2.821	1.65
Mean scores of the 11 items		3.302	

The ought-to L2 self refers to the characteristics that learners believe they should have in order to comply with the expectations of others or to avoid negative outcomes (Ametova, 2020). Table 4.4 showed that the mean value for ought-to L2 self was 3.302, the level of ought-to L2 self was at a low level based on the agreed criteria. The top three statements in this element are: "Learning English is very important because it can help me achieve my goals (such as obtaining a diploma or scholarship)", "I think it is important to learn English because it will help me find a good job in the future" and "Learning English is important, because mastering English can help me increase my income in the future".

Table 4.5 Descriptive Statistics on the L2 learning experience of High School Students in L2MSS

Questionnaire item	Detail	Mean	SD
Q14	I like the atmosphere of English class.	3.567	1.59
Q17	I find learning English very interesting.	3.470	1.49
Q22	When learning English, I think time passes quickly.	3.194	1.68
Q19	I like English classes.	3.164	1.46
Q24	I enjoy learning English.	3.007	1.42
Q6	I hope there will be more English classes.	2.956	1.43
Q21	I'm looking forward to my English class.	2.910	1.51
Q20	I like English textbooks.	2.888	1.38
Mean of 8 items		3.144	

L2 Learning Experience refers to the learners' current learning experience, which is mainly related to their previous learning experience, and the influence of the past on the present, and is related to their past second language learning experience and learning environment, such as their past successful or unsuccessful second language learning experience (Dörnyei, 2019). Table 4.5 showed that the mean value for L2 learning experience was 3.144, the level of L2 learning experience was at a low level based on the agreed criteria. The top three statements in this element are: "I like the atmosphere of English class", "I find learning English very interesting" and "When learning English, I think time passes quickly".

4.1.2 Research Question 2

What are the levels of autonomous English learning ability of EFL Chinese senior high school students?

This section focused on answering the second research question of this study, which was to describe the overall situation and the specific situation of each

dimension of Chinese high school students' autonomous English learning ability. In this section, descriptive statistics and Variance Analysis were used to analyze the questionnaire data. First, the researcher analyzed the overall situation of Chinese high school students' autonomous English learning ability, and secondly, analyzed the specific situation of each dimension of autonomous English learning ability among Chinese High School Students.

1) Analysis the overall situation of Chinese high school students' autonomous English learning ability.

In this section, the questionnaire of Xu Jinfen (2004) is used, which is presented in the form of a five-level Likert scale, and the assessment of each question is expressed as a mean value; the higher the mean value, the better the assessment result, that is, the higher the learners' autonomous English learning ability, and vice versa, the weaker the autonomous English learning ability. The means are divided into three levels, and the criteria are as follows: when $M \geq 3.5$, it indicates that the autonomous English learning ability is at a high level; when $2.5 \leq M \leq 3.4$, it indicates that the autonomous English learning ability is at a medium level; and when $M \leq 2.4$, it indicates that the autonomous English learning ability is at a low level.

Table 4.6 Overall status of autonomous English learning ability

	N	Min	Max	Mean	S.D.
Understanding teaching objectives	134	1.00	5.00	3.3706	.94162
Setting learning objectives	134	1.00	5.00	3.0045	.90627
Learning strategy use	134	1.00	5.00	3.3731	.87154
Learning Strategy Monitoring	134	1.14	5.00	3.2100	.78455
Learning Process Management	134	1.00	4.70	3.1104	.82856
Autonomous English learning ability	134	1.13	4.63	3.1858	.68853
Valid N (list status)	134				

Table 4.7 Distribution of autonomous English learning ability levels

		Frequency	Percentage	Effective percentage	Cum. Pct
Effective	Low-level	15	11.2	11.2	11.2
	Medium-level	73	54.5	54.5	65.7
	High-level	46	34.3	34.3	100.0
	Total	134	100.0	100.0	

According to Table 4.6, it is clear that the mean of all dimensions of Chinese high school students' autonomous English learning ability is higher than 2.5, and the overall mean of autonomous English learning ability reaches 3.1858, which is lower than 3.40. Table 4.7 shows the distribution of 134 Chinese high school students' autonomous English learning ability in the low, medium and high levels. The majority of them are of medium level, reaching 54.5%, and the least of them are of low level, accounting for only 11.2%. Therefore, a comprehensive analysis of the results leads to the conclusion that the overall performance of Chinese high school students' autonomous English learning ability is moderate.

This result is different from Su's (2021) study with college students, in which college students achieved a high level of autonomous learning ability. This indicates that learners have autonomous English learning ability with rich English learning experiences at the high school, but still need to strengthen their autonomous English learning. On the five dimensions of autonomous English learning ability, learning strategy use has the highest mean value ($M=3.373$), followed by understanding teaching objectives ($M=3.37$), learning strategy monitoring ($M=3.21$), learning process management ($M=3.11$), and setting learning goals has a relatively small mean value ($M=3.00$). All dimensions were at a medium level and it was clearly found that learners' ability to use learning strategies was the highest and high school students were very aware that they could improve their autonomous English learning through the use of different learning strategies. The ability to understand the teacher's teaching goals was the second highest, but the ability to set their own learning goals was the lowest. This means that although students are deeply aware of their teachers' teaching

goals, they have difficulty translating them into their own learning goals. Therefore, teachers should not only pay attention to whether their own teaching goals are reasonable and can be achieved efficiently, but also guide students to develop reasonable and more targeted learning plans and goals with a full understanding of learners' needs and learning styles.

The mean value of learning process management is slightly higher than setting learning goals. This indicates that high school students' ability to monitor and assess their own learning process, although at an intermediate level, still has room for further improvement. The students tested in this study were all from a model high school in Wuhe County, and the students had the ability to learn English independently and performed well in the high school learning process overall. Since high school students have accumulated rich learning experience, most of them have the ability to clearly understand their mastery of what they have learned, and sometimes they are aware to some extent of the mistakes they have made in the learning process, and check and update their skills in the learning process.

2) Analysis the specific situation of each dimension of autonomous English learning ability among Chinese High School Students

Table 4.8 Descriptive Statistics on the Understanding teaching objectives of High School Students

Questionnaire item	Details	Mean	SD
Q1	I know the teacher's teaching purpose, and I know the purpose of a certain teaching activity in the classroom.	3.425	1.09
Q3	I can keep up with the English teacher's teaching progress.	3.410	1.16
Q2	I can transform the teacher's teaching purpose into my own learning purpose.	3.276	1.09
Mean of 3 items		3.370	

Table 4.8 showed that the mean value of Understanding teaching objectives was 3.370, which was higher than 2.5, therefore, we can infer that the level of Understanding teaching objectives was at a moderate level based on the agreed criteria. The statements with the mean scores of 3.4 are: “I have a strong ability to plan English study time, and the planned time is also reasonable” and “I can keep up with the English teacher’s teaching progress”.

Table 4.9 Descriptive Statistics on the Setting learning objectives of High School Students

Questionnaire item	Details	Mean	SD
Q6	I have clear requirements for improving my English learning.	3.321	1.22
Q8	I understand the learning requirements for the five language skills of listening, speaking, reading, writing and reading in the English learning syllabus.	3.149	1.15
Q7	I have a strong ability to plan English study time, and the planned time is also reasonable.	2.858	1.10
Q5	I can set realistic English learning goals.	2.851	1.20
Q4	After finishing the teacher’s task, I clearly made my own English learning plan.	2.843	1.29
Mean of 5 items		3.005	

Table 4.9 showed that the mean value of Setting learning objectives was 3.005, which was higher than 2.5, therefore, we can infer that the level of Setting learning objectives was at a moderate level based on the agreed criteria. The top three statements are: “I have clear requirements for improving my English learning”, “I understand the learning requirements for the five language skills of listening, speaking,

reading, writing and reading in the English learning syllabus” and “I have a strong ability to plan English study time, and the planned time is also reasonable”.

Table 4.10 Descriptive Statistics on the Learning strategy use of High School Students

Questionnaire item	Details	Mean	SD
Q9	In listening practice, I can consciously use effective listening strategies (such as prediction, association, inference).	3.515	1.11
Q11	In the process of doing reading questions, I can consciously use effective reading strategies (such as reasoning, using context to infer the content of the article).	3.426	1.12
Q13	I fully understand the reasonable selection and use of the above learning strategies.	3.366	1.07
Q12	In the writing practice, I can consciously use effective writing strategies (such as making an outline and deciding the content of the article according to the readers' preferences).	3.283	1.09
Q10	In conversation practice, I can consciously use effective communication strategies (such as using body language, using synonyms to explain).	3.239	1.32
Mean of 5 items		3.373	

Table 4.10 showed that the mean value of Learning strategy use was 3.373, which was higher than 2.5, therefore, we can infer that the level of Learning strategy use was at a moderate level based on the agreed criteria. The top three statements are: “In listening practice, I can consciously use effective listening strategies (such as prediction, association, inference)”, “In the process of doing reading questions, I can consciously use effective reading strategies (such as reasoning, using context to infer

the content of the article)” and “I fully understand the reasonable selection and use of the above learning strategies”.

Table 4.11 Descriptive Statistics on the Learning Strategy Monitoring of High School Students

Questionnaire item	Details	Mean	SD
Q20	If I find my learning method impractical, I can change to another suitable method in time.	3.478	0.95
Q19	I can often realize whether my learning methods are suitable for me.	3.373	1.11
Q17	In listening practice, I can consciously monitor the use of listening strategies.	3.269	1.08
Q16	In reading practice, I can consciously monitor the use of reading strategies.	3.179	1.12
Q18	I will often evaluate my learning methods and find out the existing problems and solutions.	3.157	1.06
Q14	In conversation practice, I can consciously monitor the use of communication strategies.	3.029	1.08
Q15	In writing practice, I can consciously monitor the use of writing strategies.	2.985	1.16
Mean of 7 items		3.210	

Table 4.11 showed that the mean value of Learning Strategy Monitoring was 3.210, which was higher than 2.5, therefore, we can infer that the level of Learning Strategy Monitoring was at a moderate level based on the agreed criteria. The top three statements are: “If I find my learning method impractical, I can change to another suitable method in time”, “I can often realize whether my learning methods are

suitable for me.” and “In listening practice, I can consciously monitor the use of listening strategies”.

Table 4.12 Descriptive Statistics on the Learning Process Management of High School Students

Questionnaire item	Details	Mean	SD
Q30	I can choose effective ways of learning (such as exchanging learning experience with successful English learners, writing diaries or weekly notes, actively listening to English radio, reading English newspapers, watching English movies, magazines and novels).	3.291	1.33
Q29	In the process of completing a certain language task (such as listening and speaking), I often find my previous learning deficiencies and can update my understanding of previous knowledge.	3.261	1.03
Q25	I often take the initiative to cooperate with others in learning (such as looking for oral communication partners, exchanging learning experience with other students, practicing together, reviewing, etc.).	3.216	1.28
Q27	When I realize the mistakes, I can find out the reasons for them (such as unfamiliar with grammar rules, etc.) and take corresponding error correction measures.	3.216	1.09
Q26	When learning English, I often realize my own language mistakes.	3.179	1.23
Q24	I can often consciously apply new knowledge to language practice.	3.171	1.17

Table 4.12 Descriptive Statistics on the Learning Process Management of High School Students (Cont.)

Questionnaire item	Details	Mean	SD
Q22	I can actively overcome the emotional factors that are not conducive to English learning (such as inferiority, anxiety, depression, shyness, etc.).	3.059	1.21
Q23	I can make full use of existing learning resources (such as libraries, networks, reference books, radio, dictionaries, grammar books, etc.).	3.052	1.17
Q28	In the process of completing certain language learning tasks (such as listening and speaking), I can make my own plans in advance.	2.910	1.08
Q21	I actively look for various opportunities to practice English in and out of class (such as participating in English corners, English club activities or discussing with classmates).	2.746	1.22
Mean of 10 items		3.110	

Table 4.12 showed that the mean value of Learning Process Management was 3.110, which was higher than 2.5, therefore, we can infer that the level of Learning Process Management was at a moderate level based on the agreed criteria. The top three statements are: “I can choose effective ways of learning (such as exchanging learning experience with successful English learners, writing diaries or weekly notes, actively listening to English radio, reading English newspapers, watching English movies, magazines and novels)”, “In the process of completing a certain language task (such as listening and speaking), I often find my previous learning deficiencies and can update my understanding of previous knowledge” and “I often take the initiative

to cooperate with others in learning (such as looking for oral communication partners, exchanging learning experience with other students, practicing together, reviewing, etc.)”.

4.1.3 Research Question 3

Are there any difference of the Learners’ L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students studying Liberal Arts and Science program?

1) L2MSS levels among EFL Chinese high school students studying Liberal Arts and Science program.

In the previous studies by scholars, most of them took college students as the research subjects and explored the differences in L2MSS levels among learners with different academic program backgrounds, and very few researchers took high school students as the research subjects and explored the differences in L2MSS levels among learners with high school students’ backgrounds in Liberal Arts and Sciences, therefore, the researchers also used independent sample t-tests to analyze the differences in L2MSS among high school students with different arts and science backgrounds. The t-test results show that the significance of each group is less than 0.05, so it is easy to infer that Chinese high school students from different arts and science backgrounds have significant differences in L2MSS levels (see Table 4.13).

Table 4.13 L2MSS levels among EFL Chinese high school students studying Liberal Arts and Science program

	M		t-value	df	P
	Science (N=90)	Liberal Arts (N=44)			
Ideal L2 Self	4.035	2.977	-4.034	71.062	0.000*
Ought-to L2 Self	3.650	3.200	-2.604	68.631	0.011*
L2 Learning Experience	3.456	2.509	-4.604	132	0.000 *
L2MSS	3.680	2.926	-4.962	132	0.000*

As seen in Table 4.13 Independent samples t-test of L2MSS levels of high school students from different academic program backgrounds, there was a significant difference in L2MSS levels between Liberal Arts and Science subjects in terms of overall L2MSS levels ($t=-4.962$, $df=132$, $p=0.000 < 0.05$). Specifically, L2MSS levels were significantly lower in the Liberal Arts than in the Sciences ($MD=-0.754$). In terms of each dimension, there was a significant difference in the ideal L2 self of the Liberal Arts and Sciences ($t=-4.034$, $P=0.000 < 0.05$), and the level of ideal L2 self of Liberal Arts was significantly lower than that of the Sciences ($MD=-1.058$). There was a significant difference between the ought-to L2 self of Liberal Arts and Sciences ($t=-2.604$, $P=0.011 < 0.05$), and the level of ought-to L2 self of Liberal Arts was significantly lower than that of Sciences ($MD=-0.45$); there was a significant difference between the second language learning experience of Liberal Arts and Sciences ($t=-4.604$, $P=0.000 < 0.05$), and the level of the second language learning experience of Liberal Arts was significantly lower than that of Sciences ($MD=-0.947$).

2) Autonomous English learning ability among Chinese high school students with different arts and science backgrounds

Table 4.14 Autonomous English learning ability among EFL Chinese high school students studying different academic program

	M		T-value	df	P
	Science (N=90)	Liberal Arts (N=44)			
Understanding teaching objectives	3.526	3.053	-2.799	132	0.006*
Setting learning objectives	3.216	2.573	-4.076	132	0.000*
Learning strategy use	3.456	3.205	-1.574	132	0.118
Learning Strategy Monitoring	3.319	2.987	-2.339	132	0.021*
Learning Process Management	3.221	2.884	-2.245	132	0.026*
Autonomous English learning ability	3.313	2.927	-3.149	132	0.002*

The independent samples t-test analyzed the differences in the autonomous English learning ability of EFL Chinese high school students studying Liberal Arts and Science program. According to the results of autonomous English learning ability t-test, the significance of learning strategy use was 0.118, which was higher than 0.05 but did not reach the significance level. The significance of all other dimensions is lower than 0.05, therefore, we can infer that there is a significant difference in the level of autonomous English learning ability between EFL Chinese high school students of different Liberal Arts and Science programs, except for the use of learning strategies, and Liberal Arts students are lower than those Science students (see Table 4.14).

4.1.4 Research Question 4

Is there any relationship between Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students?

This section will answer the last research question of this study, which is whether there is a correlation between EFL Chinese high school students' L2MSS and autonomous English learning ability. Therefore, a Pearson correlation analysis was conducted on the questionnaire data in this study. In the Pearson correlation analysis, r denotes the correlation coefficient. When one variable increase and the other increases, we can assume that the two variables are positively correlated. The more the absolute value of r is close to 1, the more significant the correlation is. The correlation coefficient can be divided into three levels, and the criteria are as follows: when the absolute value of r is less than 0.3, the correlation between the variables is low; when the absolute value of r is between 0.3 and 0.7, the correlation between the variables is medium; when the absolute value of r is greater than 0.7, the correlation between the variables is high.

1) Analysis of the overall correlation between L2MSS and autonomous English learning ability of EFL Chinese high school students.

The correlation coefficients test between L2MSS and autonomous English learning ability of EFL Chinese high school students in this study are shown in Table 4.15.

Table 4.15 Test for correlation between L2MSS and autonomous English learning ability of EFL Chinese high school students

Variables	Average	Pearson correlation	P
L2MSS	3.5322	0.592**	0.000**
Autonomous English learning ability	3.1858		

As shown in Table 4.15, the L2MSS of EFL Chinese high school students was significantly and positively correlated with autonomous English learning ability ($r=$

0.592, $p=0.000$) and also reached a moderate correlation at the 0.01 level.

2) Correlation analysis of each dimension of L2MSS with each dimension of autonomous English learning ability.

To further explore the specific relationships between the dimensions of the L2MSS and the dimensions of autonomous English learning ability for EFL Chinese high school students, this subsection will specifically explore the correlations between each of the three dimensions of the L2MSS and each of the five dimensions of autonomous English learning ability.

Table 4.16 Test for correlation between L2MSS dimensions and autonomous English learning ability

		Ideal L2 Self	Ought-to L2 Self	L2 Learning Experience
Autonomous English learning ability	Pearson correlation	.605**	.504**	.343**
	Significance (Bilateral)	.000	.000	.000

**. Significantly correlated at the .01 level (Bilaterally).

Table 4.16 shows that the correlation between the three dimensions of the L2MSS and autonomous English learning ability is moderately positive. The correlation coefficient between ideal second language self and autonomous English learning ability was 0.605 ($r=0.605$, $p<0.01$), which was moderately positive; the correlation coefficient between ought-to second language self and autonomous English learning ability was 0.504 ($r=0.504$, $p<0.01$), which was moderately positive; the correlation coefficient between second language learning experience and autonomous English learning ability was 0.343 ($r=0.343$, $p<0.01$), which showed a moderate positive correlation.

From this, it can be found that among the three dimensions of the L2MSS, ideal second language self has the highest correlation with autonomous English learning ability, and second language learning experience has the lowest correlation with autonomous English learning ability, $p=0.343$, but it was also moderately positive, indicating that learners' autonomous English learning ability was correlated with previous positive or negative learning experiences.

Table 4.17 Correlations between L2MSS dimensions and dimensions of autonomous English learning ability

		Understanding the teaching objectives	Setting the learning objectives	Learning strategies to use	Learning Strategy Monitoring	Learning process management
Ideal L2 Self	Pearson correlation	.377**	.578**	.425**	.530**	.488**
	Significance (bilateral)	.000	.000	.000	.000	.000
Ought-to L2 Self	Pearson correlation	.383**	.469**	.278**	.471**	.410**
	Significance (bilateral)	.000	.000	.000	.000	.000
L2 Learning Experience	Pearson correlation	.464**	.300**	.222**	.271**	.236**
	Significance (bilateral)	.000	.000	.000	.002	.006

As can be seen from Table 4.17, in terms of the correlation between the dimensions of L2MSS and the dimensions of autonomous English learning ability, the ideal second language self is moderately correlated with the dimensions of autonomous English learning ability, and the highest correlation is with setting learning goals, so in the process of autonomous learning, learners should first determine their learning goals. Ought-to second language self was also moderately

correlated with the dimensions of autonomous English learning ability, except for learning strategy use, which was lowly correlated. Second language learning experiences were also correlated with the dimensions of autonomous English learning ability, with a medium correlation with understanding the teaching objectives and setting learning objectives, and a low correlation with learning strategy use, learning strategy monitoring, and learning process management.

In summary, the researcher concluded that Chinese high school students' L2MSS has a positive relationship with their autonomous English learning ability, and therefore can improve Chinese high school students' autonomous English learning ability by improving their L2MSS levels.

4.2 Analysis of Semi-structured Interview Results

In order to obtain more comprehensive and complete information to supplement the results of the quantitative study, the researcher used systematic random sampling after the questionnaire data collection and selected two students from each of the high, middle, and low scores in English in the midterm exam, and a total of six students were selected as interviewees for semi-structured interviews.

Semi-structured interviews were used as qualitative data to gain a deeper understanding of participants' autonomous English learning. The interview included 5 items, and 6 respondents, including 4 females and 2 males, participated in semi-structured interviews in their native language Chinese. They were interviewed in the school restaurant and then the responses were transcribed, translated, analyzed, and summarized by the researcher. There were no alterations to the interviews, and the researcher translated them from Chinese to English.

The core theme of the interview was based on a total of 4 questions on L2MSS and autonomous English learning ability. In order to keep participants' information confidential, the researcher numbered the respondents' using numbers based on the

order in which they answered the questions (Interviewee 1, Interviewee 2). Please referred to Appendix E for detailed information on the answers. The interview texts were analyzed to summarize the thematic category occurrences of the interviews. The categorical items were also subsequently formulated according to the frequency of keywords occurring in the interviews are illustrated in Table 3.5.

4.2.1 Research Question 1

What are the levels of Learners' L2 Motivation Self System of EFL Chinese senior high school students?

Related interview theme 1: Ideal L2 self

Strong motivation for L2 learning

“I usually enjoy watching English short videos, listening to English songs, and watching English movies. I think learning English is very interesting.” (Zhou, personal communication, April 13, 2023)

“I believe that learning English can help me learn foreign customs and cultures, and I have a great passion for learning English.” (Li, personal communication, April 13, 2023)

The goal to be achieved in Ideal L2 self-level

“I hope to achieve better results in the college entrance examination with English, in order to enter a better university.” (Guo, personal communication, April 13, 2023)

Ideal L2 self-learning reaches the level I often imagine

Many participants chose to learn English because it is a globally recognized international language, and if they travel, they can better communicate with local people. English plays a crucial role in students' future career choices. In China, many companies are foreign and multinational, allowing for better communication with colleagues.

“There are no obstacles to communicating with others when traveling abroad alone.” (Li, personal communication, April 13, 2023)

“The need for future work, as many companies are now multinational corporations.” (Qian, personal communication, April 13, 2023)

Desiring to pursue an ideal L2 self-state

The interviewee said he was interested in learning programming and found that almost all of them were “English words”. “I hope that learning English will be helpful for me in learning programming.”

“It may be helpful for me to learn programming in the future.”
(Zhang, personal communication, April 13, 2023)

Related interview theme 2: Ought-to L2 self

Some characteristics that learners think they should have

“I hope to achieve certain achievements in my future university studies and work with the help of English.” (Guo, personal communication, April 13, 2023)

Influence of external environment

“English is very important for future university studies, graduate exams, or work.” (Dong, personal communication, April 13, 2023)

“To cope with the college entrance examination.” (Zhang, personal communication, April 13, 2023)

“English accounts for a higher proportion of points in the college entrance examination.” (Zhou, personal communication, April 13, 2023)

“The overall score of the college entrance examination is closely related and deeply affects their future academic.” (Dong, personal communication, April 13, 2023)

“I hope to achieve better results in the college entrance examination with English, in order to enter a better university.” (Guo, personal communication, April 13, 2023)

In order to achieve the Ought-to L2 proficiency

“The need for future work, as many companies are now multinational corporations.” (Qian, personal communication, April 13, 2023)

“Learning English well is to surpass my classmates in English grades.” (Guo, personal communication, April 13, 2023)

The expectations and requirements of parents, teachers and friends

“My parents’ expectations are the main driving force for me to learn English.” (Zhou, personal communication, April 13, 2023)

“Learning English well is to receive praise from the teacher.” (Dong, personal communication, April 13, 2023)

Related interview theme 3: L2 learning experience

Successful L2 Learning Experience

“Enhance my confidence in English learning, it can better understand our native language.” (Qian, personal communication, April 13, 2023)

Unsuccessful L2 Learning Experience

“The expectations of others will bring some pressure and trouble to my English learning.” (Zhang, personal communication, April 13, 2023)

Positive L2 Learning Experience

“Learning English has made my logical thinking ability more rigorous.” (Guo, personal communication, April 13, 2023)

Negative L2 Learning Experience

“High school English courses are more complex, and I have some language learning anxiety.” (Zhang, personal communication, April 13, 2023)

4.2.2 Research Question 2

What are the levels of autonomous English learning ability of EFL Chinese senior high school students?

Related interview theme 2: Autonomous English learning

Understanding teaching objectives

“I will cultivate a good habit of previewing and focus on reviewing methods and understanding the teacher’s teaching objectives. (Li, personal communication, April 13, 2023)

Clear learning objectives

“I will clarify my learning objectives and cultivate self-control ability.” (Dong, personal communication, April 13, 2023)

Effective learning strategies

Most participants hope to develop effective learning strategies by watching movies, listening to music, building confidence in English learning, and previewing knowledge points before class.

“I will cultivate my interest in learning English, such as watching more English movies and listening to more English songs.” (Zhou, personal communication, April 13, 2023)

“I will preview new knowledge points before class.” (Zhang, personal communication, April 13, 2023)

Learning strategy monitoring

One interviewee mentioned the need to constantly monitor his learning process and enhance his knowledge reserve ability.

“I will build confidence in English learning and formulate effective learning strategies.” (Guo, personal communication, April 13, 2023)

Learning process management

“I will supervise my learning process and promptly consult my teacher when encountering any knowledge points that I do not understand.” (Qian, personal communication, April 13, 2023)

4.2.3 Research Question 3

Are there any difference of the Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students studying Liberal Arts and Science program?

Related interview theme 1: Ideal L2 self

Strong motivation for L2 learning

Most students chose to learn English because they liked it and were interested in foreign customs and cultures, and had a great passion for learning English.

“I usually enjoy watching English short videos, listening to English songs, and watching English movies. I think learning English is very interesting.” (Zhou, personal communication, April 13, 2023)

“I believe that learning English can help me learn foreign customs and cultures, and I have a great passion for learning English.” (Li, personal communication, April 13, 2023)

“Learning English has made my logical thinking ability more rigorous.” (Guo, personal communication, April 13, 2023)

The goal to be achieved in Ideal L2 self-level

Many respondents expressed the hope of choosing an English major in university in the future, engaging in English related work, and hoping to achieve certain achievements in future university studies and work through the use of English.

“I want to choose an English major in college and work in English related fields in the future.” (Zhou, personal communication, April 13, 2023)

“I want to work as an English teacher, English trainer, English translator, etc. in the future.” (Li, personal communication, April 13, 2023)

“I hope to achieve certain achievements in my future university studies and work with the help of English.” (Guo, personal communication, April 13, 2023)

Ideal L2 self-learning reaches the level I often imagine

Some interviewees expressed the hope of using English for communication in the future, hoping to become proficient in English and travel abroad.

“I have a strong desire to communicate with foreigners in English in the future.” (Dong, personal communication, April 13, 2023)

“I hope to master English proficiently and travel to Europe.” (Zhang, personal communication, April 13, 2023)

“Make friends, chat, or work together with foreigners.” (Qian, personal communication, April 13, 2023)

Related interview theme 2: Ought-to L2 Self

The expectations and requirements of parents, teachers and friends

Most respondents stated that the expectations of their parents, teachers, and friends are the driving force behind their English learning. In order not to disappoint or anger them, they will work harder to learn English. A respondent stated that these external factors can sometimes bring him some pressure and trouble, and he don't know how to learn English better.

“Yes. My parents’ expectations are the main driving force for me to learn English.” (Zhou, personal communication, April 13, 2023)

“Yes. Learning English well is to receive praise from the teacher.” (Dong, personal communication, April 13, 2023)

“Yes. Learning English well is to surpass my classmates in English grades.” (Guo, personal communication, April 13, 2023)

Some characteristics that learners think they should have

A respondent stated that learning English is to gain her own recognition, not the expectations of others, hoping to enhance her own connotation and make herself better. Another interviewee expressed the hope that good English can provide better job opportunities for himself in future employment.

“I study English to gain my own recognition and make myself better.” (Li, personal communication, April 13, 2023)

“Learning English can provide me with more job opportunities.” (Qian, personal communication, April 13, 2023)

Related interview theme 3: L2 learning experience

Successful L2 Learning Experience

“In order to better understand our native language.” (Qian, personal communication, April 13, 2023)

Positive L2 Learning Experience

“L2 Learning Experience can help me understanding foreign customs and cultures.” (Li, personal communication, April 13, 2023)

Related interview theme 4: Autonomous English learning

Understanding teaching objectives

“Focus on reviewing methods and understanding the teacher’s teaching objectives.” (Li, personal communication, April 13, 2023)

“I will clarify my learning goals and cultivate self-control ability.” (Dong, personal communication, April 13, 2023)

Clear learning objectives

“I will cultivate a good habit of previewing and focus on reviewing methods.” (Li, personal communication, April 13, 2023)

“I will preview new knowledge points before class.” (Zhang, personal communication, April 13, 2023)

Effective learning strategies

“Watching more English movies and listening to more English songs.” (Zhou, personal communication, April 13, 2023)

“I will build confidence in English learning and formulate effective learning strategies.” (Guo, personal communication, April 13, 2023)

Learning Strategy Monitoring

“When I watch English movies or listen to English songs, I will judge how many sentences I can understand.” (Zhou, personal communication, April 13, 2023)

“After class, I will consolidate my English knowledge.” (Guo, personal communication, April 13, 2023)

Learning Process Management

“I will supervise my learning process and promptly consult my teacher when encountering any knowledge points that I do not understand.” (Qian, personal communication, April 13, 2023)

Liberal arts students unanimously believe that learning process assessment is the best method of learning process management.

4.2.4 Research Question 4

Are there any relationship between Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students?

Related interview theme 2: Ought-to L2 self

The expectations and requirements of parents, teachers and friends

“The main driving force is to enhance my confidence in English learning and receive praise from my teachers.” (Qian, personal communication, April 13, 2023)

Influence of external environment

“English accounts for a higher proportion of points in the college entrance examination.” (Zhou, personal communication, April 13, 2023)

“The overall score of the college entrance examination is closely related and deeply affects their future academic.” (Dong, personal communication, April 13, 2023)

Related interview theme 4: Autonomous English learning

Effective learning strategies

“I will cultivate a good habit of previewing and focus on reviewing methods.” (Li, personal communication, April 13, 2023)

Learning process management

“I will supervise my learning process and promptly consult my teacher when encountering any knowledge points that I do not understand.” (Qian, personal communication, April 13, 2023)

Both liberal arts students and science students have a good understanding of teaching objectives, setting learning objectives, monitoring learning process, and managing learning process.

Among the six students interviewed in the semi-structured interview, when asked about their English learning motivation, the respondents all stated that English

accounts for a large proportion of the score in the college entrance examination, which is closely related to the overall score of the college entrance examination and deeply affects their future academic and work. This may indicate that high school students hope to achieve better results in the college entrance examination through English, therefore, learners should strengthen their autonomous learning ability.

Meanwhile, parents, teachers, and friends still greatly influence the L2MSS of high school students. But the influence of parents, teachers, and friends mainly corresponds to the learner's ought-to second language self. In the 4.1 research results, high school students' ought-to second language self-proficiency is relatively low, but it is positively correlated with their autonomous English learning ability. Therefore, the cultivation of high school students' autonomous English learning ability can be achieved through the expectations and requirements of parents, teachers, and friends towards learners.

Interviewee 5 mentioned multiple times that his English learning process is quite difficult, with negative English learning experiences, and a certain level of language learning anxiety and lack of confidence in English learning. Other respondents mentioned their relatively positive experiences in second language learning. We can conclude that there is a profound relationship between second language learning experience and the generation of learners' second language learning motivation. At the same time, this information also provides an important inspiration that English teaching should be gradual. When learning new content, it should go from simple to difficult, and teachers should focus on cultivating learners' interest and confidence in English learning.

Although a high level of second language motivation can motivate learners to learn autonomously, the lack of confidence among learners results in unsatisfactory levels of effort. Therefore, it is important for learners to set short-term learning goals, and teachers should help learners break down seemingly difficult long-term goals. Short term small goals can help learners achieve autonomous learning better, reduce learning anxiety, and enhance learning confidence in English learning.

4.3 Conclusion

Based on previous studies, this research conducted a questionnaire and semi-structured interviews with Chinese high school students. The corresponding conclusions were drawn in response to four research questions.

4.3.1 According to Table 4.1, it can be clearly seen that the mean value of L2MSS reaches 3.53, which is higher than 3.50, indicating that the overall performance of L2MSS is at a moderate level. This is similar to the L2MSS of high school students studied by Irgatoğlu (2021), which is at a moderate level. On each dimension, the ideal second language self is at the medium level ($M=3.69$), and the ought-to second language self is at the low level ($M=3.30$) and second language learning experience is at the low level ($M=3.14$).

From the semi-structured interviews, it can be concluded that most students chose to learn English because they liked it and were interested in foreign customs and cultures, and had a great passion for learning English.

4.3.2 Chinese high school students' overall autonomous English learning ability is at a medium level ($M=3.19$). On each dimension, the mean value of learning strategy use is the highest, at a moderate level. ($M=3.373$). In order, the mean values of understanding teaching objectives ($M=3.370$), learning strategy monitoring ($M=3.21$), learning process management ($M=3.11$), and setting learning goals ($M=3.00$) were all at a moderate level.

From the semi-structured interviews, it can be concluded that the expectations of parents, teachers, and friends are the source of their motivation to learn English, and that learners will work harder to learn English in order not to disappoint or upset them. However, the influence of parents, teachers, and friends mainly corresponds to learners' ought-to L2 selves. In the previous findings, high school students' ought-to L2 selves were low but moderately correlated with their autonomous English learning ability. Therefore, the cultivation of high school students' autonomous English

learning ability can be achieved through the expectations and requirements of parents, teachers, and friends towards learners.

4.3.3 According to Table 4.13 Independent samples t-test of L2MSS levels of high school students from different arts and science backgrounds, there was a significant difference in L2MSS levels between arts and science subjects in terms of overall L2MSS levels ($t=-4.962$, $df=132$, $p=0.000 < 0.05$). Specifically, L2MSS levels were significantly lower in the arts than in the sciences ($MD=-0.754$). In terms of each dimension, there was a significant difference in the ideal L2 self of arts and sciences ($t=-4.034$, $P=0.000 < 0.05$), and the level of ideal L2 self of arts was significantly lower than that of sciences ($MD=-1.058$). There was a significant difference between the ought-to L2 self of arts and sciences ($t=-2.604$, $P=0.011 < 0.05$), and the level of ought-to L2 self of arts was significantly lower than that of sciences ($MD=-0.45$); there was a significant difference between the second language learning experience of arts and sciences ($t=-4.604$, $P=0.000 < 0.05$), and the level of the second language learning experience of arts was significantly lower than that of sciences ($MD=-0.947$).

From the qualitative analysis, it can be seen that Science students reported that they enjoyed learning English more than the Liberal arts students and were more interested in English courses, that interest profoundly influences high school students' L2MSS levels, especially at the ideal second language self-level, and that learners with a higher interest in English have a facilitative instrumental motivation to learn English well.

4.3.4 In terms of the relationship between L2MSS and autonomous English learning ability, Pearson correlation analysis showed that Chinese high school students' L2MSS was moderately positively correlated with autonomous English learning ability ($r=0.592$, $p=0.000$). In terms of correlations among dimensions, the correlation coefficient between ideal second language self and autonomous English learning ability was 0.605 ($r=0.605$, $p<0.01$), which was a moderate positive correlation; the correlation coefficient between ought-to second language self and autonomous English learning ability was 0.504 ($r=0.504$, $p<0.01$), which was a

moderate positive correlation; the correlation coefficient between second language learning experience and autonomous English learning ability was 0.343 ($r=0.343$, $p<0.01$), which was moderately positive. The correlation between the ideal second language self and setting learning goals was the highest ($r=0.578$) and the lowest ($r=0.377$) with understanding teaching goals. The ought-to second language self had the largest correlation with learning strategy monitoring ($r=0.471$) and the smallest correlation with learning strategy use ($r=0.278$). Second language learning experience had the largest correlation with understanding teaching goals ($r=0.464$) and the smallest correlation with learning strategy use ($r=0.222$). This suggests that Chinese high school students' autonomous English learning ability is significantly correlated with L2MSS and that teachers can effectively improve high school students' autonomous English learning ability by improving their L2MSS levels, especially their ideal second language self-image.

From the semi-structured interviews, it can be seen that Interviewee 5 made several references to negative English learning experiences, a certain amount of language learning anxiety, a lack of confidence in learning English, a low overall L2MSS and a low level of autonomous English learning ability. Interviewee 1, on the other hand, mentions a relatively positive experience of second language learning and has a high level of L2MSS overall and, correspondingly, a high level of autonomous English learning ability. We can conclude that the level of L2MSS is closely related to the learner's ability to learn English autonomously.

Chapter 5

Discussions and Recommendations

This chapter discusses the L2MSS level and autonomous English learning ability level of Chinese high school students, the differences in L2MSS and autonomous English learning ability between liberal arts and science students, and the research results of the relationship between them. The first section elaborates the summary of the study and the findings. The second section elaborates the discussions, pedagogical implications, limitations and recommendations for the future of the study.

5.1 The Summary of the Study

It took the form of non-experimental correlational study. This study used questionnaires for quantitative data analysis and semi-structured interviews for qualitative data analysis. First of all, the questionnaire was distributed to 134 students from Wuhe County Senior High School. After that, a total of 6 students were selected to participate in semi-structured interviews based on their high, medium, and low scores in the mid-term English exam. To answer the research questions, quantitative data were analyzed using descriptive analysis, Pearson correlation, based on the SPSS26 program, while qualitative data were analyzed using thematic analysis.

The objectives of this study were: 1) exploring the level of learners' L2 motivation self-system (L2MSS) and autonomous English learning ability of EFL Chinese senior high school students, 2) exploring the difference of the Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students studying Liberal Arts and Science program, and 3) examining the correlation between L2MSS and autonomous English learning ability of EFL Chinese senior high school students.

After being approved by Wuhe County High School, the students signed a consent form and participated in the study. 134 participants completed a questionnaire survey in the classroom. After analyzing the results of the questionnaire for half a month, a total of six participants were selected to conduct semi-structured interviews during extracurricular time at school based on their high, medium, and low English scores in the mid-term exam. For ethical reasons, participants were informed that this questionnaire and interview had no impact on their course scores and that their names would be kept confidential so that they could honestly provide answers in the questionnaire and interview. Thereby ensuring the authenticity and reliability of the collected data.

To analyze the participants' L2MSS and autonomous English learning abilities, quantitative data were used to calculate mean and standard deviation (SD) scores for each questionnaire component via SPSS 26. The researcher utilized Creswell's (Creswell, 2012) six steps of data analysis in qualitative research.

5.2 The Summary of the Findings

The findings of the L2MSS and autonomous English learning ability based on the research questions: 1) What are the levels of Learners' L2 Motivation Self System of EFL Chinese senior high school students?; 2) What are the levels of autonomous English learning ability of EFL Chinese senior high school students?; 3) Are there any difference of the Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students studying Liberal Arts and Science program?; 4) Are there any relationship between Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students?

Based on data analysis, it can be clearly seen that the mean value of L2MSS is at a moderate level ($M=3.53$). This is similar to the L2MSS of high school students studied by Irgatoğlu (2021). On each dimension, the ideal second language self is at

the medium level, and the ought-to second language self is at the low level and second language learning experience is at the low level.

Chinese high school students' overall autonomous English learning ability is at a medium level ($M=3.19$). On each dimension, the mean value is at a moderate level.

There is a significant difference in L2MSS levels between arts and science subjects in terms of overall L2MSS levels. Specifically, L2MSS levels are significantly lower in the arts than in the sciences.

Pearson correlation analysis showed that Chinese high school students' L2MSS was moderately positively correlated with autonomous English learning ability.

The data on the views of Chinese high school students on L2MSS and autonomous English learning ability comes from semi-structured interviews with six students. The interview analysis is adapted from the program recommended by Creswell's (2021). The researchers used six steps to analyze semi-structured interview data. The results show that enhancing learners' second language learning motivation can greatly affect their autonomous English learning ability.

5.3 Discussion

The objectives of this study were to explore the L2MSS level and autonomous English learning ability level of EFL Chinese high school students, as well as the differences and correlations between the two. This study sought to contribute to a growing body of studies hence the bulk of literature in the L2MSS and autonomous English learning ability field. This section presents the discussions of the findings in relation to the previous studies.

5.3.1 Research Question 1: What are the levels of Learners' L2 Motivation Self System of EFL Chinese senior high school students?

According to data analysis, it can be clearly seen that the mean value of L2MSS reaches a moderate level. This is similar to the L2MSS of high school students studied by Irgatoğlu (2021). On each dimension, the ideal second language self is at the medium level ($M=3.69$), this is consistent with the research findings of Li (2020) on second language teaching. And the ought-to second language self is at the low level ($M=3.30$), this indicates that in learners' English learning, they will still learn in such an environment even though they face pressure from the outside (Martin, 2022). Therefore, parents and teachers can give certain expectations in English learning for high school students, but they should not bring too much pressure on students. And second language learning experience is at the low level ($M=3.14$), this is similar to the in-depth study proposed by Jang and Lee (2019) on the impact of motivation on second language writing processes and products.

From the semi-structured interviews, it can be concluded that most students chose to learn English because they liked it and were interested in foreign customs and cultures, and had a great passion for learning English. Celik and Yildiz (2019) mentioned that motivation is one of the factors that affect the success of middle school or foreign language learning, and is defined as the driving force that initiates, guides, and maintains the learning process. In the process of learning a new foreign language, the cultural elements in the target language actively motivate students, which helps to learn knowledge more easily and effectively. The research results demonstrate the importance of the target foreign language culture and its contribution to student motivation.

5.3.2 Research Question 2: What are the levels of autonomous English learning ability of EFL Chinese senior high school students?

Chinese high school students' overall autonomous English learning ability is at a moderate level. On each dimension of autonomous English learning ability, the mean value is all at a moderate level. Orawiatnakul & Wichadee (2017) emphasize that the concept of learner autonomy plays an important role in language learning. Researchers emphasize new forms of learning, enabling learners to guide their own learning. The

research results show that students have a moderate level of understanding the autonomous learning and extracurricular language learning behavior. The research findings emphasize the necessity of increasing autonomous learning.

From the semi-structured interviews, it can be concluded that the expectations of parents, teachers, and friends are the source of their motivation to learn English, and that learners will work harder to learn English in order not to disappoint or upset them. Therefore, the cultivation of high school students' autonomous English learning ability can be achieved through the expectations and requirements of parents, teachers, and friends towards learners.

5.3.3 Research Question 3: Are there any difference of the Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students studying Liberal Arts and Science program?

According to Independent samples t-test of L2MSS levels of high school students from different arts and science backgrounds, there was a significant difference in L2MSS levels between arts and science subjects in terms of overall L2MSS levels. Specifically, L2MSS levels were significantly lower in the arts than in the sciences.

According to the results of autonomous English learning ability T-test, the significance of learning strategy use was 0.118, which was higher than 0.05 and did not reach the significance level. The significance of all other dimensions is lower than 0.05, therefore, we can infer that there is a significant difference in the level of autonomous English learning ability between Chinese high school students of different arts and science subjects, except for the use of learning strategies, and arts subjects are lower than science subjects.

From the qualitative analysis, it can be seen that science students reported that they enjoyed learning English more than the Liberal arts students and were more interested in English courses.

5.3.4 Research Question 4: Are there any relationship between Learners' L2 Motivation Self System and autonomous English learning ability of EFL Chinese senior high school students?

In terms of the relationship between L2MSS and autonomous English learning ability, Pearson correlation analysis showed that Chinese high school students' L2MSS was moderately positively correlated with autonomous English learning ability. This result is the same as the findings of Lu & Berg (2019), both of which indicated a significant positive correlation between the two. Thus, it can be clearly concluded that the L2MSS of these high school students was moderately positively correlated with their autonomous English learning ability, which indicates that the higher the L2MSS of high school students, the stronger their autonomous English learning ability. This result verifies the appropriateness of the L2MSS in the Chinese foreign language learning environment, where motivation from the learner's self and the learner's autonomous learning behaviors and abilities are closely linked. Liu (2015) mentioned that among the numerous learning variables that may affect language learning, autonomous learning is a very unique variable. Participants exhibit significant differences in all aspects of learner autonomy and have different levels of motivation. In addition, research results indicate a high level of positive correlation between motivation and autonomous learning.

Learners with a high level of ideal second language self will have a strong motivation to learn second language in order to achieve the desired level and state of second language learning in the future. This positive desire creates a strong impetus for high school students' autonomous second language learning, and learners will work harder to learn English and will also take the initiative to use autonomous learning strategies to regulate their English learning status and improve their English learning effectiveness. These learners are able to make full use of learning resources, take the initiative to select learning materials, arrange a suitable learning environment, and actively eliminate negative factors that hinder English learning. Norrish, Williams & Robinson (2013) also argue that "in the pursuit of goals, learners are motivated and challenged, stimulating positive emotions, cognitions, and behaviors that lead to

positive outcomes”. Therefore, students with higher levels of ideal second language proficiency have higher and more positive aspirations for learning English and study harder, as well as have higher levels of autonomous English learning ability.

In contrast, the correlation between the ought-to second language self and autonomous English learning ability was slightly lower but also moderately positive, although this finding is not entirely consistent with the findings of Csizér, Albert & Piniel (2021), which demonstrated a high correlation between the two. However, it also argues for the finding that there is a moderate positive correlation between learners’ ought-to second language self and autonomous English learning ability. Learners are motivated to learn second language based on their responsibilities and duties, to fulfill the expectations of their parents, teachers, and friends, or to avoid negative outcomes, and this part of motivation is a preventive instrumental motivation. The learner’s ought-to second language self-image is limited by the views or expectations of others, with parental influence being the most important.

From the research results in section 4.1, it can be concluded that most learners are committed to inquiry to understand the teaching objectives and set learning objectives, and do not have adequate learning strategies or are less aware of using them. There is also a lack of self-monitoring and management of the learning process. This is also a common problem faced by most Chinese high school students. On the other hand, it may be because the learners’ ideal second language self is high and although they are full of motivation to learn, their ought-to second language self and second language learning experience scores are slightly lower. We can infer that high school students’ English learning faces some pressure from the external environment and their past failed English learning experiences, which make them more anxious and lack confidence. This may make learners avoid confronting their learning methods and fail to positively parse the mistakes that occurred in the past, and learners prefer to have expectations about their future selves. Therefore, the learner’s attention is focused on understanding the learning goals.

From the semi-structured interviews, it can be concluded that the level of L2MSS is closely related to the learner's ability to learn English autonomously. Spratt et al., (2002) believed that motivation could affect autonomous English learning. The researcher investigated learners' autonomy practices in the form of extra-curricular activities for learning. The findings found that motivation plays a key role in learners' autonomy and therefore, teachers may strive to ensure motivation before they train students to become autonomous.

5.4 Limitation of the Study

This study explored the correlation between L2MSS and autonomous English learning ability of high school students and made some targeted suggestions for improving L2MSS and autonomous English learning ability. However, this study still has some limitations and shortcomings for improvement.

Firstly, the current study involved only a small number of participants, and the study population and sample study subjects were high school students at Wuhe County High School. It is recommended that future studies should be conducted with a larger sample of subjects from different cities or schools with different levels and backgrounds. Only in this way the researchers can gain a deeper understanding of the study and obtain more accurate results.

Secondly, this study focuses on quantitative research using questionnaires, and the authenticity and objectivity of the data are affected by the seriousness of students' answers, and the six-level scale used in questionnaire 1 and the five-level scale used in questionnaire 2 will inevitably make it difficult for the subjects to answer the questionnaires and make the results of the questionnaires biased. It is hoped that future studies will overcome the shortcomings of using two scales with different levels. In addition, similar studies can also adopt qualitative research methods such as classroom observation and learning diaries to supplement the analysis and discussion of quantitative studies.

Thirdly, this study only investigated the correlation between L2MSS and independent English learning ability, but did not explore the predictive and explanatory effects between the two. Therefore, future research could focus on the sequential relationship between the two, specifically to investigate whether learner L2MSS promotes independent English learning ability, or whether independent English learning ability promotes learner L2MSS, or whether there are mediating effects with other variables. This is something that has not been agreed upon in previous studies, and more research needs to be done to verify this.

5.5 Pedagogical Implications

Based on the results of the research, the following insights were obtained on how to stimulate Chinese high school students' second language self-motivation in the process of English learning and how to improve high school students' autonomous English learning ability:

From the results of the first research question of this study, it is clear that Chinese high school students have more positive L2MSS, but their ideal second language self and second language learning experiences are still relatively low compared to college and graduate students. Therefore, all three dimensions of the L2MSS need to be improved for high school students, especially the ideal second language self and second language learning experience. Since they are moderately positively correlated with high school students' autonomous learning ability, we can enhance learners' autonomous learning ability by helping students construct their ideal second language self-image and improve their second language learning experiences.

Therefore, teachers should not only be aware of the importance of L2MSS, but also reinforce high school students' awareness of the importance of the ideal second language self so that they can use the future-oriented role of the ideal second language self to assist in teaching and learning. Teachers can guide high school learners in and out of the classroom to construct a positive ideal second language self-image. The

higher the ideal second language self-image of high school students is positioned, the stronger their motivation to learn, which will drive them to engage in autonomous learning and continuously improve their autonomous learning ability.

Specifically, teachers can cite some excellent role models to stimulate high school students' strong vision of learning second language well. At the same time, teachers, as organizers and instructors of classroom activities, should focus on creating a relaxed and harmonious classroom atmosphere, helping high school students choose appropriate teaching materials and teaching modes, stimulating learners' interest in learning, encouraging and praising learners in all teaching sessions in a timely manner, allowing learners to fully experience the joy and sense of accomplishment of foreign language learning, helping students build self-confidence, reduce learning anxiety, and establish a positive and successful second language learning experience.

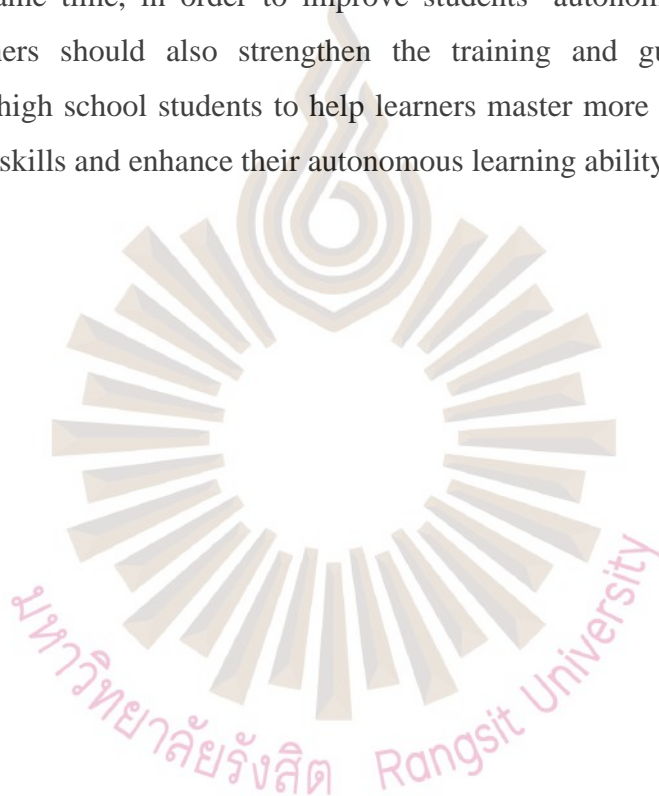
Motivation from the ought-to second language self is related to meeting the expectations of others (parents, teachers, and friends) and avoiding their disappointment, and this part of motivation is not persistent and deep. Moreover, students' second language self-image has a dynamic developmental character, and previous studies have proved that the ought-to second language self can be transformed into the ideal second language self to a certain extent. Therefore, teachers should moderate their expectations and demands on learners, adopt appropriate and effective motivational strategies in their teaching practice, and consciously implement some interventions on the ought-to second language self. They should transform the learners' ought-to second language selves into positive ideal second language selves and continuously strengthen and internalize the learners' learning motivation.

5.6 Recommendations for Further Study

The results of the study showed that high school students' autonomous English learning skills were at an intermediate level, especially in setting learning goals, which were weak and still expected to be further strengthened. Clapp (2013) suggests that goals are a core component of learners' autonomous learning, suggesting that setting

learning goals plays an important role in autonomous learning. It is the responsibility for English teachers to guide students to set reasonable and efficient learning goals, with a particular focus on helping students to divide their long-term goals into several short-term goals. Once students achieve their short-term goals, they will gain confidence and a sense of accomplishment in the process of autonomous English learning, which will provide additional motivation to achieve more goals.

At the same time, in order to improve students' autonomous learning ability, English teachers should also strengthen the training and guidance on learning strategies for high school students to help learners master more autonomous learning strategies and skills and enhance their autonomous learning ability.



REFERENCES

- Abdel Razeq, A. H. (2018). Autonomous learning levels of students majoring in EFL and the role of their teachers in developing autonomous learning. *Journal of Educational and Psychological Studies-Sultan Qaboos University*, 34, 225-228. doi:10.2037/0298-7233.25.2.335.
- Al-Harbi, S. S., & Alshumaimeri, Y. A. (2016). The Flipped Classroom Impact in Grammar Class on EFL Saudi Secondary School Students' Performances and Attitudes. *English Language Teaching*, 9(10), 60-80.
- Al-Hoorie, A. H. (2018). The L2 motivational self-system: A meta-analysis. *Studies in Second Language Learning and Teaching*, 8(4), 721-754.
- Altay, I. F., & Altay, A. (2019). A systematic review of studies on blended learning in EFL environment. *International Journal of Curriculum and Instruction*, 11(1), 125-140.
- Alzubaidi, E., Aldridge, J. M., & Khine, M. S. (2016). *Learning English as a second language at the university level in Jordan: Motivation, self-regulation and learning environment perceptions. Learning Environments Research*, 19(1), 133-152.
- Ametova, O. (2020). The influence of integrative motivation and instrumental motivation on learning English as a Foreign Language. *Science web academic papers collection*, 15(8), 687-698.
- Amirian, Z., Shayanfar, M., & Rezazadeh, M. (2021). Structural Equation Model of Teachers' Mindsets, Self-Efficacy, and Emotional Experiences and Iranian EFL Learners' Willingness to Communicate and L2 Motivational Self System. *Two Quarterly Journal of English Language Teaching and Learning University of Tabriz*, 13(28), 1-17.
- Apple, M. T., Falout, J., & Hill, G. (2020). The relationship between future career self-images and English achievement test scores of Japanese STEM students. *IEEE Transactions on Professional Communication*, 63(4), 372-385.
- Aripova, S. (2021). Students' Motivation in Autonomous Learning. *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, 12(4), 1095-1098.

REFERENCES(CONT.)

- Arslan, T., & Çiftçi, H. (2021). Second language motivational self-system of sixth graders in Turkey: A correlational study. *Tesol Journal*, 12(1), e00518.
- Bai, X., Wang, X., Wang, J., Tian, J., & Ding, Q. (2020, August). College students' autonomous learning behavior in blended learning: Learning motivation, self-efficacy, and learning anxiety. In *2020 International Symposium on Educational Technology (ISET)*. IEEE, 105-108.
- Beck, T. W. (2013). The importance of a priori sample size estimation in strength and conditioning research. *The Journal of Strength & Conditioning Research*, 27(8), 2323-2337.
- Baru, M., Tenggara, W. N., & Mataram, M. U. (2020). Promoting Students' Autonomy through Online Learning Media in EFL Class. *International Journal of Higher Education*, 9(4), 320-331.
- Benson, P. (1996). Concepts of autonomy in language learning. *Autonomy in language learning*, 24(16), 27-34.
- Brady, I. K. (2019). A multidimensional view of L2 motivation in southeast Spain: Through the 'ideal selves' looking glass. *Porta Linguarum: revista internacional de didáctica de las lenguas extranjeras*, (31), 37-52.
- Calafato, R. (2020, October). Learning Arabic in Scandinavia: Motivation, metacognition, and autonomy. *Lingua*, 246(5134), 102-103.
- Celik, B., & Yildiz, Y. (2019). The role of foreign language culture on teaching the language and learner motivation. *International Journal of Social Sciences & Educational Studies*, 5(4), 150-161.
- Chalupa, C., & ter Haseborg, H. (2014). Improving Student Motivation through Autonomous Learning Choices. *NECTFL Review*, 74, 53-85.
- Chen, T. (2022). An Investigation and Analysis of College English Majors' Autonomous Learning Ability in Ubiquitous Learning Environment. *Journal of Environmental and Public Health*, 8(1), 73-81.
- Cheng, X. (2000). Asian students' reticence revisited. *System*, 28(3), 435-446.
- Clapp, E. P. (2013). The learner-directed classroom: Developing creative thinking skills through art. *Harvard Educational Review*, 83(1), 237.

REFERENCES (CONT.)

- Clifford, V. A. (1999). The development of autonomous learners in a university setting. *Higher Education Research & Development*, 18(1), 115-128.
- Cotterall, S. (1995). Readiness for autonomy: Investigating learner beliefs. *System*, 23(2), 195-205.
- Creswell, J. W. (2012). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research*. Pearson Education, Inc.
- Csizér, K., Albert, Á., & Piniel, K. (2021). Age - related differences in the motivation of learning English as a foreign language: Attitudes, selves, and motivated learning behavior. *Language learning*, 58(2), 327-355.
- Demirdöken, G., & Okur, S. (2022). Psychometric properties of speaking anxiety scale and an interdisciplinary investigation with serial mediation analysis. *Innovation in Language Learning and Teaching*, 1-17.
- Dickinson, L. (1993). *Talking shop: Aspects of autonomous learning*. *ELT journal*, 47(4), 330-336.
- Dickinson, L. (1995). Autonomy and motivation a literature review. *System*, 23(2), 165-174.
- Dörnyei, Z. (2005). The psychology of the language learner: Individual differences in second language acquisition. *New Jersey*, 36(81), 1-19.
- Dörnyei, Z. (2010). Researching motivation: From integrativeness to the ideal L2 self. Introducing applied linguistics: *Concepts and skills*, 3(5), 74-83.
- Dörnyei, Z., & AL-HOORIE, A. H. (2017). The motivational foundation of learning languages other than global English: Theoretical issues and research directions. *The Modern Language Journal*, 101(3), 455-468.
- Dörnyei, Z. (2019). Towards a better understanding of the L2 Learning Experience, the Cinderella of the L2 Motivational Self System. *Studies in Second Language Learning and Teaching*, 9(1).
- Du, Y. (2020). Study on Cultivating College Students' English Autonomous Learning Ability under the Flipped Classroom Model. *English Language Teaching*, 13(6), 13-19.

REFERENCES (CONT.)

- Fotiadou, A., Angelaki, C., & Mavroidis, I. (2017). Learner autonomy as a factor of the learning process in distance education. *European Journal of Open, Distance and E-learning*, 20(1), 95-110.
- Gardner, R. C. (2001). Integrative motivation and second language acquisition. *Motivation and second language acquisition*, 23(1), 1-19.
- Getie, A. S. (2020). Factors affecting the attitudes of students towards learning English as a foreign language. *Cogent Education*, 7(1), 1738184.
- Ghanizadeh, A., & Rostami, S. (2015). A Dörnyei-inspired study on second language motivation: A cross-comparison analysis in public and private contexts. *Psychological Studies*, 60(3), 292-301.
- Ghapanchi, Z., Khajavy, G. H., & Asadpour, S. F. (2011). L2 motivation and personality as predictors of the Second language proficiency: Role of the Big Five traits and L2 motivational self-System. *Canadian Social Science*, 7(6), 148-155.
- Ghorbandordinejad, F., & Ahmadabad, R. M. (2016). Examination of the relationship between autonomy and English achievement as mediated by foreign language classroom anxiety. *Journal of Psycholinguistic research*, 45(3), 739-752.
- Glory, K. M., & Subekti, A. S. (2021). Indonesian high school learners' fear of negative evaluation and ought-to L2 self. *Langkawi: Journal of The Association for Arabic and English*, 7(2), 157-169.
- Higgins, E. T. (1987). Self-discrepancy: a theory relating self and affect. *Psychological review*, 94(3), 319.
- Huang, H. T. (2017). Private English Tutoring and Adolescents' Motivation to Learn English as a Foreign Language: A Self System Perspective. *Taiwan Journal of TESOL*, 14(1), 1-36.
- Huang, S. C. (2019). Learning experience reigns—Taiwanese learners' motivation in learning eight additional languages as compared to English. *Journal of Multilingual and Multicultural Development*, 40(7), 576-589.
- Huang, Y. W. (2014). Self and language anxiety. *English language and literature studies*, 4(2), 66.

REFERENCES (CONT.)

- Irgatoğlu, A. (2021). L2 Motivational Self System and Learning Approaches of High School Students. *Education Quarterly Reviews*, 4.
- Jang, Y., & Lee, J. (2019). The effects of ideal and ought-to L2 selves on Korean EFL learners' writing strategy use and writing quality. *Reading and Writing*, 32, 1129-1148.
- Jiang, Y., & Dewaele, J. M. (2015). What lies bubbling beneath the surface? A longitudinal perspective on fluctuations of ideal and Ought-to L2 self among Chinese learners of English. *International Review of Applied Linguistics in Language Teaching*, 53(3), 331-354.
- Xu J., & Liu, Y (2019). Review of Research on Cross-linguistic Influence in Third Language Acquisition. *Journal of Beijing International Studies University*, 41(3), 32.
- Khan, M. R. (2015). Analyzing the relationship between L2 motivational selves and L2 achievement: A Saudi perspective. *International Journal of English Language Teaching*, 2(1), 68-75.
- Khotimah, K., Widiati, U., Mustofa, M., & Ubaidillah, M. F. (2019). Autonomous English learning: Teachers' and students' perceptions. *Indonesian Journal of Applied Linguistics*, 9(2), 371-381.
- Kim, T. Y. (2009). The dynamics of L2 self and L2 learning motivation: A qualitative case study of Korean ESL students. *English Teaching*, 64(3), 49-70.
- Koehler, M. J., Mishra, P., Akcaoglu, M., & Rosenberg, J. M. (2013). The technological pedagogical content knowledge framework for teachers and teacher educators. *ICT integrated teacher education: A resource book*, 2-7.
- Kormos, J., & Csizer, K. (2014). The interaction of motivation, self-regulatory strategies, and autonomous learning behavior in different learner groups. *Tesol quarterly*, 48(2), 275-299.
- Kormos, J., & Kiddle, T. (2011). Systems of goals, attitudes, and self-related beliefs in second-language-learning motivation. *Applied linguistics*, 32(5), 495-516.

REFERENCES (CONT.)

- Kristmanson, P., Lafargue, C., & Culligan, K. (2013). Experiences with autonomy: Learners' voices on language learning. *Canadian modern language review*, 69(4), 462-486.
- Kun, L. (2021). A Study of the Influence of the L2 Motivational Self System on Motivational Regulation Strategies and Motivated Behavior. *Journal of Beijing International Studies University*, 43(2), 87.
- Lai, H. J., & Wang, C. Y. (2012). Examining public librarians' information literacy, self-directed learning readiness, and e-learning attitudes: A study from Taiwan. *Malaysian Journal of Library & Information Science*, 17(2), 101-115.
- Lashari, A. A., Umrani, S., & Buriro, G. A. (2021). Learners' Self-regulation and Autonomy in Learning English.
- Lee, J. S., & Lee, K. (2021). The role of informal digital learning of English and L2 motivational self-system in foreign language enjoyment. *British Journal of Educational Technology*, 52(1), 358-373.
- Li, C. (2020). A positive psychology perspective on Chinese EFL students' trait emotional intelligence, foreign language enjoyment and EFL learning achievement. *Journal of Multilingual and Multicultural Development*, 41(3), 246-263.
- Li, M., & Zhang, L. (2021). Tibetan CSL Learners' L2 Motivational Self System and L2 Achievement. *System*, 97, 102436.
- Li, N., & Park, H. (2021). Relative Contribution of Self-Efficacy and Motivation to Chinese Learners' Autonomous English Learning. *Journal of Pan-Pacific Association of Applied Linguistics*, 25(1), 91-114.
- Li, Q. (2014). Differences in the motivation of Chinese learners of English in a foreign and second language context. *System*, 42, 451-461.
- Li, T., & Liu, Z. (2021). Exploring effects of the second language motivational self-system on Chinese EFL learners' willingness to communicate in English and implications for L2 education. *Journal of Higher Education Research*, 2(4), 169-177.

REFERENCES (CONT.)

- Linh, P. N., & Hien, N. T. T. (2022). Speaking Self-efficacy and L2 Motivational Self System in Online EFL Emergency TBLT and TSLT Classes: A Multiple-treatment Counterbalanced Experimental Study. *Computer Assisted Language Learning*, 23(4), 56-75.
- Liu, G. (2016). A study on the autonomous learning validity of Chinese EFL students. *Journal of Language Teaching and Research*, 7(4), 738.
- Liu, H. J. (2015). Learner autonomy: The role of motivation in foreign language learning. *Journal of Language Teaching and Research*, 6(6), 1165.
- Liu, Y., & Thompson, A. S. (2018). Language learning motivation in China: An exploration of the L2MSS and psychological reactance. *System*, 72, 37-48.
- Lou, L. (2021). Cultivation of Students' Autonomous Learning Ability in Application-oriented Universities. *Theory and Practice in Language Studies*, 11(4), 422-429.
- Lu, J., & Fan, S. (2013). Gender differences in autonomous learning: a study of non-English majors in a Chinese university discourse. *Internet Journal of Language, Culture and Society*, (36), 18-27.
- Lu, Y., & Berg, D. R. (2019). Taiwanese University Students' Ideal L2 Selves and Autonomy: Does High School Program Make a Difference. *International Journal of Educational Methodology*, 5(4), 569-575.
- MacIntyre, P. D., Dewaele, J. M., Macmillan, N., & Li, C. (2019). The emotional underpinnings of Gardner's attitudes and motivation test battery. *Contemporary language motivation theory*, 60, 57-79.
- Magid, M., & Chan, L. (2012). Motivating English learners by helping them visualise their Ideal L2 Self: Lessons from two motivational programmes. *Innovation in Language Learning and Teaching*, 6(2), 113-125.
- Markus, H., & Nurius, P. (1986). Possible selves. *American psychologist*, 41(9), 954.
- Martin, C. (2022). Modern foreign language learning: exploring the possible impact of parental experiences on student motivation. *Innovation in Language Learning and Teaching*, 1-19.

REFERENCES (CONT.)

- Martinović, A., & Burić, I. (2021). L2 Motivation: The Relationship Between Past Attributions, the L2MSS, and Intended Effort. *Journal for Foreign Languages*, 13(1), 409-426.
- Masouleh, N. S., & Jooneghani, R. B. (2012). Autonomous learning: A teacher-less learning!. *Procedia-Social and Behavioral Sciences*, 55, 835-842.
- Meevissen, Y. M., Peters, M. L., & Alberts, H. J. (2011). Become more optimistic by imagining a best possible self: Effects of a two-week intervention. *Journal of behavior therapy and experimental psychiatry*, 42(3), 371-378.
- Moskovsky, C., Assulaimani, T., Racheva, S., & Harkins, J. (2016). The L2 motivational self-system and L2 achievement: A study of Saudi EFL learners. *The Modern Language Journal*, 100(3), 641-654.
- Nitta, R., & Baba, K. (2015). Self-regulation in the evolution of the ideal L2 self: A complex dynamic systems approach to the L2 motivational self-system. *Motivational dynamics in language learning*, 72(6), 367-396.
- Norrish, J. M., Williams, P., O'Connor, M., & Robinson, J. (2013). An applied framework for positive education. *International Journal of Wellbeing*, 3(2).
- Nunan, D. (1995). Closing the gap between learning and instruction. *Tesol Quarterly*, 29(1), 133-158.
- Olaya, M. L. (2018). Developing Autonomy Through Student-Centered English Language Learning Process for Engineering Students. *GIST Education and Learning Research Journal*, 17, 34-58.
- Orawiwatnakul, W., & Wichadee, S. (2017). An Investigation of Undergraduate Students' Beliefs about Autonomous Language Learning. *International Journal of Instruction*, 10(1), 117-132.
- Ou, C. (2017). A Review on Language Learner Autonomy Research in China (2006-2016): Based on 12 Key Domestic Journals. *English Language Teaching*, 10(11), 76-86.
- Pan, C., & Zhang, X. (2021). A longitudinal study of foreign language anxiety and enjoyment. *Language Teaching Research*, 136-216.

REFERENCES (CONT.)

- Papi, M. (2010). The L2 motivational self-system, L2 anxiety, and motivated behavior: *A structural equation modeling approach. System, 38*(3), 467-479.
- Pattiya, J. (2022). *Exploring the Roles of L2 Motivational Self System in English Learning Achievement of Thai High School Learners* (Doctoral dissertation, Mahasarakham University). Retrieved from <http://202.28.34.124/dspace/handle/123456789/1707>.
- Peng, J. E. (2015). L2 motivational self-system, attitudes, and affect as predictors of L2 WTC: An imagined community perspective. *The Asia-Pacific Education Researcher, 24*(2), 433-443.
- Pollard, A. (2015). Web-based journals in the classroom: Motivation and autonomous learning. *Indonesian Journal of Applied Linguistics, 4*(2), 20-31.
- Qu, W. (2022). Research on College English Independent Learning System Based on Constructive Teaching. *Advances in Education, Humanities and Social Science Research, 2*(1), 278-278.
- Railton, D., & Watson, P. (2005). Teaching autonomy: 'Reading groups and the development of autonomous learning practices. *Active Learning in Higher Education, 6*(3), 182-193.
- Safdari, S. (2021). Operationalizing L2 motivational self-system: Improving EFL learners' motivation through a vision enhancement program. *Language Teaching Research, 25*(2), 282-305.
- Saito, K., Dewaele, J. M., Abe, M., & In'nami, Y. (2018). Motivation, emotion, learning experience, and second language comprehensibility development in classroom settings: A cross-sectional and longitudinal study. *Language Learning, 68*(3), 709-743.
- Shih, H. J., & Change, S. M. (2018). Relations among L2 Learning Motivation, Language Learning Anxiety, Self-Efficacy and Family Influence: A Structural Equation Model. *English Language Teaching, 11*(11), 148-160.
- Shor, I. (1988). Developing student autonomy in the classroom. *Equity & Excellence, 24*(3), 35-37.

REFERENCES (CONT.)

- Song, D., & Bonk, C. J. (2016). Motivational factors in self-directed informal learning from online learning resources. *Cogent Education*, 3(1), 1205838.
- Spratt, M., Humphreys, G., & Chan, V. (2002). Autonomy and motivation: Which comes first? *Language teaching research*, 6(3), 245-266.
- Subekti, A. S. (2018). L2 Motivational Self System and L2 achievement: A study of Indonesian EAP learners. *Indonesian Journal of Applied Linguistics*, 8(1), 57-67.
- Suhendi, A. (2018). Constructivist learning theory: The contribution to foreign language learning and teaching. *KnE Social Sciences*, 29 (1), 87-95.
- Su, W. (2021). How to Use Modern Teaching Methods to Cultivate Students' Autonomous Learning Ability. *Open Access Library Journal*, 8(03), 1.
- SWATEVACHARKUL, R. (2021). L2 Motivational Self System: A Case of Thai EFL Senior High School Students. 3L: *Southeast Asian Journal of English Language Studies*, 27(4).
- Tabrizi, H. M., & Saeidi, M. (2015). The Relationship among Iranian EFL Learners' Self-Efficacy, Autonomy and Listening Comprehension Ability. *English Language Teaching*, 8(12), 158-169.
- Takahashi, C., & Im, S. (2020). Comparing Self-Determination Theory and the L2 Motivational Self System and Their Relationships to L2 Proficiency. *Studies in Second Language Learning and Teaching*, 10(4), 673-696.
- Taylor, E. (2001). Positive psychology and humanistic psychology: A reply to Seligman. *Journal of Humanistic Psychology*, 41(1), 13-29.
- Wang, N., Chen, J., Tai, M., & Zhang, J. (2021). Blended learning for Chinese university EFL learners: Learning environment and learner perceptions. *Computer Assisted Language Learning*, 34(3), 297-323.
- Wang, Q., & Luo, S. (2019). Shifting from teaching the subject to developing core competencies through the subject: The revised senior middle school English curriculum standards (2017 Edition) in China. *Second handbook of English language teaching*, 88(4), 109-134.

REFERENCES (CONT.)

- Wight, M. C. S. (2015). Students with learning disabilities in the foreign language learning environment and the practice of exemption. *Foreign Language Annals*, 48(1), 39-55.
- Yang, H. C. (2012). Language Anxiety, Acculturation, and L2 Self: A Relational Analysis in the Taiwanese Cultural Context. *Electronic Journal of Foreign Language Teaching*, 9(2).
- Yang, J. S., & Kim, T. Y. (2011). The L2 motivational self-system and perceptual learning styles of Chinese, Japanese, Korean, and Swedish students. *English Teaching*, 66(1), 141-162.
- Yang, S., Zhou, S., & Cheng, X. (2019). Why do college students continue to use mobile learning? Learning involvement and self-determination theory. *British Journal of Educational Technology*, 50(2), 626-637.
- Yao, S. (2016). Research on Web-based Autonomous English Learning of Engineering Students. *International Journal of Emerging Technologies in Learning*, 11(6).
- Yildiz, Y., & Yucedal, H. M. (2020). Learner autonomy: A central theme in language learning. *International Journal of Social Sciences & Educational Studies*, 7(3), 208-212.
- Zhang, D. (2022). Affective Cognition of Students' Autonomous Learning in College English Teaching Based on Deep Learning. *Frontiers in psychology*, 12, 6601.
- Zhang, J. (2014). Chinese Students' Goal Orientation in English Learning: A Study Based on Autonomous Inquiry Model. *English Language Teaching*, 7(2), 84-89.
- Zhang, Q. M., & Kim, T. Y. (2013). Cross-grade analysis of Chinese students' English learning motivation: A mixed-methods study. *Asia Pacific Education Review*, 14, 615-627.
- Zhao, X., Xiao, W., & Zhang, J. (2022). L2 motivational self-system, international posture and the sustainable development of L2 proficiency in the COVID-19 era: A case of English majors in China. *Sustainability*, 14(13), 8087.

REFERENCES (CONT.)

- Zhou, L., Wu, S., Zhou, M., & Li, F. (2020). 'School's out, but class' on', the largest online education in the world today: Taking China's practical exploration during the COVID-19 epidemic prevention and control as an example. *Best Evid chin Edu*, 4(2), 501-519.
- Zhou, R., & Bao, Y. (2018). The Impact of Achievement Motivation on Project-Based Autonomous Learning-"An Empirical Study on the 2017 NBEPC". *English Language Teaching*, 11(11), 31-43.







APPENDICES A

Questionnaire

Questionnaire on L2MSS and Autonomous English Learning Ability of Senior High School Students

Dear students, we are conducting an investigation on the L2MSS and autonomous English learning ability of senior high school students. We promise that the survey results are only used for academic research, and have nothing to do with your academic achievements, and there is no right or wrong answer. Please answer according to your actual situation. Thank you very much for your support and cooperation!

1. Basic information

Gender: _____

Liberal Arts or Science: _____

Grade: _____

English score of mid-term exam: _____

2. A Questionnaire on L2MSS of Senior High School Students

Please read each item carefully, then select the answer that suits you best, and then tick (✓) in the table

1=Strongly Disagree, 2=Mostly Disagree, 3=Basically Disagree, 4=Basically Agree
5=Mostly Agree, 6=Strongly Agree

Title No	Item	1	2	3	4	5	6
1	I think it is important to learn English because it will help me find a good job in the future.						
2	I often imagine that I would live abroad and communicate with the local people if my English is good enough.						
3	One of the reasons I think learning English is important is that people I respect think I should learn English well.						
4	I often imagine another self: I can communicate						

	with others in English in the future.						
5	The reason why learning English is necessary is because people around me want me to learn it.						
6	I hope there will be more English classes.						
7	Learning English is important, because mastering English can help me increase my income in the future.						
8	I study English in order to gain the recognition of my classmates, teachers, family members or bosses.						
9	I often imagine another self: being able to communicate with people in English like native speakers.						
10	I often imagine another self: I can communicate with foreign friends or colleagues in English in the future.						
11	Learning English is very important because it can help me achieve my goals (such as obtaining a diploma or scholarship).						
12	I think it is important to learn English, because being able to use English is a sign of good education.						
13	I think it is important to learn English, because learning English well can help me get a higher social status.						
14	I like the atmosphere of English class.						
15	I think learning English is important, because if I understand English, others will respect me more.						
16	I hope I can be like those native English speakers (such as speaking, doing things, living, etc.).						
17	I find learning English very interesting.						

18	If I don't learn English well, I will disappoint others.						
19	I like English classes.						
20	I like English textbooks.						
21	I'm looking forward to my English class.						
22	When learning English, I think time passes quickly.						
23	I must learn English to avoid being blamed by my parents or teachers.						
24	I enjoy learning English.						
25	I often imagine another self: I can write emails or letters fluently in English.						

3. A Questionnaire on Autonomous English Learning Ability of Senior High School Students

Please read each item carefully, then select the answer that suits you best, and then tick (✓) in the table

1=Strongly Disagree, 2=Basically Disagree, 3=Uncertain, 4=Basically Agree, 5=Strongly Agree

Title No	Item	1	2	3	4	5
1	I know the teacher's teaching purpose, and I know the purpose of a certain teaching activity in the classroom.					
2	I can transform the teacher's teaching purpose into my own learning purpose.					
3	I can keep up with the English teacher's teaching progress.					
4	After finishing the teacher's task, I clearly made my own English learning plan.					
5	I can set realistic English learning goals.					

6	I have clear requirements for improving my English learning.					
7	I have a strong ability to plan English study time, and the planned time is also reasonable.					
8	I understand the learning requirements for the five language skills of listening, speaking, reading, writing and reading in the English learning syllabus.					
9	In listening practice, I can consciously use effective listening strategies (such as prediction, association, inference).					
10	In conversation practice, I can consciously use effective communication strategies (such as using body language, using synonyms to explain).					
11	In the process of doing reading questions, I can consciously use effective reading strategies (such as reasoning, using context to infer the content of the article).					
12	In the writing practice, I can consciously use effective writing strategies (such as making an outline and deciding the content of the article according to the readers' preferences).					
13	I fully understand the reasonable selection and use of the above learning strategies.					
14	In conversation practice, I can consciously monitor the use of communication strategies.					
15	In writing practice, I can consciously monitor the use of writing strategies.					
16	In reading practice, I can consciously monitor the use of reading strategies.					

17	In listening practice, I can consciously monitor the use of listening strategies.					
18	I will often evaluate my learning methods and find out the existing problems and solutions.					
19	I can often realize whether my learning methods are suitable for me.					
20	If I find my learning method impractical, I can change to another suitable method in time.					
21	I actively look for various opportunities to practice English in and out of class (such as participating in English corners, English club activities or discussing with classmates).					
22	I can actively overcome the emotional factors that are not conducive to English learning (such as inferiority, anxiety, depression, shyness, etc.).					
23	I can make full use of existing learning resources (such as libraries, networks, reference books, radio, dictionaries, grammar books, etc.).					
24	I can often consciously apply new knowledge to language practice.					
25	I often take the initiative to cooperate with others in learning (such as looking for oral communication partners, exchanging learning experience with other students, practicing together, reviewing, etc.).					
26	When learning English, I often realize my own language mistakes.					
27	When I realize the mistakes, I can find out the reasons for them (such as unfamiliar with grammar rules, etc.) and take corresponding error correction measures.					

28	In the process of completing certain language learning tasks (such as listening and speaking), I can make my own plans in advance.					
29	In the process of completing a certain language task (such as listening and speaking), I often find my previous learning deficiencies and can update my understanding of previous knowledge.					
30	I can choose effective ways of learning (such as exchanging learning experience with successful English learners, writing diaries or weekly notes, actively listening to English radio, reading English newspapers, watching English movies, magazines and novels).					



APPENDICES B

Interview Outline

Interview Outline

1. Do you like learning English or English courses? Why?
2. What is your biggest motivation to learn English at this stage?
3. At this stage, do you learn English because of the expectations and requirements of others (parents, teachers, friends) around you? Why?
4. What do you want to do in English in the future? Why?
5. How do you learn English autonomously? What are the main driving forces



The logo of Rangsit University is a circular emblem. It features a central sun-like symbol with rays emanating from it. Above the sun is a stylized flame or torch. The entire emblem is surrounded by a circular border containing the university's name in Thai and English.

APPENDICES C

The IOC form to evaluate and comment on the questionnaire

The IOC form to evaluate and comment on the questionnaire

Validation Form for Questionnaire to Elicit the Relationship between L2 Motivational Self System and Autonomous English Learning Ability of Senior High School EFL Chinese Students

The IOC form to evaluate and comment on the questionnaire

Item	Scale			Comments
	-1	0	1	
Part 1. Basic information The purpose of this part is to get a general profile of the participants. The information will be used for the research purpose only.				
1) 性别 Gender <input type="checkbox"/> Male <input type="checkbox"/> Female				
2) 文科或者理科 Liberal Arts or Science <input type="checkbox"/> Liberal Arts <input type="checkbox"/> Science				
3) 年级 Grade <input type="checkbox"/> Grade1 <input type="checkbox"/> Grade2 <input type="checkbox"/> Grade 3				
4) 期中考试英语分数 English score of mid-term exam				

For the expert who is Chinese, please kindly comment the use of Chinese of the questionnaire part 1 on the following aspects:

- The Chinese language used in the questionnaire is appropriate for the participants.
Yes No Comment: _____
- The Chinese language used in the questionnaire well corresponds to the English version.

Yes No Comment: _____

Item	Scale			Comments
	-1	0	1	
Part 2: A Questionnaire on L2MSS of Senior High School Students The purpose of this part is for the information to understand the level of second language motivational self-system of Chinese senior high school students. Please feel free to check the information. The information will not affect any children's school records and grades. 本部分旨在了解中国高中生的二语动机自我系统水平。请随时查看信息。这些信息不会影响任何孩子的学习记录和成绩。 Please read each item carefully, then select the answer that suits you best, and then tick (√) in the table 1=Strongly Disagree, 2=Mostly Disagree, 3=Basically Disagree, 4=Basically Agree 5=Mostly Agree, 6=Strongly Agree				
1) I think it is important to learn English because it will help me find a good job in the future. 我认为学习英语重要，因为英语对我将来找好工作有帮助。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
2) I often imagine that I would live abroad and communicate with the local people if my English is good enough. 我常想象，自己学好英语后在国外生活并用英语和当地人交流。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4				

Item	Scale			Comments
	-1	0	1	
<input type="checkbox"/> 5 <input type="checkbox"/> 6				
3) One of the reasons I think learning English is important is that people I respect think I should learn English well. 我认为学习英语重要的原因之一是：我尊敬的人认为我应该学好英语。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
4) I often imagine another self: I can communicate with others in English in the future. 我常想象另一个自我：我将来能用英语与别人交流。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
5) The reason why learning English is necessary is because people around me want me to learn it. 学习英语之所以必要，是因为我周围的人希望我学习英语。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
6) I hope there will be more English classes. 我希望英语的课时能更多一点。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4				

Item	Scale			Comments
	-1	0	1	
<input type="checkbox"/> 5 <input type="checkbox"/> 6				
7) Learning English is important, because mastering English can help me increase my income in the future. 学习英语重要，因为精通英语将来可以帮我增加收入。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
8) I study English in order to gain the recognition of my classmates, teachers, family members or bosses. 我学习英语是为了获得同学、老师、家人或老板对我的认可。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
9) I often imagine another self: being able to communicate with people in English like native speakers. 我常想象另一个自我：能像英语母语者一样用英语与人交流。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
10) I often imagine another self: I can communicate with foreign friends or colleagues in English in the future. 我常想象另一个自我：将来能用英语和外国朋友或同事交流。				

Item	Scale			Comments
	-1	0	1	
<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
11) Learning English is very important because it can help me achieve my goals (such as obtaining a diploma or scholarship). 学习英语很重要，因为它能帮我达到既定目标（如获得学位或奖学金）。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
12) I think it is important to learn English, because being able to use English is a sign of good education. 我认为学习英语重要，因为能够使用英语是受过良好教育的标志。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
13) I think it is important to learn English, because learning English well can help me get a higher social status. 我认为学习英语重要，因为学好英语可以帮助我获得更高的社会地位。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
14) I like the atmosphere of English class. 我喜欢英语课的气氛。				

Item	Scale			Comments
	-1	0	1	
<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
15) I think learning English is important, because if I understand English, others will respect me more. 我认为学习英语重要，因为要是我懂英语，别人就会更加尊重我。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
16) I hope I can be like those native English speakers (such as speaking, doing things, living, etc.). 我希望自己能像那些以英语为母语的人一样(如说话、做事、生活等)。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
17) I find learning English very interesting. 我觉得学习英语很有趣。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
18) If I don't learn English well, I will disappoint others. 如果我英语学得不好，会令别人失望。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				

Item	Scale			Comments
	-1	0	1	
19) I like English classes. 我喜欢上英语课。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
20) I like English textbooks. 我喜欢英语教材。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
21) I'm looking forward to my English class. 我期待上英语课。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
22) When learning English, I think time passes quickly. 学英语时, 我觉得时间过得很快。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
23) I must learn English to avoid being blamed by my parents or teachers. 我必须学习英语以免被父母或老师责怪。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
24) I enjoy learning English. 我享受学习英语的过程。				

Item	Scale			Comments
	-1	0	1	
<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				
25) I often imagine another self: I can write emails or letters fluently in English. 我常想象另一个自我:能用英语流畅地写 Email 或写信。				
<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5 <input type="checkbox"/> 6				

For the expert who is Chinese, please kindly comment the use of Chinese of the questionnaire part 2 on the following aspects:

3. The Chinese language used in the questionnaire is appropriate for the participants.

Yes No Comment: _____

4. The Chinese language used in the questionnaire well corresponds to the English version.

Yes No Comment: _____

Item	Scale			Comments
	-1	0	1	
Part 3: A Questionnaire on Autonomous English Learning Ability of Senior High School Students The purpose of this part is for the information to understand the the level of Autonomous English Learning Ability of Chinese senior high school students. Please feel free to check the information. The information will not affect any children's school records and grades. 本部分旨在了解中国高中生的英语自主学习水平。请随时查看信息。这些信息不会影响任何孩子的学习记录和成绩。 Please read each item carefully, then select the answer that suits you best, and then tick (√) in the table				

Item	Scale			Comments
	-1	0	1	
1=Strongly Disagree, 2=Basically Disagree, 3=Uncertain, 4=Basically Agree, 5=Strongly Agree				
1) I know the teacher's teaching purpose, and I know the purpose of a certain teaching activity in the classroom. 我了解老师的教学目的，我知道老师在课堂上采取某项教学活动的目的。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
2) I can transform the teacher's teaching purpose into my own learning purpose. 我能把老师的教学目的转化成自己的学习目的。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
3) I can keep up with the English teacher's teaching progress. 我能跟上英语老师的教学进度。				

Item	Scale			Comments
	-1	0	1	
<input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
4) After finishing the teacher's task, I clearly made my own English learning plan. 在完成老师布置的任务之后，我明确制定了自已的英语学习计划。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
5) I can set realistic English learning goals. 我能制定切合实际的英语学习目标。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
6) I have clear requirements for improving my English learning. 我对提高自己的英语学习有明确的要求。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
7) I have a strong ability to plan English study time, and the planned time is also reasonable. 我规划英语学习时间的能力很强，规划的时间也很合理。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				

Item	Scale			Comments
	-1	0	1	
<p>8) I understand the learning requirements for the five language skills of listening, speaking, reading, writing and reading in the English learning syllabus.</p> <p>我了解对英语学习大纲中听、说、读、写、看五种语言技能的学习要求。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>9) In listening practice, I can consciously use effective listening strategies (such as prediction, association, inference).</p> <p>在听力练习中，我能有意识地使用有效听力策略（如预测，联想，推理）。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>10) In conversation practice, I can consciously use effective communication strategies (such as using body language, using synonyms to explain).</p> <p>在会话练习中，我能有意识地使用有效交际策略（如利用肢体语言，使用近义词来解释）。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>11) In the process of doing reading questions, I can consciously use effective reading strategies (such as reasoning,</p>				

Item	Scale			Comments
	-1	0	1	
<p>using context to infer the content of the article).</p> <p>在做阅读题过程中，我能有意识地使用有效阅读策略（如推理，利用上下文推测文章内容）。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>12) In the writing practice, I can consciously use effective writing strategies (such as making an outline and deciding the content of the article according to the readers' preferences).</p> <p>在写作练习中，我能有意识地使用有效写作策略（如列提纲，根据读者的喜好决定文章内容）。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>13) I fully understand the reasonable selection and use of the above learning strategies.</p> <p>我全面了解上述的学习策略的合理选择及使用。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>14) In conversation practice, I can consciously monitor the use of communication strategies.</p>				

Item	Scale			Comments
	-1	0	1	
在会话练习中，我能有意识地监控交际策略的使用。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
15) In writing practice, I can consciously monitor the use of writing strategies. 在写作练习中，我能有意识地监控写作策略的使用情况。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
16) In reading practice, I can consciously monitor the use of reading strategies. 在阅读练习中，我能有意识地监控阅读策略的使用情况 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
17) In listening practice, I can consciously monitor the use of listening strategies. 在听力练习中，我能有意识地监控听力策略的使用。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
18) I will often evaluate my learning methods and find out the existing problems and solutions. 我会经常评价自己的学习方法，并找出存在的问题和解				

Item	Scale			Comments
	-1	0	1	
决的方法。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
19) I can often realize whether my learning methods are suitable for me. 我能经常意识到自己的学习方法是否适合自己。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
20) If I find my learning method impractical, I can change to another suitable method in time. 如果发现自己的学习方法不切实际时，我能及时换用其它合适的方法。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
21) I actively look for various opportunities to practice English in and out of class (such as participating in English corners, English club activities or discussing with classmates). 在课内外我主动寻找各种机会练习英语（如参加英语角，英语社团活动或是与同学讨论等）。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				

Item	Scale			Comments
	-1	0	1	
22) I can actively overcome the emotional factors that are not conducive to English learning (such as inferiority, anxiety, depression, shyness, etc.). 我能主动克服不利于英语学习的情感因素（如自卑，焦虑，压抑，害羞等）。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
23) I can make full use of existing learning resources (such as libraries, networks, reference books, radio, dictionaries, grammar books, etc.).我能充分利用已有学习资源（如图书馆、网络、参考书、广播、字典、语法书等）。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
24) I can often consciously apply new knowledge to language practice. 我常能有意识地把新学的知识应用到语言实践中去。 <input type="checkbox"/> 1 <input type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4 <input type="checkbox"/> 5				
25) I often take the initiative to cooperate with others in learning (such as looking for oral communication partners, exchanging learning experience with other students, practicing together,				

Item	Scale			Comments
	-1	0	1	
<p>reviewing, etc.).</p> <p>我常能主动与他人合作学习（如寻找口语交流伙伴,与其他同学交流学习心得、一起练习、复习等）。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>26) When learning English, I often realize my own language mistakes.</p> <p>学习英语时,我常能意识到自身的语言错误。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>27) When I realize the mistakes, I can find out the reasons for them (such as unfamiliar with grammar rules, etc.) and take corresponding error correction measures.</p> <p>我在意识到错误的同时能找到错误原因（如掌握不熟、不熟悉语法规则等）并采取相应错误更正措施。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>28) In the process of completing certain language learning tasks (such as listening and speaking), I can make my own plans in advance.</p> <p>在完成某项语言学习任务(如听与说等)</p>				

Item	Scale			Comments
	-1	0	1	
<p>的过程中，我能自己预先制定计划的完成情况。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>29) In the process of completing a certain language task (such as listening and speaking), I often find my previous learning deficiencies and can update my understanding of previous knowledge.</p> <p>在完成某项语言任务（如听与说等）的过程中，我常发现以前学习的不足，能更新自己对先前知识的理解。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				
<p>30) I can choose effective ways of learning (such as exchanging learning experience with successful English learners, writing diaries or weekly notes, actively listening to English radio, reading English newspapers, watching English movies, magazines and novels).</p> <p>我能选择有效的学习途径（如与英语学习成功者交流学习经验，写日记或周记，主动听英语广播，阅读英语报纸，看英语电影、杂志和小说）。</p> <p><input type="checkbox"/>1 <input type="checkbox"/>2 <input type="checkbox"/>3 <input type="checkbox"/>4</p> <p><input type="checkbox"/>5</p>				

For the expert who is Chinese, please kindly comment the use of Chinese of the questionnaire part 3 on the following aspects:

5. The Chinese language used in the questionnaire is appropriate for the participants.

Yes No Comment: _____

6. The Chinese language used in the questionnaire well corresponds to the English version.

Yes No Comment: _____

After collecting the scores for each item, calculate the IOC score by dividing the sum of the ratings by the total number of raters. An item is considered content valid if its IOC score is more than 0.50 will be used. The comments will be considered for the revisions.



The logo of Rangsit University is a large, faint watermark in the background. It features a stylized flame or sunburst design at the top, with rays extending downwards. Below the rays, the text "มหาวิทยาลัยรังสิต" (Mahavithayalai Rangsit) is written in Thai script, and "Rangsit University" is written in English, both following the curve of the design.

APPENDICES D

**The IOC form to evaluate and comment on the
semi-structured interviews**

The IOC form to evaluate and comment on the semi-structured interviews

Validation Form for semi-structured interviews questions to elicit the Relationship between L2 Motivational Self System and Autonomous English Learning Ability of Senior High School EFL Chinese Students

The IOC form to evaluate and comment on the semi-structured interviews for students

Item	Scale			Comments
	-1	0	1	
1. The information of the interview and the interviewee				
1.1 Interview time:				
1.2 Interview place:				
1.3 Interviewer:				
1.4 Basic information of interviewees:				
(1) Gender 性别:				
(2) Liberal Arts or Science 文科或者理科:				
(3) Grade 年级:				
(4) English score of mid-term exam 期中考试英语分数:				
2. The interview description provides for the interviewee				
Interview Description: The purpose of this interview is to understand the level of second language motivational self system and autonomous English learning ability of Chinese senior high school students. There is no right or wrong in the content				

Item	Scale			Comments
	-1	0	1	
<p>of the interview. The interview results will be anonymous and your private information will be kept confidential.</p> <p>Please rest assured to answer. Thank you for your cooperation.</p> <p>The interview questions below will be given to you to read first. You will have 5 minutes to prepare for your answers. If you do not want to answer any questions, please just say skip. Then, the interviewer will be asking the next question.</p> <p>访问描述：</p> <p>本次访谈的目的是了解中国高中生的第二语言动机自我系统水平和自主英语学习能力。</p> <p>面试内容没有对错之分。面试结果将是匿名的，您的私人信息将被保密。</p> <p>请放心回答。感谢您的配合。</p> <p>下面的面试问题将交给您先阅读。你有 5 分钟的时间准备答案。如果你不想回答任何问题，请说跳过。然后，访问者会问下一个问题。</p>				
3.The interview contents				

Item	Scale			Comments
	-1	0	1	
3.1 Do you like learning English or English courses? Why? 你喜欢学习英语或英语课程吗？为什么？				
3.2 What is your biggest motivation to learn English at this stage? 现阶段你学习英语的最大动机是什么？				
3.3 At this stage, do you learn English because of the expectations and requirements of others (parents, teachers, friends) around you? Why? 在这个阶段，你学习英语是否是因为你周围的其他人（父母、老师、朋友）的期望和要求？为什么？				
3.4 What do you want to do in English in the future? Why? 将来你想用英语做什么？为什么？				
3.5 How do you learn English autonomously? What are the main driving forces? 你是如何自主学习英语的？主要的驱动力是什么？				

For the expert who is Chinese, please kindly comment the use of Chinese of the questionnaire part 1 on the following aspects:

7. The Chinese language used in the questionnaire is appropriate for the participants.

Yes No Comment: _____

8. The Chinese language used in the questionnaire well corresponds to the English version.

Yes No Comment: _____

After collecting the scores for each item, calculate the IOC score by dividing the sum of the ratings by the total number of raters. An item is considered content valid if its IOC score is more than 0.50 will be used. The comments will be considered for the revisions.



The image features a large, faint watermark of the Rangsit University logo in the background. The logo is a circular emblem with a stylized flame or sunburst at the top, radiating lines in the middle, and a circular base. The text "มหาวิทยาลัยรังสิต" (Mahavithayalai Rangsit) is written in Thai script along the bottom arc, and "Rangsit University" is written in English along the bottom arc.

APPENDICES E

Translation of semi-structured interview responses

Translation of semi-structured interview responses

Question 1. Do you like learning English or English courses? Why?	
Interviewee 1	I usually enjoy watching English short videos, listening to English songs, and watching English movies. I think learning English is very interesting.
Interviewee 2	I believe that learning English can help me learn foreign customs and cultures, and I have a great passion for learning English.
Interviewee 3	English is very important for future university studies, graduate exams, or work.
Interviewee 4	Learning English has made my logical thinking ability more rigorous.
Interviewee 5	To cope with the college entrance examination.
Interviewee 6	In order to better understand our native language.

Question 2. What is your biggest motivation to learn English at this stage?	
Interviewee 1	English accounts for a higher proportion of points in the college entrance examination.
Interviewee 2	There are no obstacles to communicating with others when traveling abroad alone.
Interviewee 3	The overall score of the college entrance examination is closely related and deeply affects their future academic.
Interviewee 4	I hope to achieve better results in the college entrance examination with English, in order to enter a better university.
Interviewee 5	It may be helpful for me to learn programming in the future.
Interviewee 6	The need for future work, as many companies are now multinational corporations.

Question 3. At this stage, do you learn English because of the expectations and requirements of others (parents, teachers, friends) around you? Why?	
Interviewee 1	Yes. My parents' expectations are the main driving force for me to learn English.
Interviewee 2	No. I study English to gain my own recognition and make myself

	better.
Interviewee 3	Yes. Learning English well is to receive praise from the teacher.
Interviewee 4	Yes. Learning English well is to surpass my classmates in English grades.
Interviewee 5	Yes. But the expectations of others will bring some pressure and trouble to my English learning.
Interviewee 6	No. Learning English can provide me with more job opportunities.

Question 4. What do you want to do in English in the future? Why?	
Interviewee 1	I want to choose an English major in college and work in English related fields in the future.
Interviewee 2	I want to work as an English teacher, English trainer, English translator, etc. in the future.
Interviewee 3	I have a strong desire to communicate with foreigners in English in the future.
Interviewee 4	I hope to achieve certain achievements in my future university studies and work with the help of English.
Interviewee 5	I hope to master English proficiently and travel to Europe.
Interviewee 6	Make friends, chat, or work together with foreigners.

Question 5. How do you learn English autonomously? What are the main driving forces?	
Interviewee 1	I will cultivate my interest in learning English, such as watching more English movies and listening to more English songs. The main driving force is my desire to use English more for communication in my living environment.
Interviewee 2	I will cultivate a good habit of previewing and focus on reviewing methods and understanding the teacher's teaching objectives. The main driving force is to meet the expectations of parents and teachers.
Interviewee 3	I will clarify my learning goals and cultivate self-control ability. The main driving force is the hope of getting into a good university in the

	future.
Interviewee 4	I will build confidence in English learning and formulate effective learning strategies. The main driving force is to improve my English proficiency.
Interviewee 5	I will preview new knowledge points before class, but high school English courses are more complex, and I have some language learning anxiety. My main driving force for autonomous English learning is to achieve good results in the English exam.
Interviewee 6	I will supervise my learning process and promptly consult my teacher when encountering any knowledge points that I do not understand. The main driving force is to enhance my confidence in English learning and receive praise from my teachers.



BIOGRAPHY

Name	Shasha Zhao
Date of Birth	July 07 1990
Place of Birth	Anhui, China
Education background	Wannan Medical College, China Bachelor degree in Nursing, 2014 Rangsit University, Thailand Master of Education in Bilingual Education and English Language Teaching, 2023
Address	Suzhou, China

