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Doctoral Dissertation

The Research on Tibetan Students' English Metalinguistic Awareness in the Context of Tibetan-Chinese Bilingual Education

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Declaration of Originality

I, WANG Chuan (Student ID Number: D191037) declare that this dissertation entitled "The Research on Tibetan Students' English Metalinguistic Awareness in the Context of Tibetan-Chinese Bilingual Education" submitted as partial requirement for Ph.D. study program in Education is my original work and that all the sources in any form (e.g., ideas, figures, texts, tables, etc.) that I have used or quoted have been properly acknowledged and cited in the text as well as in the list of references.

WANG Chuan 14/04/2023

Signature Date

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Abstract

Since the end of the 20th century, China has implemented a bilingual education system in ethnic minority areas as part of its efforts to preserve and promote the linguistic and cultural diversity of these areas. For ethnic minority students, bilingual education refers to the teaching of two languages, the ethnic minority language and the national official language Chinese from primary schools to secondary schools, which aims to cultivate bilingual and bicultural talent in ethnic minority areas of China. And after the third years in primary schools, students begin to learn a foreign language, English, which is a compulsory subject at the basic education stage in China. Foreign studies have shown that bilingual learning promotes improvements in the quality of the learner's language system, leading to the development of language learning skills, language management skills, and language maintenance skills. These improvements, in turn, contribute to the development of learners' meta-linguistic awareness in learning a third language. However, these studies had been tested in which the first, second, and third languages belonged to the same language family (L1/L2/L3). For example, the learner's first language is Italian, the second language is German and the third language is English, and they all belong to the Indo-European language family. Therefore, the general objective of this research is to test whether bilingual learners who learn the first language Tibetan (Sino-Tibetan language family) and the second language Chinese (Sino-Tibetan language family), followed by the third language English (Indo-European language family) still show the advantages in meta-linguistic awareness (LI/L2+L3). The specific objective of this research is to test the differences in meta-linguistic awareness among Tibetan-Chinese bilingual students with different bilingual levels when learning English as a third language.

In this research, the data collection and analysis are divided into following steps. First, the Student Language Assessment Scale (SLAS) is used to assess students' language proficiency in Tibetan and Chinese. According to the assessment results, 208 students are divided into two groups, the balanced Tibetan-Chinese group and the unbalanced Tibetan-Chinese group. Second, the Standardized English Proficiency Test (SEPT) is used to analyzed the correlation coefficient between students' SEPT results and MAT-2 results to test the validity of the MAT-2. Third, the Meta-linguistic Awareness Test-2 (MAT-2) is used to test two groups of students' meta-linguistic awareness, and by the descriptive statistics, the Shapiro-Wilk test, the Levene test, and the independent sample t-test to test the research hypotheses. The research results indicate that even though the three languages belong to different language families (Tibetan, Sino-Tibetan language family; Chinese, Sino-Tibetan language family; English, Indo-European language family), bilingual students who are proficient in two languages still show more cognitive advantages in meta-linguistic awareness when learning a third language than those who are not proficient. Firstly, the balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of phonological awareness in third language English learning, especially in phonetics and phonology, syllable. However, when it comes to phonemes, there is no significant difference between the two groups due to the differences in consonant and vowel

systems between languages, especially in vowel length. Secondly, the balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of word awareness in third language English learning, especially in word ambiguity, word formation. However, when it comes to part of speech, there is no significant difference between the two groups due to the role of part of speech varies in different languages. Thirdly, the balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of syntactic awareness in third language English learning, especially in comprehension, synonymy, acceptability, and grammar function. The results indicate that in tasks that require control of attention, all bilingual students are able to perform very well. However, when it comes to problems that require high control of attention in language processing, only balanced bilingual students show an advantage.

Based on the findings of this study, the benefits for pedagogy may be demonstrated from the following aspects. In terms of formulating English education policies for Tibetan minorities. First, which foreign languages should be provided for ethnic minorities? Study found that linguistic similarity between languages facilitates transfer. Therefore, when formulating foreign language education policies for ethnic minorities, consideration should be given to offering languages that are similar to their native languages. Second, when should Tibetan minorities receive English education? Study found that among 208 Tibetan fifth grade students, only 98 have achieved a balanced bilingual level, accounting for 47% of the total numbers of students. That is to say, 53% of Tibetan fifth grade students learn English as a third language even without learning Tibetan and Chinese well. Based on the threshold hypothesis, if students learn a third language without reaching a certain bilingual level, this language state may not help or even hinder their third language learning. Third, what support should the national government provide? The study found that there are four educational issues that need to be addressed in Tibetan areas: the shortage of qualified teachers, the outdated teaching materials, the inadequate infrastructure, and the insufficient financial support. In terms of compiling English textbook for Tibetan minorities. First, enhance Tibetan students' meta-linguistic awareness. Meta-linguistic awareness tasks are categorized into language knowledge analysis and language processing control. Incorporating these tasks in English textbooks can enhance their meta-linguistic ability and improve English learning efficiency. Second, based on the multilingual learning background of Tibetan students, incorporating content related to the traditional culture of Tibetan minority group, China's mainstream culture, and foreign classical culture can provide a well-rounded and culturally relevant learning experience for Tibetan students. Third, follow the cognitive abilities of Tibetan students. Adopting a compilation principle of gradual progression from simple to complex, from easy to difficult, can be effective in improving the English proficiency of Tibetan students. In terms of training English teachers for Tibetan minorities. Related measures include providing targeted training programs, combining online and offline training methods, optimizing the training evaluation system, and attaching importance to the post-training guidance. In terms of guiding English teaching for Tibetan minorities. Targeted instructions can focus on the following aspects: phonological awareness training, especially phonemic awareness

training; word awareness training, especially parts of speech training; and syntactic awareness training.

Key words: Bilingual education, Tibetan students, third language, meta-linguistic awareness, English education

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Chapter One Introduction

1.1 Research Background

China is a diverse country with 56 officially recognized ethnic groups, each with their own unique culture, language, and traditions. The Han ethnic group is the largest, accounting for 91.51% of the overall population, and the Chinese language (often referred to as Mandarin or Standard Chinese) has become the national official language and script. Since the end of the 20th century, China has established a bilingual education system in ethnic minority areas as part of its efforts to preserve and promote the linguistic and cultural diversity of these areas. For ethnic minority students, bilingual education refers to the teaching of two languages, the ethnic minority language and the national official language Chinese from primary schools to secondary schools, which aims to cultivate bilingual and bicultural talent in ethnic minority areas of China. And after the third years in primary schools, students begin to learn a foreign language, English, which is a compulsory subject at the basic education stage in China. Ethnic minority language education can inherit and carry forward the traditional culture and religious beliefs of ethnic minority groups and enhance their ethnic identity. Chinese language education for ethnic minorities can improve students' Chinese language skills, reduce the psychological stress and academic burden that students will encounter when they receive a high-level education in mainland China in the future. Therefore, Chinese language education will facilitate more opportunities for ethnic minority students to succeed in the future and also can help them better integrate into mainstream society in China.

The Chinese government has given bilingual education an increasingly high priority since the establishment of the People's Republic of China in 1949, as evidenced by several official documents and policies. Under the care of the Communist Party of China (CPC) and the Chinese government, bilingual education in China's ethnic minority areas has made significant progress over the years. Since the reform and opening up policy was introduced in the 1980s, China has resumed and intensified the promotion of ethnic minority languages and scripts, and has carried out extensive experiments and reforms in bilingual education in ethnic minority areas. These efforts have covered various aspects of bilingual education, including goals, program models, contents, methods, and evaluation systems, aiming to push the development of bilingual education in ethnic minority areas to a new level.[1] In addition to the development of bilingual education policies and programs in China's ethnic minority areas, research related to bilingual education has also been conducted extensively. Various research theories and methods, such as linguistics, psychology, and pedagogy, have been introduced into the study of bilingual education, and corresponding academic groups and institutions have been established to support research in this field. Based on the data released by China's Ministry of Education, as of recent years, 21 ethnic minority languages have been adopted in bilingual education in primary and secondary schools in ethnic minority areas in China. Furthermore, over 6 million ethnic minority students are currently receiving bilingual education in more than 10,000 schools across the

country. Every year, more than 3,000 textbooks in 29 ethnic minority languages are used in bilingual schools, covering all grade levels, from kindergarten to high school. It is evident that bilingual education for ethnic minorities in China is flourishing with great vigor. However, although the achievements of bilingual education in China are remarkable, the focus of such research is mainly on how to improve the quality of bilingual education, while the advantages of meta-linguistic awareness that ethnic minority students gain from the bilingual education haven't been fully identified and utilized.

Foreign studies have shown that bilingual learning promotes improvements in the quality of the learner's language system, leading to the development of language learning skills, language management skills, and language maintenance skills; these improvements, in turn, contribute to the development of learners' meta-linguistic awareness in learning a third language.[2] However, these studies had been tested in which the first, second, and third languages belonged to the same language family (L1/L2/L3). For example, the learner's first language is Italian, the second language is German and the third language is English, and they all belong to the Indo-European language family. At present, it is unknown that whether Tibetan students have the advantages of meta-linguistic awareness in learning the third language English in the context of Tibetan-Chinese bilingual education. Since the first language Tibetan and second language Chinese belong to the Sino-Tibetan language family and the third language English belongs to the Indo-European language family. In this regard, this research adopts an empirical approach to explore Tibetan students' English meta-linguistic awareness in the context of Tibetan-Chinese bilingual education.

1.2 Research Objective

Foreign studies indicated that bilingual learners who are proficient in two languages will show more cognitive advantages in meta-linguistic awareness when learning a third language than bilingual learners who are not proficient. However, these studies had been tested in which the first, second, and third languages belonged to the same language family (L1/L2/L3). Therefore, the general objective of this research is to test whether bilingual learners who learn the first language Tibetan (Sino-Tibetan language family) and the second language Chinese (Sino-Tibetan language family), followed by the third language English (Indo-European language family) still show the advantages in meta-linguistic awareness (LI/L2+L3). The specific objective of this research is to test the differences in meta-linguistic awareness among Tibetan-Chinese bilingual students with different bilingual levels when learning English as a third language.

1.3 Research Significance

1.3.1 Theoretical Significance

There are usually two types of language families held by bilingual learners. The first language and the second language (L1+L2) belong to different language families, or the first and second languages belong to the same language family (L1/L2). If a bilingual learner learns a third language, he or she holds up to five types of language families. The first and second languages belong to same language family but the third

language is different (L1/L2+L3); the first and third languages belong to the same language family but the second language is different (L1/L3 + L2); the second and third languages belong to the same language family but the first language is different (LI + L2/L3); the first, second and third languages all belong to the same language family (L1/L2/L3); the first, second and third languages all belong to different language families (L1+L2+L3) (See Table 1.1).

Table 1.1 The types of language families held by bilingual and trilingual learners

Bilingual Learners	Trilingual Learners
1. L1+L2 2. L1/L2	1. L1/L2+L3 2. L1/L3+L2 3. L1+L2/L3 4. L1 /L2 /L3 5. L1+L2+L3

The Threshold Hypothesis proposed by Cummins and the Control and Analysis Theory proposed by Bialystok both argue that the bilingual learners who are proficient in two languages will show more cognitive advantages in meta-linguistic awareness when learning a third language than bilingual learners who are not proficient.[3][4] However, these studies had been tested in which the first, second, and third languages belonged to the same language family (L1/L2/L3). For example, the learner's first language is Italian, the second language is German and the third language is English, and they all belong to the Indo-European language family. This research will test whether bilingual learners who learn the first language Tibetan and the second language Chinese, which belong to the Sino-Tibetan language family, and followed by the third language English, which belongs to the Indo-European language family, still show the advantages in meta-linguistic awareness (LI/L2+L3) (See Table 1.2). Therefore, the theoretical significance of this research is to test the universal applicability of Threshold Hypothesis proposed by Cummins and the Control and Analysis Theory proposed by Bialystok.

Table 1.2 The advantages of meta-linguistic awareness in third language learning

Language Families	The Third Language Learning Shows Advantages in Meta-linguistic Awareness
L1/L2/L3	Tested
L1/L2+L3	Untested

1.3.2 Practical Significance

Meta-linguistic awareness is an essential component in facilitating students' language development in speaking, listening, reading, and writing; it is also recognized as a critical skill in knowledge analysis and attention control, making it a fundamental aspect of fostering students' language abilities.[5] For ethnic minority students, identifying and utilizing the advantages of meta-linguistic awareness that they gain from bilingual education will better help them learn the third language English, and

explore the world with more confidence. For English teachers, making full use of students' strengths and weaknesses in meta-linguistic awareness is of great importance to improve their teaching quality and promote the development of English education in ethnic minority areas of China.

1.4 Research Methods

1.4.1 Literature Review Method

A literature review is a critical evaluation and synthesis of previously published studies and other works on a particular subject or research question. It includes analyzing, summarizing, and examining the conclusions, justifications, and research procedures of earlier publications that are relevant to the research issue. In this regard, the literature review in this research is divided into five sections, which provide the theoretical basis for the study. The first section discusses research on bilingual education, the second section focuses on research on meta-linguistic awareness, and the third section examines research on trilingual acquisition. The fourth section analyzes the limitations of previous research, and the fifth section summarizes the improvements of this research.

1.4.2 Questionnaire Method

The Student Language Assessment Scale (SLAS) is used to assess ethnic minority students' language proficiency in China, which was designed by Chinese linguists. The Student Language Assessment Scale (SLAS) is divided into three sections: the first is the basic information about the students, the second is the assessment of Tibetan language proficiency, the third is the assessment of Chinese language proficiency. According to the assessment results, the students are divided into two groups, the balanced Tibetan-Chinese group and the unbalanced Tibetan-Chinese group, to take the subsequent Meta-linguistic Awareness Test (MAT).

1.4.3 Test Method

The Meta-linguistic Awareness Test (MAT) is used internationally to test students' meta-linguistic awareness during the process of third language learning, which was designed by Italian psychologists Maria Antonietta Rinto, Renzo Titone, and Italian linguist Francesca Trusoo. The Meta-linguistic Awareness Test (MAT) is divided into three different types, MAT-1, MAT-2 and MAT-3. MAT-1 is suitable for testing the children aged 4-6; MAT-2 is suitable for testing students aged 9-13; MAT-3 is suitable for testing adolescents aged >=16. The Meta-linguistic Awareness Test (MAT) consists of three parts: the phonological awareness test, the word awareness test, and the syntactic awareness test. The phonological awareness test includes phonetic and phonology, syllable, phonemes; the word awareness test includes word ambiguity, word formation and part of speech; the syntactic awareness test includes comprehension, synonymy, acceptability, and grammar function.

1.4.4 Statistical Analysis Method

In this research, the SPSS 28.0 is used to process and analyze the data. First, Pearson correlation analysis is used to test the validity of the MAT-2. Second, the descriptive statistics is used to analyze the data of the two groups on the MAT-2. Third, the Shapiro-Wilk test is used to assess how close the data of the two groups fit to a normal

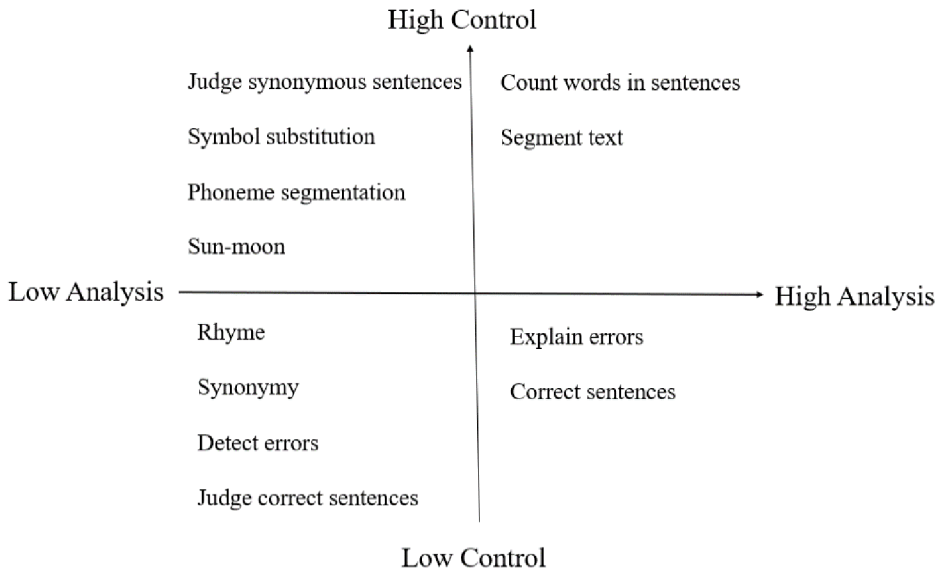
distribution. Fourth, the Levene test is used to assess if the data of two groups have equal variances respectively. Fifth, the independent samples t-test is used to test the differences between the two groups on the items of MAT-2, so as to test the research hypotheses.

1.5 Research Theoretical Framework

1.5.1 The Control and Analysis Theory

The Control and Analysis Theory was proposed by Canadian psychologists Bialystok and Ryan, suggested that the processing of language by meta-linguistic awareness is divided into two processes: the analysis of language knowledge and the control of language processing, which is used to explain bilingual learners' advantages in meta-linguistic awareness, especially in syntactic awareness.[6] The analysis of language knowledge is the skill responsible for constructing, organizing and interpreting learner's implicit language knowledge; the control of language processing is the skill responsible for selecting information from mental representations and directing attention to specific aspects of the stimulus situation when solving a problem. Examining the ways in which knowledge is learned, represented, and stored in the mind is a key component of knowledge analysis. It investigates how people create knowledge representations in their minds and how they encode, arrange, and retrieve information from memory. This may entail examining how perception, attention, and memory affect the acquisition and representation of knowledge as well as examining how individuals and cultures differ in these areas. Understanding how people control their cognitive processes is necessary for efficient knowledge processing and application. This may involve looking at how people manage their cognitive resources, prioritize information, and distribute their attention. It also entails looking into the cognitive control systems that enable people to govern and modify their cognitive processes in response to shifting task demands or environmental circumstances. Bialystok and Ryan further argued that the analysis of language knowledge and the control of language processing play different roles in meta-linguistic awareness tasks. The analysis of language knowledge plays a role in tasks that need to analyze and understand linguistic knowledge; the control of language processing plays a role in situational tasks that are likely to mislead or distract learners.[7] Bialystok further classified the meta-linguistic awareness tasks into: explain errors, correct sentences, count words in strings, attributes of words, rhyme, synonymy, detect errors, judge correct sentences, count words in sentences, segment text, judge synonymous sentences, symbol substitution, phoneme segmentation, and sun-moon (See Figure 1.1).[8][9] The quadrant model offers a thorough framework for comprehending the many aspects of meta-linguistic awareness and the kinds of tasks that fall into each category. It has helped us understand how people develop and employ meta-linguistic awareness in various linguistic contexts and how it is related to language development, literacy skills, and cognitive processes.

Figure 1.1 Classification of meta-linguistic awareness tasks and the quadrant in which each task is located



Bialystok, in a previous study, concluded that bilingual student's advantage in meta-linguistic awareness can actually be attributed to their advantage in control of language processing. In syntactic awareness tasks, higher levels of bilingual students showed an advantage in attentional control, i.e., they were better able to selectively direct their attention to sentence structure rather than to meaning. Bilingual learners typically perform better than monolingual learners on activities involving syntactic awareness, which involves comprehending and manipulating sentence structure. This advantage may be related to their experience in handling and processing different languages, which necessitates a greater sensitivity to the structural features of language. The continual switching between different languages exposes bilingual learners to various sentence patterns, grammatical conventions, and word ordering. Their ability to understand and control the syntactic structure of language may be improved by this exposure and practice, which could result in improved performance on tasks requiring syntactic awareness. However, in tasks requiring analysis, only bilingual learners who were proficient in both languages showed an advantage.[10]

1.5.2 The Threshold Hypothesis

The Threshold Hypothesis is a theory about language acquisition proposed by Cummins, and it's also known as "thresholds theory" or "critical theory". Cummins has noted that two thresholds exist in bilingualism: a lower threshold that suffices to prevent negative effects, and a higher threshold that is essential to achieve positive benefits; the learners are required to have a particular, age-appropriate level of competence in their first two languages before they may become proficient in a third language.[11]

According to the threshold hypothesis, bilingual learners must reach a certain level of proficiency in both languages, or a "threshold," in order to outperform monolingual people on cognitive tests. This barrier is frequently greater for cognitive-academic language competence since it necessitates more challenging cognitive and linguistic tasks as opposed to basic interpersonal communication skills (BICS), which only include daily conversational language. In accordance with this theory, bilingual learners are more likely to have cognitive advantages, such as improved executive functions,

attentional control, and cognitive flexibility, if they attain the threshold level of language fluency in both languages. This is due to the fact that they are able to make full use of their language skills and cognitive abilities in both languages, which results in cognitive advantages that may be applied to other domains. The cognitive benefits of bilingualism, however, might not be as obvious if bilingual learner does not achieve the required degree of linguistic competency in both languages. To put it another way, language proficiency plays an essential part in determining the cognitive advantages of bilingualism, with higher levels of proficiency being associated with greater advantages. Based on the threshold theory, two thresholds are set to represent the two levels of bilingual ability that learners must achieve in their bilingual learning process. When learners reach the first threshold, the negative effects of bilingual learning will be avoided; when learners reach the second threshold, the positive effects of bilingual learning will be manifested, and promoting the development of bilingual learners' cognitive abilities, especially in third language learning. Therefore, Cummins divided the language level of bilingual learners into three levels, and explained the relationship between each level and cognitive development (See Figure1.2).

Figure 1.2 The basic framework of threshold theory

The Threshold Hypothesis
Level: High level Proficiency: Balanced bilingual learners Cognitive Development: At this threshold, the balanced bilingual learners are proficient in two or more languages, and this language state will have a positive effect on their cognitive development.
The Second Threshold ⬆
Level: Intermediate level Proficiency: Unbalanced bilingual learners Cognitive Development: At this threshold, the unbalanced bilingual learners are proficient in one of the two languages, and this language state will have no effect on their cognitive development.
The First Threshold ⬆
Level: Low-level Proficiency: Limited bilingual learners Cognitive Development: At this threshold, the limited bilingual learners are not proficient in both languages, and this language state will have a negative effect on their cognitive development.

(1) Low Level: Bilingual learners are not proficient in both languages, and this language state will have a negative effect on their cognitive development. In other words, if Tibetan students are not proficient in Tibetan and Chinese, this language state will

inevitably have a negative effect on their cognitive development, especially in third language learning.

(2) Intermediate level: Bilingual learners are proficient in one of the two languages, and this language state will have no effect on their cognitive development, i.e., it will neither promote nor hinder the cognitive development of the bilingual learners. In other words, if Tibetan students are proficient in either Tibetan or Chinese, this language state will have no effect on their cognitive development.

(3) High level: Bilingual learners are proficient in two or more languages, and this language state will promote their cognitive development. In other words, if Tibetan students are proficient in Tibetan, Chinese, or more languages, this language state will have a positive effect on their cognitive development, especially in third language learning.

1.5.3 The Dynamic System Theory

Researchers Esther Thelen and Linda B. Smith established the Dynamic Systems Theory (DST), which serves as a framework for comprehending how complex systems—like language learning and human development—evolve and change over time through interactions among various components. Herdina and Jessner, on the other hand, have made contributions to the fields of multilingualism and language instruction, particularly within the framework of dynamic multilingualism, which draws on DST principles. In order to comprehend how multilingual learners dynamically navigate and expand their linguistic repertoires through time, this framework builds on the ideas of the Dynamic Systems Theory (DST). Herdina and Jessner's research illuminate the dynamic nature of multilingual language use and acquisition by examining the intricate relationships among language, cognition, culture, and identity in multilingual learners.[12]

The theory holds that multilingual acquisition is complex, a non-linear and dynamic process that depends on various interacting factors. Many research on multilingualism have revealed important distinctions between monolingual and multilingual acquisition, and these distinctions may be linked to higher degrees of meta-linguistic awareness. Hence, the multilingual dynamic model is created to reflect the dynamic link between the variables present in multilingual acquisition (and loss). The multilingual dynamic model is learner-centered and makes an effort to explain individual variances in the learning process on the basis of linguistic attitudes, learning motivation, and language ability. From the perspective of dynamic system theory, language development presents three features, language attrition, language interdependence, and cognitive characteristics. Language attrition describes the deterioration and loss of first language abilities of bilingual learners who are immersed in a second language as well as the deterioration and loss of second language abilities brought on by extended periods of non-use after bilingual learners have received second language instruction. As a result, learners who do not invest the time to retain their language skills may gradually lose their ability to communicate in that language. Language interdependence refers to the interconnectedness and interaction of multiple languages within a learner's language system. It takes many different forms when people are bilingual or multilingual because their knowledge of and usage of languages can affect one another. This can happen in

a number of areas, including phonetics, grammar, syntax, phonemics, and pragmatics. Cognitive characteristics refers to the benefits or enhancements to cognition that bilingual or multilingual leaners may get from their language learning experiences. The cognitive benefits of bilingualism or multilingualism have been demonstrated, including enhanced executive functioning, cognitive flexibility, meta-linguistic awareness, and problem-solving abilities. Overall, the theory acknowledges the dynamic and interactive nature of language development, with factors like language attrition, language interdependence, cognitive characteristics, and meta-linguistic awareness playing significant roles in determining the trajectory of language development over time in multilingual learning contexts.

In 1996, Numan argued that the development of language system in monolingual learning is always a straight line. On the one hand, the development of language system in monolingual learning generally progresses in a relatively linear and systematic manner, following a typical pattern of phonological, lexical, morphological, syntactic, and pragmatic development. On the other hand, the development of language system in monolingual learning is often guided by innate language-learning abilities and environmental input, and it typically progresses in a consistent and largely predictable manner (See Figure 1.3). The Dynamic System Theory (DST), which was founded on psycholinguistics, stressed that language proficiency develops over time to respond to changing communicative needs; as a result, learners gradually gain transitional mastery of various language systems. Based on this theory, the development of language system in multilingual learning develops over time and multiple linguistic variables interact with each other. As a consequent, the progression of language system development in multilingual learning is often depicted as a curve rather than a straight line. Compared to monolingual learning, the development of language systems in multilingual learning tends to be more complex and dynamic. This is due to the interplay of various factors, including language exposure, language use, language transfer, and individual learner characteristics, which can result in a nonlinear and dynamic pattern of language development over time. These factors can also result in variations in the rate and trajectory of language development among multilingual learners, often depicted as a curve rather than a straight line, reflecting the dynamic nature of multilingual language acquisition (See Figure 1.4).[13] Recognizing and understanding the dynamics involved in multilingual learning can greatly inform the design and implementation of effective strategies to support multilingual learners.

Figure 1.3 The straight-line development

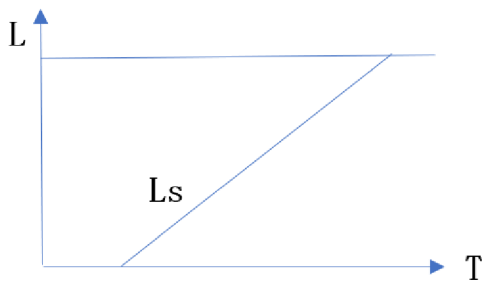
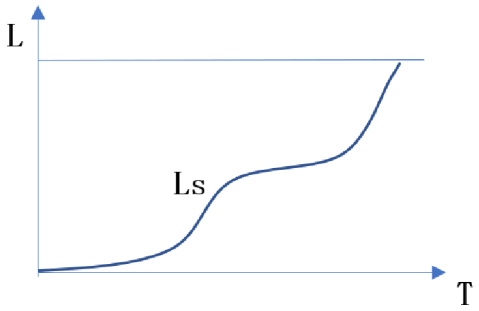


Figure 1.4 The curve development



Ls= Individual Language System
T=Time
L=Language Level

1.6 Research Innovation

The first innovation of this research. Its research on meta-linguistic awareness based on different language families. Foreign research has shown that bilingual learners who are proficient in two languages will show more cognitive advantages in meta-linguistic awareness when learning a third language than bilingual learners who are not proficient. However, these studies had been tested in which the first, second, and third languages belonged to the same language family (L1/L2/L3). This research is to test whether bilingual learners who learn the first language Tibetan (Sino-Tibetan language family) and the second language Chinese (Sino-Tibetan language family), followed by the third language English (Indo-European language family) still show the advantages in meta-linguistic awareness (LI/L2+L3). Therefore, its research on meta-linguistic awareness based on different language families. The second innovation of this research. The Meta-linguistic Awareness Test (MAT), designed by Italian psychologists, is introduced for the first time to test Tibetan primary school students' meta-linguistic awareness during the process of third language learning. The Meta-linguistic Awareness Test (MAT) is a widely recognized assessment tool used internationally to measure students' meta-linguistic awareness, and is divided into three different types. MAT-1 is suitable for testing the children aged 4-6; MAT-2 is suitable for testing students aged 9-13; and MAT-3 is suitable for testing adolescents or adults aged >=16. Therefore, the test results will have a certain degree of international recognition. The third innovation of this research. It is the first research to study the learning process of English as a third language for Tibetan primary school students in China. At present, there is no research on the advantages of meta-linguistic awareness in third language learning for Tibetan primary school students in the context of Tibetan-Chinese bilingual education. The previous research on Tibetan primary school students' third language learning have mainly focused on their emotions, attitudes and difficulties in learning English. Therefore, for ethnic minority students, identifying and utilizing the advantages of

meta-linguistic awareness that they gain from the bilingual education will better help them learn the third language English, and explore the world with more confidence; for English teachers, making full use of students' strengths and weaknesses in meta-linguistic awareness is of great importance to improve their English teaching quality and promote the development of English education in ethnic minority areas of China.

Chapter Two Literature Review

2.1 Research on Bilingual Education

2.1.1 The Definition of Bilingual Education

Generally speaking, bilingual education is a teaching method that uses two languages for academic instruction. Unlike learning a second language as a subject, bilingual education utilizes both languages in different subjects, such as mathematics, art, science, and history. [14] As different models of bilingual education determine the different times each language is used for teaching and learning, there is no academic consensus on the definition of bilingual education. Some of the viewpoints on this topic include the following aspects.

Jack Richards defines bilingual education as "the use of a second or foreign language to teach academic subjects in school." [15] This definition highlights the utilization of a second language, which is not the student's native language, as the primary medium of instruction for academic subjects. According to Torsten Husen, a Swedish educator and scholar, bilingual education is a teaching method where two languages are used to instruct non-language subjects, like science, social studies, mathematics and more.[16] In this regard, this definition also highlights the use of two languages for academic instruction, but specifically mentions that the languages are used for non-language subjects. Torsten Husen further explains that bilingual education should involve using a minimum of two languages in some teaching processes, without necessarily requiring their simultaneous use or use within the same term. Similarly, the Encyclopedia of Bilingualism and Bilingual Education defines bilingual education as the use of two languages for instruction in schools, including subjects like science, mathematics, social sciences, humanities, and others. In Education and Bilingualism, Miguel Siguan and William F Mackey defines bilingual education as an educational system that employs two languages as media of instruction, where one language is often, but not necessarily, the student's native language.[17] García is a well-known expert on bilingual education, provides a more detailed understanding of bilingual education in 2011, where bilingual education involves the planned and systematic use of two languages in a student's education at school.[18] This includes using multilingual practices to enhance learning and communication, promote tolerance for linguistic differences, and foster an appreciation of language and bilingualism. Wang Binhua, a Chinese expert in bilingual education, it is defined as the practice of utilizing a second language as the medium of instruction for non-language subjects, such as chemistry, mathematics, chemistry, physics, history, and geography, either fully or partially, in schools.[19] Zhu Pu, a Chinese scholar, defines bilingual education as the study of typical school subjects, such as literature or history, in another language, such as English.[20] According to Wang Benhua's definition, bilingual education is a planned and systematic use of two languages in a student's education at school. This approach integrates a second language as the primary medium of instruction for non-language subjects, such as science, math, physics, history, chemistry, and geography, either fully or partially. Bilingual education, as defined earlier, can aid in the development of students' language proficiency in

writing, speaking, listening, and reading in a second language, which can enhance their ability to communicate with others, excel in academic subjects, and increase their chances of success in the future.

In China's ethnic minority areas, bilingual education system is practiced, which entails the instruction of academic subjects in two languages: the language of the ethnic minority and Chinese, the country's official language. This type of education is considered an essential component of China's ethnic education. On the one hand, some scholars believe that bilingual education in ethnic minority areas involves teaching academic subjects using two languages. They suggest that the instruction should begin with the ethnic minority language, and gradually transition to Chinese as a second language. This is often called "transitional bilingual education", which gradually transitions students from using their native language to using second language as the primary language of teaching. On the other hand, other scholars point out that the phrase "bilingual education" describes imparting academic material in two languages. The amount of each language used can vary based on the program model. As a result, Chinese scholars generally agree that bilingual education in ethnic minority areas involves teaching two languages, the native language and the national official language Chinese, with the aim of cultivating bilingual and bicultural talent to promote exchange, communication, harmonious coexistence, and common prosperity among all ethnic minority groups in China.

In conclusion, the following characteristics of bilingual education can be summarized from the existing literature. Firstly, bilingual education refers to the language teaching system used in language teaching activities, and only when a school stresses the use of two languages for non-language teaching can it be considered bilingual education. Secondly, bilingual education typically prioritizes the enhancement of students' language skills, with a special emphasis on improving second language skills. Thirdly, to implement bilingual education, it is necessary to have three essential elements, teachers who are proficient in both languages, students who are capable of learning in both languages, and teaching materials that are suitable for bilingual education. Without any of these three elements, the effectiveness of bilingual education will be greatly reduced.

2.1.2 The Theoretical Framework of Bilingual Education

Before the 1970s, most academics believed that language competence was exclusively correlated with phonological, word, syntactic, and semantic understanding or that it referred to grammatical competence. Chomsky distinguished between language competence and language performance as a powerful refutation of this theory and the dominant behaviorist approach. But in response to Chomsky's view, Hymes proposed a different view, and argued that the content of language proficiency goes far beyond what can be covered by the concept of language competence, and he presented the concept of communicative competence, and believed that language competence is an aspect of communicative competence.[21] Hymes pointed out that adequate communication requires mastery of many codes, including verbal decoding and sentence decoding, and therefore, language proficiency is not solely about grammatical accuracy, but also encompasses the practical application of sentences in meaningful

communication. It includes learning how to use language effectively in real-world contexts in addition to knowing the grammatical rules. Although there is no consensus among applied linguists as to what constitutes "communicative competence" other than grammar, Hymes' view is still very influential. To be sure: everyone agrees that communicative competence can be defined, according to Chomsky's theory, as a system of rule sets that provide criteria for judging what is grammatical correctness, acceptability and propriety. Chomsky noted that language proficiency is a unique ability inherent to the human beings, which can be acquired by nearly all individuals except those with severe developmental delays. Thus, language is innate, and every normal person is born with a Language Acquisition Device (LAD) in the mind. This inherent capacity enables the individuals to acquire multiple languages, including first, second, and even third languages during their early development.

Canale and Swain established a framework for communicative language proficiency based on Hymes' theory of communicative competence. They argued that communicative competence includes grammatical competence, discourse competence, sociolinguistic competence and strategic competence. Grammatical competence is the capacity to use vocabulary and grammatical rules to form grammatically correct sentences, and grammatical competence relates to the language itself and includes the ability to deal with the relationship between its phonology and semantics, as well as the ability to enable speakers to produce language that conforms to grammatical rules. Schachter noted that it is most reasonable to define communicative competence as consisting of grammatical competence and pragmatic competence. But Bachman put forward another point of view, and believed that language competence is more than just grammatical competence. Bachman studied the phenomenon of language use in different types of communication and proposed that communicative competence consists of two aspects: organizational competence and pragmatic competence. Organizational competence encompasses the understanding of linguistic units and the rules governing their arrangement to create coherent and cohesive texts; and pragmatic competence is the ability to use language effectively in appropriate language contexts. Among the many theories of language, Canale and Swain's model of communicative competence has influenced second language acquisition for a long time and since then there has been a consensus in second language research that communicative competence is identified as the goal of language teaching. However, regarding bilingual education, the Balance Theory, the Interdependence Hypothesis, and the Iceberg Theory are some of the more influential theories.

2.1.2.1 The Balanced Theory

The Balanced Theory was created by Jim Cummins, a distinguished researcher in the fields of bilingualism and second language learning. In the 1980s, Cummins developed the Balanced Theory to explain the relationship between a student's first language (L1) and second language (L2) proficiency, and to guide language instruction for bilingual students.[22] According to the Balanced Theory, bilingual students who want to succeed academically in a second language must become proficient in both their L1 and L2. Cummins argued that an excellent basis in the student's L1 can facilitate the acquisition of the L2, as skills and knowledge can be transferred from one language to another.

Additionally, students need to develop proficiency in their L2 to succeed in academic and social contexts where that language is dominant.

The Balanced Theory highlights the significance of creating opportunities for bilingual students to enhance their language skills in meaningful contexts, like academic subjects or social interactions, instead of concentrating solely on isolated language instruction. The Balanced Theory has led to the development of "content-based language instruction" or "language across the curriculum" approach, which is commonly utilized in bilingual immersion programs. In the "content-based language instruction" approach, language instruction is integrated with content learning. Teachers utilize content from different academic subjects like math, science, or social studies, to teach linguistic abilities including reading, speaking, writing, and listening. This approach enables students to acquire language skills in a context that has relevance and significance for them and enhances their understanding of how language is utilized in academic and social situations. In addition, the Balanced Theory has significantly influenced language education policies and practices around the world, particularly in countries with large bilingual or multilingual populations. In Canada, the theory has influenced the development of bilingual education programs that aim to promote the maintenance and development of both official languages (English and French). Similarly, in the United States, the theory has informed the development of dual-language immersion programs, which strive to develop bilingualism and biliteracy among students. In this regard, the Balanced Theory has been essential in promoting a more inclusive and equitable approach to supporting bilingual students. This theory recognizes the linguistic and cultural diversity of students as an asset rather than a deficit, and stresses the importance of maintaining and developing both languages. As a result, the Balanced Theory has had significant implications for a deeper comprehension of the relationship between a student's first language and second language proficiency, and has helped shape language education policies and practices worldwide.

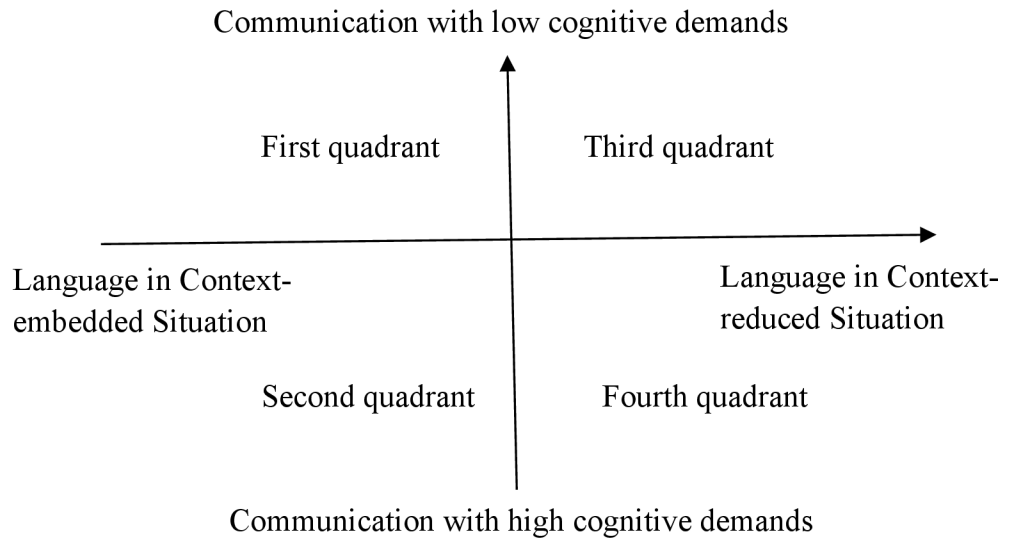
2.1.2.2 The Interdependence Hypothesis

Cummins' Interdependence Hypothesis suggests that a student's proficiency in their first language can have a positive effect on their ability to learn a second language.[23] But Cummins further explains that this transfer of abilities or skills occurs only there is an interdependence between languages, with cognitive, academic, and social skills learned in one language being applied to the other language.[24] The Interdependence Hypothesis proposes that bilingualism can offer cognitive, academic, and social advantages to individuals. Research has found that bilinguals possess greater cognitive flexibility, better problem-solving skills, and increased meta-linguistic awareness compared to monolinguals. Moreover, studies have shown that bilinguals tend to perform better on measures of academic achievement and have a higher likelihood of completing higher levels of education. Furthermore, bilingualism can provide social advantages including heightened cultural awareness and the capacity to interact with a wider spectrum of individuals. Overall, these findings suggest that bilingualism is an asset that should be valued and promoted, and that language instruction should prioritize the development of students' proficiency in both languages.

This theoretical framework also states that language proficiency involves two

interdependent components: Basic Interpersonal Communication Skills (BICS) and Cognitive/Academic Language Proficiency (CALP)." BICS, which are essential for daily social interactions like conversing with peers, comprehending humor, and carrying out basic tasks, are typically acquired through regular exposure to the language, taking approximately two years to develop in students who are in a new language environment. CALP, in contrast, pertains to the advanced language abilities needed for academic or cognitive purposes, such as comprehending academic texts, producing essays, and engaging in classroom discourse. Acquiring these skills necessitates a greater language proficiency and usually takes five to seven years for students learning a new language. This theoretical framework has the benefit of enabling a dynamic description of language level (See Figure 2.1).[25]

Figure 2.1 The degree of contextual support and cognitive involvement in communicative activities



It reflects the extent to which students need contextual support to express a meaning or to understand a meaning. Cummins argued that there is a difference between language in context-embedded situation and language in context-reduced situation.[26] The language in context-embedded situation refers to the communication that is face-to-face, students can actively negotiate their meaning, and language can be supported by nonverbal communication and contextual cues (e.g., nodding, gestures, intonation, eye contact, etc.). In this regard, students can receive the feedbacks in time when it is not understood. For example, two students who do not understand each other's language can communicate well because they can use gestures, facial expressions, body language, etc. while the language in context-reduced situation refers to the fact that the cues for communication come from the language itself and that participants can only identify the meaning of words by their own linguistic knowledge and common sense. Some language skills develop gradually as students' language skills improve. That is, the cognitive involvement in communication is reduced only when the language has reached a significant level of proficiency. For example, learning the phonemic and

syntactic aspects of the first language requires a great deal of cognitive involvement for children as young as 2 or 3 years old. These language tasks should belong to the second quadrant (context-embedded situation, communication with high cognitive demand). But after children's proficiency has reached a certain level, these language tasks transition from the second quadrant to the first quadrant (context-embedded situation, communication with low cognitive demand). In these four quadrants, the first quadrant is a relatively easy and this low level of communication that can be handled by "basic fluency" or "basic interpersonal communication skills". The fourth quadrant (context-reduced situation, communication with high cognitive demands) is a relatively difficult and high level of communication, which requires more cognitive involvement. Although this dynamic model from Cummins has great practical relevance for teaching and learning languages, it is not perfect and is not rigorous enough in certain aspects and needs further improved. For example, Baker argued that Cummins' division between the "context-embedded support" / "context-reduced support" and "low cognitive demand" / " high cognitive demand" is unclear.[27] Although many scholars have taken a scientific approach to study bilingual theory and developed the best theoretical frameworks, language is complex and no theory is perfect. Therefore, every theoretical framework has shortcomings and is subject to criticism.

2.1.2.3 The Iceberg Theory

Visually, this concept is often illustrated using two icebergs that represent two languages, and share a common underlying proficiency or operating system beneath the waterline where they overlap.[28] The Iceberg Theory proposed by Cummins is also known as Common Underlying Proficiency (CUP) model, suggests there are shared underlying abilities or competencies between a bilingual learner's L1 and L2, which contribute to proficiency in both languages. This model emphasizes the interdependence of language proficiency across both languages. The CUP model is often represented by two icebergs, where the visible parts represent the surface-level language proficiency in each language, and the submerged parts represent the shared underlying proficiency that overlaps between both languages (See Figure 2.2).[29] The iceberg theory consists of five main arguments:

(1). Irrespective of the language used by a bilingual learner, the process of language analysis, control, and utilization in various language skills, like speaking, writing, reading, listening, is governed by a single central operating system. Therefore, even if a bilingual individual has attained mastery in two or more languages, they rely on a common underlying proficiency in their language skills.

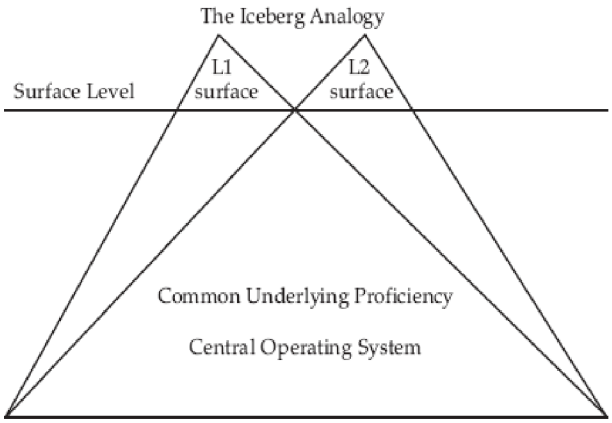
(2). The human brain can accommodate and process several different languages simultaneously, which justifies the phenomenon of bilingualism or multilingualism. Handling two or more languages is not a difficult task for the human beings.

(3). Bilingual and multilingual learners can develop improved information processing skills, cognitive abilities, and academic success. Exposure to multiple languages can enhance their central processing system for language, resulting in better academic performance and overall success.

(4). The various cognitive challenges that students face in the classroom that make it essential for them to use a language in which they are highly proficient.

(5). The development of a learner's cognitive system can be aided by using a language to support linguistic functions including reading, listening, speaking, and writing. However, if a student is not proficient or lacks skills in a second language, forcing them to use it can have a negative impact on their cognitive system.

Figure 2.2 The iceberg analogy



Cummins' Iceberg Theory provides insights into how the process of language acquisition and proficiency development works for bilingual individuals. It suggests that developing proficiency in one language can facilitate the development of proficiency in another language due to the presence of a common underlying proficiency or operating system for the language. This means that learners who have developed an excellent basis in L1 can apply the cognitive processes and linguistic knowledge they have gained to the learning of L2. It emphasizes how crucial it is to invest in helping learners become proficient in a language as a basis for success when studying another language. Additionally, the theory also attaches the importance of promoting and maintaining bilingualism and multilingualism in individuals, as it can have positive impacts on their cognitive and academic abilities. By being exposed to and learning multiple languages, bilingual and multilingual learners can better develop their information processing ability, executive function, and problem-solving skills. Furthermore, bilingualism and multilingualism have been associated with improved academic performance, higher levels of cognitive flexibility, and better job prospects in multilingual environments. Thus, it is crucial for language teachers and educational institutions to recognize and support the value of bilingualism and multilingualism in individuals.

2.1.3 Research on Bilingual Education Abroad

Foreign research on bilingual education has mainly concentrated on the model of bilingual education, with different scholars having different views. Bilingual education models include instructional methods, strategies, and practices that promote bilingualism and biliteracy by providing education in two languages, usually the students' native language and a second language. Generally, bilingual education models can be categorized into the following types:

Firstly, the immersion bilingual education model. Immersion is a type of bilingual

education where academic subjects are taught in a language that is not the student's native language, typically referred to as their second language.[30] In other words, students spend all or most of their schooldays "immersed" in a second language. The second language is not only used as academic content, but also as the language of instruction for other subjects at school. In the 1960s, immersion bilingual education was introduced in Canada through the St. Lambert's Bilingual Education Experiment. This pioneering program utilized French as the language of instruction for primary school students whose first language was English, enabling them to learn various subjects in French while developing their language skills. In Canada, the types of immersion bilingual education can be classified based on the age at which students begin, including early immersion (infancy or kindergarten), delayed or mid-immersion (ages 9 to 10), or late immersion (secondary school level). According to the amount of time immersed in it, it gradually subdivided into two types, the total immersion and partial immersion. The total immersion is a type of bilingual education in which the entire class is instructed solely in the second language, without any use of the native language. For example, the English immersion program required in California, Arizona and Massachusetts in the United States is a total immersion program because the class is taught using only the students' second language, English.[31] The partial immersion is a type of bilingual education in which both languages are used in the classroom. Typically, about half of the class time is devoted to learning the second language, while the other half is dedicated to instruction in the native language. Research suggests that students who participate in total immersion programs tend to achieve higher levels of proficiency in speaking, writing, reading, and listening the second language compared to those in partial immersion programs. Those who learn a second language through partial immersion, on the other hand, typically have a higher level of proficiency than those who just take standard language programs.

Secondly, the maintenance bilingual education model. It the model of teaching in students' native language at the beginning of bilingual education, then gradually, some subjects are taught in the second language, while others still remain in native language.[32] In model of maintenance bilingual education, the goal can be to develop fluent and balanced bilingual proficiency - or even more, to offer the school curriculum in both languages. It is an effective model of language education, which teaching students' native language and second language at the same time. It differs from other models, like the "early exit" or "late exit" models, in that it emphasizes the continued instruction and development of students' native language even after they have gained literacy skills in a second language. And then, the maintenance bilingual education be further subdivided into two types, the static maintenance and the developmental maintenance. The former plans to maintain bilingual students' native language proficiency in order to prevent the weakening or loss of it with the learning of the second language, rather than to further improve their native language proficiency. On the contrary, the latter refers to aims to improve bilingual students' second language proficiency while improving their native language proficiency so that they can become truly bilingual and bicultural and achieve the ideal of multicultural coexistence and integration.

Thirdly, the transitional bilingual education model. It refers to the model of teaching partly or entirely in the students' native language at the beginning of bilingual education, and gradually transitioning to the second language.[33] The goal is language assimilation, which entails increasing the use of the majority language while proportionally reducing the use of the native language in the classrooms. The transitional bilingual education model states that students must first become fluent in their native language before becoming proficient in their second language, in which fluency is defined both as linguistic fluency (speaking) and literacy (reading and writing). It has been shown in several research that linguistic abilities picked up in the first language may be easily transferred to the second. In order to help students transition into a second language as quickly as possible, teachers need to instruct students in subjects like math and natural science in their native languages. This gives students the knowledge they need to succeed in these subject areas once they are placed in a second language classroom. Therefore, the transitional bilingual education model differs from the immersion bilingual education model, because the former temporarily allows students from language minorities to use their native language in the classroom. These students are taught in their native language for a period of time until they are considered competent to cope with mainstream language education. Transitional bilingual education model is subdivided into the two types, early-exit and late-exit.[34] Early exit is defined as a maximum of two years in native language teaching, and then followed by a transition to second language teaching. Late-exit is defined as about 40% of classroom teaching in native language until the 6th grade. The early-exit program aims to accelerate second language acquisition for integration into classrooms with native speakers as quickly as possible. In contrast, the late-exit program focuses on ensuring understanding of all content while maintaining the use of the student's native language, with a longer transition period for slower-paced acquisition of the second language.

2.1.4 Research on Bilingual Education in China

China has established bilingual education system in its ethnic minority areas, especially in places like Tibet, Xinjiang, Inner Mongolia, and Guangxi, where large ethnic minority populations reside. Bilingual education for ethnic minority students involves the instruction of two languages - the native language and the national official language of China, i.e., Chinese - from primary to secondary school levels. In accordance with this study, this section is specifically devoted to providing an extensive literature review on bilingual education in Tibetan areas.

2.1.4.1 The Model of Bilingual Education in Tibetan Areas

According to Chinese scholar Tie Shenglan's research in 2014, there are four models of bilingual education in China's Tibetan areas, which are: (1) teaching mainly in Tibetan, supplemented by Chinese; (2) teaching mainly in Chinese, supplemented by Tibetan; (3) teaching mainly in Tibetan and gradually transitioning to Chinese; (4) teaching in Chinese.[35]The bilingual education models of teaching mainly in Tibetan supplemented by Chinese, as well as teaching mainly in Tibetan and gradually transitioning to Chinese, are suitable for the Tibetan areas with a high concentration of Tibetan populations; while, the bilingual education models of teaching mainly in Chinese, supplemented by Tibetan, as well as teaching in Chinese are suitable for the

Tibetan areas with a high concentration of Han Chinese populations.

According to Chinese scholars Wang Rong and Shang Ma's research in 2014, the implementation of bilingual education in China's Tibetans areas is divided into four stages.[36] (1) At the preschool education stage, the language for teaching mainly in Tibetan, supplemented by Chinese; (2) At the primary education stage, the maintenance bilingual education model is widely used. Tibetan students enter primary schools and are taught in Tibetan, and gradually some subjects are taught in Chinese, while other subjects are still maintained in Tibetan, which is to balance the use of two languages; (3) At the secondary education stage, the transitional bilingual education model is widely used. Tibetan students enter secondary schools are taught in Tibetan, and then gradually transition to teach in Chinese. (4) At the higher education stage, the immersion bilingual education model is widely used in Tibetan universities or colleges, the language for teaching in Chinese only, which is not the Tibetan students' native language.

2.1.4.2 The Goals of Bilingual Education in Tibetan Areas.

Colin Baker, a prominent scholar specializing in bilingual education, has proposed that the goals of bilingual education can vary and may not necessarily involve an equal emphasis on both languages in the classroom.[37] He highlights that the underlying philosophies and politics of education can result in various types of monolingual or bilingual education systems. Thus, the ten typical goals of bilingual education have been proposed by Baker in 2001 (See Table 2.1).[38]

Table 2.1 Ten typical goals of bilingual education

Varying Goals of Bilingual Education
1. To assimilate individuals or groups into the mainstream of society. 2. To unify a multilingual society. 3. To enable people to communicate internationally. 4. To provide language skills which are marketable, aiding employment and social status. 5. To preserve ethnic and religious identity. 6. To reconcile and mediate between different linguistic and political communities. 7. To spread the use of a colonial language. 8. To strengthen elite groups and preserve their position in society. 9. To give legal equality to languages that have unequal status in society. 10. To deepen understanding of language and culture.

According to this, the ultimate goal of bilingual education should be fluency and literacy in both languages through different strategies. Bilingual education in China's ethnic minority areas aims to achieve various goals, such as improving the quality of ethnic education, promoting equal educational opportunities for ethnic minority

students, fostering students' bilingual and bicultural competencies, developing cross-cultural communication skills, and contributing to national unity and social harmony. Additionally, it seeks to equip ethnic minority students with the essential knowledge and abilities to adapt to social and economic changes while retaining their unique cultural heritage, allowing them to fully participate in wider society. In this regard, Chinese scholars believe that bilingual education in Tibetan areas should aim to enhance the comprehensive language skills and cross-cultural communication abilities of Tibetan students, foster ethnic unity, reinforce national solidarity, and promote the overall development and common prosperity among all ethnic minority groups.

In 2011, Chinese scholars Wang Jian proposed in his research that the goal of bilingual education in Tibetan areas should cultivate bilingual and bicultural talents who are proficient in Tibetan and Chinese.[39] Chinese bilingual educator Wang Binhua stated that the goal of bilingual education in Tibetan areas should enhance the native language proficiency of Tibetan students while also developing their comprehensive abilities in speaking, reading, writing and listening in the Chinese language.[40] Chinese famous educator Zhong Qiquan also believed that the goal of bilingual education in Tibetan groups should promote multilingual talent and support national, ethnic, and individual development in China, not to address the demands of ethnic assimilation.[41] In addition, other Chinese scholars suggest that the goal of bilingual education in China's Tibetan areas should facilitate the development of Tibetan students' cognitive and linguistic flexibility in order to effectively navigate the demands of a bilingual context. This entails equipping them with the skills and ability to switch between the both languages in accordance with the audience and the situation, and eventually cultivating their bilingual and bicultural competence to enable them to thrive in two languages. Therefore, bilingual education for China's ethnic minority groups should endeavor to instill a sense of patriotism and national self-confidence, as well as foster attitudes of respect, equality, and openness towards other cultures. In this regard, the goals of bilingual education in Tibetan areas are to improve the quality of ethnic education in China, to ensure equity in access to education for Tibetan students, to develop the ability of Tibetan students to adapt to social changes and to train bilingual and bicultural talents for the country.

2.1.4.3 The Evaluation System of Bilingual Education in Tibetan Areas.

The bilingual education evaluation system is specifically crafted to assess the efficacy and overall impact of bilingual education programs, with a view to promoting bilingualism and cultural awareness among students. By using various methods and tools, such as language proficiency assessments, academic achievement assessments, program evaluations, student and parent surveys, and teacher evaluations, educators and policymakers can make informed decisions about the effectiveness of bilingual education programs and identify areas for further improvement. Therefore, the evaluation of bilingual education activities also involves many aspects.

John A. Buggs, an expert in bilingual education, identified five key aspects that should be considered when evaluating bilingual education programs.[42] (1) Evaluating students' bilingual skills and academic performance in various subjects. The evaluation should include a comprehensive assessment of students' reading, speaking, writing and

listening skills in two languages, both before and after participating in the bilingual education program. (2) Evaluating students' interest, motivation, and attitudes towards bilingual activities is an essential part of assessing the effectiveness of bilingual education programs. Understanding students' perceptions and engagement with the program is vital, as these factors can significantly impact their learning outcomes. (3) Evaluating bilingual teachers' professional knowledge, teaching ability, language proficiency, and cultural competence is crucial to ensure effective implementation of bilingual education programs. (4) Evaluate various factors affecting bilingual education, such as various social, political, cultural factors and language environments, and bilingual educational resources as well as the support from students' parents. (5) When evaluating bilingual education programs, it is important to assess the program itself. Such as evaluating the program design, implementation, and outcomes is crucial for determining feasibility and effectiveness of the bilingual education programs. This helps identify areas for improvement and ensures that the program supports student success in bilingual education.

According to research conducted by Chinese scholar Lian Wenbin in 2012, the evaluation of bilingual education in Tibetan areas mainly focuses on three aspects: evaluation of students' academic achievement, evaluation of the bilingual education program, and evaluation of students' intelligence and cognitive level.[43] (1) Evaluation of students' academic achievement. It is divided into the evaluation of students' bilingual ability and academic achievements. The former concentrates on the evaluation of students' comprehensive ability of using both languages; the latter focuses on the evaluation of students' academic performance, for instance, the comparison of students' academic performance before and after participation in the bilingual education program and to verify whether the participation in bilingual education program improves students' academic level. (2) The evaluation of a bilingual education program aims to assess the program's design, implementation, and outcomes. This includes an evaluation of the program's goals, curriculum, instructional strategies, and assessment methods. It also includes an assessment of how the program is being implemented, including the quality of instruction, the support provided to bilingual teachers, and the availability of resources to support bilingual education. (3) Evaluation of students' intelligence and cognitive level aims to assess whether the program has a positive effect on their academic and cognitive abilities through intelligence and social psychological tests. The evaluation seeks to determine the effectiveness of bilingual education in improving students' intellectual and cognitive development.

This study believes that the evaluation system of bilingual education in Tibetan areas of China should focus on the following aspects: (1) Language proficiency assessments are used in bilingual education programs to measure students' proficiency in their native language and the target language of instruction. These assessments help determine the progress students are making in developing language skills and can be used to evaluate the effectiveness of the program. (2) Academic achievement assessments evaluate students' progress in different academic areas, like math, natural sciences, and social humanities, and are used to assess the effectiveness of bilingual education programs in improving academic achievement. (3) Program evaluations aim to determine the

effectiveness of the overall bilingual education program by assessing factors such as curriculum, instructional strategies, and support services. (4) Student and parent surveys are a valuable source of feedback on bilingual education programs. These surveys can provide insight into the experiences of students and their families, and assist in locating potential improvement areas. (5) Teacher evaluations in bilingual education programs assess the effectiveness of teachers in delivering instruction and supporting student learning. These evaluations may include classroom observations, analysis of instructional materials and lesson plans, and feedback from students and other teachers. The goal is to determine the quality of instruction and identify areas where teachers may need additional support or potential improvement to better meet their students' needs.

In conclusion, an all-encompassing assessment system can furnish vital insights into the efficiency of bilingual education initiatives, facilitating educators and policymakers in arriving at informed decisions and pinpointing areas for enhancement. By scrutinizing factors such as program structure, execution, and results, as well as language proficiency, academic accomplishments, and teacher efficacy, educators and policymakers can identify the strengths and limitations of a program and take relevant measures to enhance it. This, in turn, can result in improved student outcomes and optimal utilization of resources for supporting bilingual education.

2.1.4.4 The Professional Development of Bilingual Teachers in Tibetan Areas.

The promotion of bilingual programs in Tibetan areas has brought to the critical issue of professional development for bilingual teachers, emerging as a prominent research topic in the field of bilingual education. Currently, the research on professional development of bilingual teachers in Tibetan areas has been divided into two aspects, the professional quality of bilingual teachers and the in-service training of bilingual teachers.

Regarding the professional quality of bilingual teachers in Tibetan areas, Wang Jian, a Chinese scholar, identified in 2015 that it is primarily demonstrated through the following aspects.[44] (1) Bilingual teachers' ethnic view, which includes an awareness of both Han Chinese and Tibetan history, culture, and customs, is essential to their professional effectiveness. It influences the way they choose to teach, how they use pedagogy, and how they connect with students and parents. (2) Bilingual teachers' professional ethics, which includes upholding moral principles and values, like fairness, equity, and confidentiality, in the classroom. It impacts their relationships with students, parents, colleagues, and the community, and is crucial to their professional competence. (3) Bilingual teachers' professional knowledge and competence, which includes the mastery of bilingual knowledge and culture, pedagogical skills, and bilingual teaching strategies. They utilize these skills to facilitate student learning, create an inclusive learning environment, and use technology effectively. (4) Bilingual teachers' scientific research ability pertains to their capacity to conduct research, analyze data, and apply research-based instructional practices. It is important for their professional growth, development, and advancing the field of bilingual education. Other Chinese scholars have also pointed out that the professional quality of bilingual teachers in Tibetan areas must meet three requirements: (1) Necessary professional knowledge, such as ethnic

linguistics, modern linguistics, modern Chinese, pedagogy, psychology, and socio-cultural knowledge; (2) Necessary teaching ability, such as the ability to organize bilingual teaching activity, the ability to accurately choose teaching contents and methods according to Tibetan students' needs, the ability to express and communicate, and the ability to scientific research; (3) Necessary teaching skills, such as the skills to reduce Tibetan students' psychological pressure, the skills to regulate classroom atmosphere, the skills to eliminate classroom distractions, etc. Zhou Jing, an expert in bilingual education in China, has identified the professional qualities of bilingual teachers in Tibetan areas as follows. The noble professional ideal of bilingual teachers mainly includes loyalty and love for the bilingual education, as well as strong motivation and confidence in the bilingual education. In addition, bilingual teachers should have a unique knowledge structure of bilingual education, which includes bilingual and bicultural basics, bilingual expertise, and knowledge of bilingual education science. High academic level of bilingual education mainly includes the teacher qualification certificate and related academic degree requirements. And the correct values and positive attitude toward bilingual education are the guidelines for bilingual teachers to act.

With regard to the in-service training of bilingual teachers in Tibetan areas, in 2017, research conducted by Chinese bilingual educator Yang Wei revealed that in-service training for bilingual teachers in Tibetan areas can be divided into the following categories.[45] (1) The university-centered bilingual teacher training organized by the state. For example, during the winter or summer holidays, bilingual teachers from primary and secondary schools in Tibetan areas will be sent to ethnic universities or colleges in mainland China for in-service bilingual training. The content of in-service bilingual training is mainly based on theoretical knowledge of bilingual education. (2) The bilingual teacher training organized by the local education department in Tibetan areas. For example, this kind of bilingual teacher training usually conducted on weekends or during holidays, and the training centers are usually set up around schools in Tibetan areas. (3) The school-based bilingual teacher training organized by the local schools. For example, this kind of bilingual teacher training is organized by local schools in Tibetan areas. The school employs bilingual education experts to come to the school to conduct bilingual training for bilingual teachers, and the training is usually conducted on weekends.

2.1.4.5 The Types of Bilingual Teaching Materials in Tibetan Areas.

Bilingual teaching materials primarily include bilingual textbooks, which play a vital role in the bilingual teaching process. In addition, bilingual reading materials are also considered an important part of bilingual teaching materials. So far, there are four types of bilingual teaching materials in Tibetan areas with three value orientations: knowledge-centered, activity-centered, and learning experience centered.

Bilingual teaching materials in Tibetan areas can be subdivided into four types: uniform bilingual teaching materials, translated bilingual teaching materials, school-based bilingual teaching materials and bilingual reading materials. (1) Uniform bilingual teaching materials refer to bilingual textbooks that are compiled by the national bilingual education department in accordance with the uniform bilingual curriculum

standards.[46] (2) Translated bilingual teaching materials are bilingual textbooks that are translated by school districts from the national mainstream textbook written in Chinese into Tibetan and Chinese. These materials are translated in order to better serve students with Tibetan language backgrounds where no suitable bilingual textbook is available. (3) School-based bilingual teaching materials refer to the development and compilation of bilingual teaching materials by each school, with the approval of the local school district. This process involves hiring experts in bilingual teaching materials, and organizing bilingual teachers, parents and students to participate in the compilation, implementation, and evaluation of the materials.[47] The development of such bilingual teaching materials typically involves the collection of extensive data from multiple sources, particularly those related to ethnic minority languages. (4) Bilingual reading materials refer to course supplementary reading materials designed for Tibetan students, which are written in both Tibetan and Chinese languages. They are mainly used by bilingual teachers to organize classroom readings and discussions, and by Tibetan students to read independently inside and outside the classroom.[48]

The development of bilingual teaching materials in Tibetan areas has gone through three value orientations, which have influenced the overall approach to designing and implementing these materials. Firstly, the knowledge-centered bilingual teaching material. Before the end of the 19th century, it was influenced by the traditionalist educational views such as Comenius' pansophic education theory of "teaching all knowledge to all people". The pansophic education theory is one of the important theories of Comenius: that everything must be taught to everyone, as a guiding basis for education, something like universal education. This kind of value orientation was also influenced by Herbart's intellectualism education theory and Bacon's "Knowledge is power". In the early days, the bilingual teaching materials in Tibetan areas were based on the knowledge-centered, and bilingual teaching materials were considered to be the carriers of bilingual and bicultural knowledge. This knowledge-centered places special emphasis on the logical and systematic nature of language knowledge. Thus, under the influence of this value orientation, the main task of bilingual teachers is to teach bilingual and bicultural knowledge in a systematic and planned manner, while the main task of Tibetan students is to learn bilingual and bicultural knowledge. Secondly, the activity-centered bilingual teaching materials. During the close of the 19th and the start of the 20th centuries, the great educator John Dewey's modernist education ideas gradually came to dominate the educational world. Dewey believed that teaching in schools should be student-centered, and students should be organized to participate in a variety of activities. Students can only acquire knowledge by participating in various activities related to social life at school, and knowledge permeates these activities. As a result, the value orientation of bilingual teaching material in Tibetan areas has changed fundamentally under this educational philosophy. Bilingual teaching materials became the carrier of various bilingual activities in schools, which was conducive to bilingual teachers organizing bilingual activities and motivating Tibetan students' interest and enthusiasm in learning activities. Thirdly, the learning experience centered bilingual teaching materials. Since the middle and late 20th century, constructivist learning theory has gained popularity with its unique view. Constructivist theory holds

that students actively participate in their learning and their experiences help them build their knowledge. This approach emphasizes the importance of students' existing knowledge and encourages their active engagement in the learning process. Based on the constructivist learning theory, the development of bilingual teaching materials in Tibetan areas considers the existing experiences of Tibetan students as a foundation. The focus is to cater for Tibetan students' actual needs and, to the greatest extent feasible, supporting their developmental demands.

2.2 Research on Meta-linguistic Awareness

2.2.1 The Definition of Meta-linguistic Awareness

Meta-linguistic awareness, or meta-linguistic ability, is the conscious reflection on the nature of language, including the ability to focus attention on language itself and evaluate it as a form of meta-cognition. The concept of meta-linguistic awareness is valuable in elucidating how linguistic knowledge is applied and transferred across different languages; it sheds light on phenomena such as code-switching and translation among bilingual individuals.[49] Hence, meta-linguistic awareness differs from simply engaging in regular language operations, as it involves a conscious process of language use and the exercise of relevant control. Meta-linguistics expresses and manifests itself in following ways.[50]

(1) Code-switching, the conscious switching between different languages in a conversation, showcases bilingual individuals' meta-linguistic awareness of distinct linguistic systems and their ability to navigate between them.

(2) Translation, facilitated by meta-linguistic awareness, allows bilinguals to consciously and strategically translate one language into one another, utilizing their comprehension of the structures and meanings of both languages.

(3) Meta-linguistic comments, offered by those with meta-linguistic awareness, involve providing feedback or comments on language use, grammar, or vocabulary, demonstrating their capacity to reflect on and evaluate language.

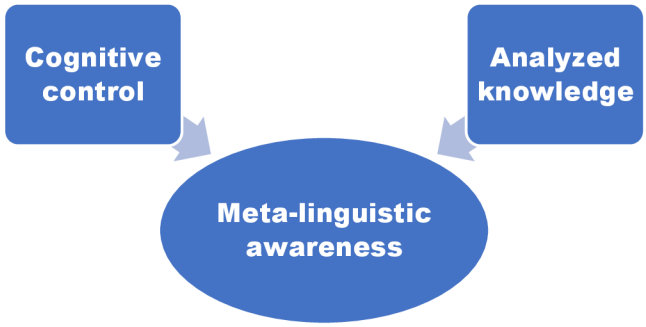
(4) Language analysis, which is motivated by meta-linguistic awareness, is the capacity to consider and evaluate the rules, structures, and patterns of language beyond its simply communicative usage.

(5) Language play, a manifestation of meta-linguistic awareness, can be seen in creative expressions like wordplay, jokes, or puns, demonstrating an individual's understanding of language at a meta-level.

Cazden was one of the first researchers to define meta-linguistic awareness. She pointed out that meta-linguistic awareness is a special form of linguistic expression that exists in language, a special cognitive demand that is more difficult to acquire than listening and speaking.[51] Although the concept defined by Cazden illustrated that meta-linguistic awareness is distinct from speaking and listening, she did not point out the special cognitive needs associated with this language function. Cummins defined meta-linguistic awareness as an ability to analyze language output, and he thought meta-linguistic awareness makes language structure as the center of one’s attention rather than its literal meaning.[52] Thomas defined meta-linguistic awareness as the ability to reflect and evaluate language based on language itself.[53] This concept explains, to

some extent, how language is organized and applied. Another possible claim made by Tunmer is that meta-linguistic awareness and meta-linguistic competence are different from other kinds of language development, and that these meta-linguistic abilities are entirely distinct from the acquisition and development of fundamental speaking and listening abilities.[54] According to Tunmer's argument, meta-linguistic competence is necessarily different from linguistic competence.

Figure 2.3 The structure of meta-linguistic awareness



Numerous studies have demonstrated that meta-linguistic awareness is related to student's language-related activities such as spelling, reading, speaking, and writing, and therefore meta-linguistic awareness has always been an important element in the study of student's cognitive development. Meta-linguistic awareness is often understood as involving cognitive control, which includes selecting and coordinating relevant information for comprehending language manipulation, as well as analyzed knowledge, which entails recognizing the meaning and structure of manipulated language (See Figure 2.3).[55] As opposed to intuitive knowledge, analyzed knowledge in the context of meta-linguistic awareness refers to knowing that is explicit and objective, while cognitive control involves the selection and coordination of information, typically within a certain timeframe.[56] For instance, in a given proposition, a sentence with wordplay, meta-linguistic awareness comes into play in several steps. One must control the selection and coordination of relevant information in that proposition and then analyze the information in order to decipher it. According to Bialystok and Ryan, mastering meta-linguistic awareness requires a 'high degree' of manipulation of two dimensions (analytical knowledge and cognitive control).[57] In this regard, meta-linguistic awareness is a cognitive skill that transcends specific languages and can be developed and applied across different languages an individual is exposed to or proficient in. It involves reflecting on various aspects of language, such as phonology (i.e., sound system), word structure, syntax (i.e., grammar rules), and pragmatics (i.e., language use in context). For instance, individuals with meta-linguistic awareness can critically analyze and manipulate these linguistic components in multiple languages they are familiar with.

2.2.2 Research on Meta-linguistic Awareness Abroad

In the past two decades, the research on meta-linguistic awareness in foreign countries has been more in-depth, and achieved many valuable results. From the current research

status, researchers have mainly focused on the categories of meta-linguistic awareness. It includes phonological awareness, word awareness, syntactic awareness and pragmatic awareness

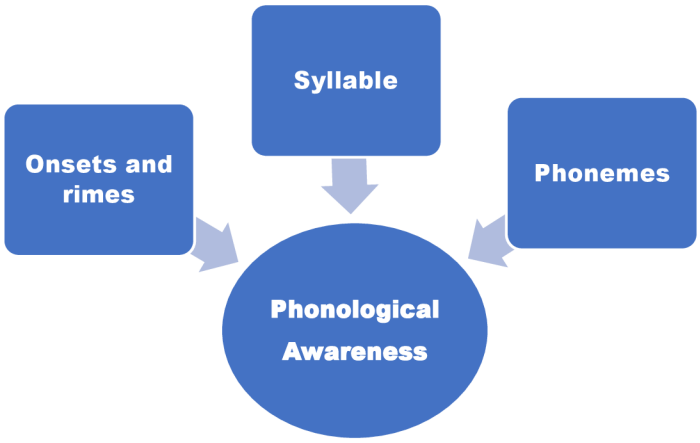
2.2.2.1 Phonological Awareness

Phonological awareness, the awareness of the sound structure of words, is a reliable indicator of students' vocabulary spelling abilities, and it is also a prominent area of focus in language studies and literacy instruction.[58] Phonological awareness is a meta-linguistic ability that involves conscious attention to and contemplation of language structure, particularly as it relates to speaking and listening.[59] It is a component of the broader phonological processing system, which encompasses various abilities related to language processing. Phonological awareness differs from other phonological abilities in that it specifically involves meta-cognition and requires individuals to consciously reflect on and manipulate the sounds and structure of language. Thus, phonological awareness, the ability to recognize and process sounds in spoken language, forms the basis for decoding, blending, and ultimately, word spelling.

Phonological awareness includes the detection and manipulation of sounds at three levels: (1) syllables, (2) onsets and rimes, (3) phonemes (See Figure 2.4). Syllables are organizational units of speech sounds, typically consisting of a syllable nucleus (often a vowel) with optional initial and final margins (usually consonants). Syllables are regarded as the phonological "building blocks" of words. For instance, the word "banana" has three syllables: ba-na-na. The onset is the initial consonant or consonant cluster of a syllable, while the rime consists of the vowel and any consonants that follow. For instance, in the word "cat," the onset is the consonant /k/ and the rime is "at," which includes the vowel /æ/ and the final consonant /t/. The onset and rime are significant components of phonological awareness, aiding individuals in breaking down and manipulating the sounds within words. The phoneme is a unit of sound that distinguishes words from one another in a language. Phonemes are fundamental in the sound system of a language, and changes in phonemes can alter word meanings. For instance, the word "cat" consists of three phonemes: /k/, /æ/, and /t/. Hence, phonological awareness includes four main levels, word level, syllable level, onset-rime level, and phoneme level. At the word level, the main task is to identify the words in a sentence, such as identify the single words in a given sentence, combine single words into a compound word, break up a compound word into two single words, and remove a single word from a compound word. At the syllable level, the main task is to combine syllables into a single word, break up a single word into syllables, and remove a syllable from a single word. At the onset-rime level, the main task is to identify the rhymes in a single word, combine the onset with the rime to form a single word, and break up a single word into onset and rime. At the phoneme level, the main task is to identify the sounds in a single word, combine sounds into a single word, and break up a single word into sounds. Fluency in word and text reading depends on these basic skills: like phonological awareness, phonics and decoding, and word recognition. Therefore, phonological awareness encompasses a range of abilities, such as recognizing rhyming words, counting syllables in names, identifying alliterations, segmenting sentences into words, and determining syllable count in words. It can be assessed using a phonemic segmentation task, although using a non-graphic, non-word

syllable test may yield more accurate results.[60] Some linguistic scholars have noted that phonological awareness develops in different levels. The low level involves awareness of syllables and onset-rime segments, where students learn to recognize and manipulate these units. Subsequently, students develop the ability to blend and segment individual phonemes, which is a higher level of phonemic awareness. The capacity to substitute, reverse, and delete phonemes from a word is a sign of high-level phonemic awareness. This higher level of phonemic awareness continues to develop even beyond fifth or six grade.

Figure 2.4 The structure of phonological awareness



Due to phonological awareness involves a range of skills that develop over time and are essential for vocabulary spelling and learning, and is also central to sentence decoding and text comprehension. Therefore, the research related to phonological awareness is divided into two aspects. The first is the research on correlation between the development of phonological awareness and student's vocabulary spelling ability. The second is the research on correlation between the development of phonological awareness and student's vocabulary learning ability.

The research results indicated that phonological awareness is positively correlated with students' vocabulary spelling ability, and the phonological awareness training is crucial for the improvement of students' vocabulary learning ability. Firstly, Cisero studied bilingual students with Spanish as the first language and English as the second language and found that Spanish-speaking students can transfer their phonological awareness skills from the first language to the learning of new vocabularies in the second language, English. Study has also shown a significant correlation between Spanish-speaking students' phonological awareness skills and their vocabulary spelling ability in English, suggesting that phonological awareness in the first language can influence abilities in the second language learning as well.[61] In 2009, Jason et al. studied 130 bilingual students whose native language was Spanish and the second language was English, and confirmed the phonological awareness of students' native language have cross-linguistic impact on the learning of new vocabularies in a second language; it also have been found that students' phonological awareness in native language can be effectively

transferred to the second language learning and have a beneficial effect on their vocabulary spelling ability.[62] In 2017, Kim's study examined the correlation between phonological awareness and vocabulary knowledge in second language learners. The results revealed a positive correlation between phonological awareness and vocabulary knowledge, indicating that higher levels of phonological awareness were correlated with higher vocabulary abilities in second language learners. In 2019, according to a study by Chinese linguistic scholar Wang Benhua, Chinese primary school students whose native language is Chinese and learn English as a second language showed that their phonological awareness in their native language can effectively influence their vocabulary spelling in second language learning, English.[63] In 2020, Chinese scholar Yao Yuanyuan found that phonological awareness in meta-linguistic awareness influence rapid naming and vocabulary recognition in second language English. She noted that in the early stage, students use phonological awareness to spell words, in the middle stage, students use orthographic awareness to decode words, and in the later stage student use morpheme awareness to recognize words. Moreover, a comparative study conducted by Chinese scholar Zhang investigated the role of phonological awareness in the reading development of Chinese and English students. The study revealed that phonological awareness played an essential part in both languages, with similar patterns observed in Chinese and English. Specifically, higher levels of phonological awareness were correlated with increased vocabulary spelling abilities in two groups of students.

In conclusion, from the above studies we can see that the phonological awareness abilities in an individual's native language can significantly impact their proficiency in learning new words in a second language. Strong phonological awareness skills in the native language can serve as a foundation for acquiring similar skills in a second language, leading to improved accuracy in pronunciation and sound recognition. However, it's crucial to note that language acquisition is influenced by various factors, including exposure, motivation, and learning style, in addition to phonological awareness. These elements play pivotal roles in the overall process of language acquisition and should be considered holistically when examining language learning outcomes.

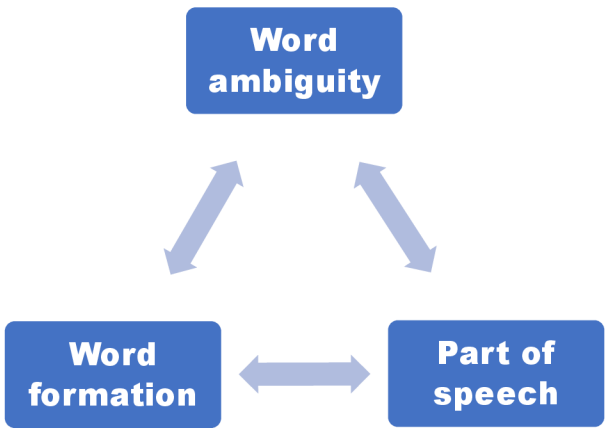
2.2.2.2 Word Awareness

Word awareness involves understanding that phrases or sentences are made of individual words and the ability to manipulate words within phrases or sentences, including tasks such as playing with compound words. According to Bialystok, word awareness refers to the degree to which students can comprehend that words are the fundamental units of meaning in language and have an understanding of the nature of words.[64] In 1984, Bowey and Tunmer identified three components of word awareness, which include: understanding words as language units, recognizing words as arbitrary language symbols, and being aware of the term "word awareness" itself.[65] The first aspect of word awareness entails recognizing that phrases or sentences are made up of individual words, each with its own specific meaning; the second aspect of word awareness involves recognizing that words are arbitrary symbols used in language, meaning that their meanings are conventionally associated with them and not inherently

linked; the third aspect of word awareness involves being aware of the concept of "word awareness" itself, which entails recognizing and understanding the term "word awareness" as a linguistic construct used to describe the understanding of words as units of language and arbitrary symbols. These three components work together to increase an individual's word awareness, which is a necessary component of language development and is crucial for the development of literacy abilities.

According to the concept of meta-linguistic awareness, word awareness consists of three parts, first, awareness of word ambiguity; second, awareness of words formation, and third, awareness of part of speech (See Figure 2.5). Word ambiguity refers to a word having multiple meanings within the language to which it belongs. For example, consider the sentence "after taking a shot with his bow, the archer took a bow." In this sentence, both instances of "bow" are nouns, but they have different meanings. The first "bow" refers to a type of weapon used for hunting, while the second "bow" refers to a gesture of ending a performance. This illustrates how word ambiguity can arise when a single word has multiple meanings depending on its context. Word formation refers to the process of creating or changing words in a language. It includes forming new words through processes such as affixation, compounding, blending, conversion, and more. For instance, "official," "officer," and "unofficial" are all derived from the base word "office" using different word formation processes. Understanding word formation is crucial for developing vocabulary and language skills, as it involves comprehending how words can be formed and transformed in a language. Regarding the part of speech, it refers to a category of words that share similar grammatical characteristics. For instance, in English, common parts of speech include nouns, verbs, pronouns, adjectives, conjunctions, adverbs, prepositions, interjections, numbers, articles, and determiners. Understanding the different parts of speech is necessary for grasping the nuances of language, as it involves comprehending the grammatical properties associated with each word category.

Figure 2.5 The structure of word awareness



In language learning, proficient reading ability is vital for academic, economic, and social success. Reading involves constructing mental representations of written language by deciphering the meaning of words at different levels, including individual

words, sentences, and texts. The process of learning how to read depends to a large extent on the analysis of language knowledge and the control of language processing, that is, control over the knowledge required and control in language form to extract its meaning. As a result, phonological awareness and word awareness work in tandem to facilitate language learners in processing, comprehending, and utilizing the components of the language they are using. By reviewing the relevant literature, studies on students' meta-linguistic skills have focused on word awareness and its contribution to reading ability.

Many studies have found that word awareness in meta-linguistic awareness is positively correlated with students' reading ability and word awareness also can predict students' reading levels. In a study conducted by Lonigan et al. in 2000, it was found that word awareness was a significant predictor of reading level in 5-6-year-old children. Specifically, higher levels of word awareness were associated with greater proficiency in reading texts that contained more challenging vocabulary. It indicates that word awareness plays a crucial role in early reading development and can impact a child's ability to effectively navigate texts with varying levels of vocabulary complexity.[66] In 2015, a study conducted by Sun Bing et al., the correlation between meta-linguistic awareness and English reading ability in junior high school students was examined. The results showed a positive correlation between word awareness and English reading ability in this population. Furthermore, both word awareness and syntactic awareness were found to significantly predict the English reading level of junior high school students.[67] Above findings indicate that fostering word awareness and syntactic awareness may play a crucial role in enhancing English reading ability among junior high school students. In a study conducted by Zhang et al. in 2017, the correlation between word awareness and reading comprehension was examined in junior high school students, both with and without dyslexia. The findings revealed that word awareness, specifically the abilities to segment and blend sounds in words, significantly predicted reading comprehension level in both groups of students. This suggests that word awareness, particularly the skills related to segmenting and blending sounds, plays a significant part in reading comprehension for junior high school students, regardless of whether they have dyslexia or not. Moreover, in a study conducted by Chen et al.in 2019, the correlation between word awareness, syntactic awareness, and reading comprehension in Chinese junior high school students. The study's findings indicate that word awareness and syntactic awareness are crucial language skills that positively impact reading comprehension in the context of the English language. In a recent study conducted by Jiayuan Zheng in 2021, the correlation between meta-linguistic awareness and English reading ability in junior high school students was examined. The findings revealed that phonological awareness in meta-linguistic awareness was not significantly correlated with students' English reading ability. However, word awareness in meta-linguistic awareness was found to be a significant predictor of students' English reading levels. This suggests that word awareness may play a more influential role in English reading ability among junior high school students compared to phonological awareness.[68]

In conclusion, word awareness, including phonological and morphological awareness,

along with syntactic awareness, are crucial factors that influence reading ability among junior high school students. These factors have been shown to significantly predict reading comprehension in junior high school students, regardless of their dyslexia status and language of instruction (e.g., English or Chinese). Therefore, it is important to prioritize the improvement of word awareness and syntactic awareness abilities in language learning and literacy instruction for junior high school students in order to enhance their reading ability and overall language proficiency. Further research in this area can provide valuable insights into effective strategies and interventions to improve reading comprehension and language skills in junior high school students.

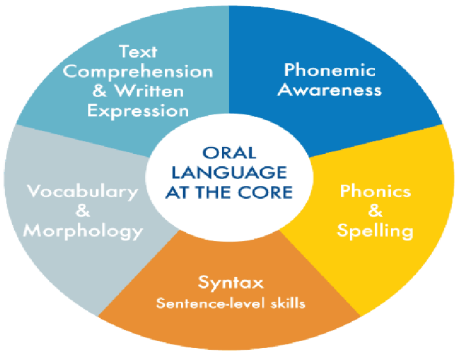
2.2.2.3 Syntactic Awareness

Syntactic awareness is the ability to reflect on the grammar structure of language, in which the learner directs their attention from the meaning of the sentence to the structure of the sentence. It includes the capacity to understand and apply knowledge of grammar rules, sentence structure, and word order in both language production and comprehension. Syntactic awareness allows individuals to consciously manipulate and use syntactic structures in their speech and writing, as well as interpret and comprehend the syntactic features of language input. It is a fundamental element of language proficiency and essential for effective communication in a given language. Syntactic processing also includes the utilization of inferential and pragmatic rules that go beyond the surface-level structure of language. This involves understanding the intended meaning and context of a sentence, which may require learners to draw on their knowledge of word order and syntactic rules, as well as their understanding of contextual cues. For instance, when encountering sentences with ambiguous or complex syntax, learners may need to rely on their syntactic knowledge and contextual understanding to accurately interpret them. Syntactic processing thus involves the integration of syntactic rules with inferential and pragmatic cues for effective language comprehension. In this regard, syntactic awareness is the ability of students to monitor the relationships between words in a sentence for comprehension when speaking or reading or writing. Students can develop their syntactic awareness at an early age through exposure to spoken language, particularly through reading aloud or independently. Thus, as a meta-linguistic skill, syntactic awareness is distinct from the comprehension or construction of a sentence, because it focuses on the sentence structure rather than the sentence meaning (See Figure 2.6).[69]

In 2016, Foorman, et al., noted that syntactic awareness facilitates the comprehension of how sentences work, and the meanings behind word order, structure, and punctuation; syntactic awareness allows individuals to analyze and comprehend the underlying syntactic structures or patterns in language, aiding their understanding of how sentences are constructed and convey meaning.[70] As noted by Tunmer, syntactic structure typically consists of three components or parts: the phrase structure grammar, the transformation grammar, and the morphophonology.[71] The phrase structure grammar includes the rules for organizing words and phrases into hierarchical structures, such as noun phrases and verb phrases; the transformation grammar involves the rules for converting one type of syntactic structure into another, such as transforming declarative sentences into interrogative sentences or changing active voice to passive voice; the

morphophonology encompasses the changes in pronunciation or sound forms of words that occur based on their syntactic context, such as morphological changes in word endings, stress patterns, or other phonological adjustments.

Figure 2.6 The structure of syntactic awareness



Syntactic knowledge and syntactic awareness are relevant and helpful in improving the student's writing ability.[72] Both are correlated but distinct constructs. Syntactic awareness involves assessing students' meta-linguistic awareness, or their ability to manipulate language as an object, while syntactic knowledge involves their ability to understand or produce various grammatical structures in a sentence. In 1988, Bowey and Patel explained that syntactic awareness as a meta-linguistic skill does not develop in isolation from syntactic knowledge, and that advanced syntactic knowledge may also emerge in students with more advanced syntactic awareness.[73] For instance, students may participate in tasks such as listening to sentences and identifying corresponding pictures, or generating sentences in oral or written language samples. These tasks assess their syntactic awareness by necessitating the use of meta-linguistic skills to comprehend or produce grammatically accurate sentences.

Since the 21st century, research on syntactic awareness has primarily concentrated on examining the correlation between students' syntactic awareness and their writing ability.[74] Plaza and Cohen's 2003 model provides insights into the correlation between word awareness, syntactic awareness, and writing ability. Their research findings highlight the close connection and mutual influence of these factors in the improvement of writing skills.[75] Plaza and Cohen's model proposes that word awareness and syntactic awareness serve as foundational elements that contribute to the development of writing ability. Writing ability encompasses various skills, such as vocabulary use, sentence construction, coherence, and organization. These two factors, word awareness and syntactic awareness, act as building blocks that enable writers to effectively organize their thoughts and ideas in writing. Plaza and Cohen's model posits that word awareness and syntactic awareness are crucial precursors to the development of proficient writing skills. Word awareness enables writers to select and use words effectively, while syntactic awareness allows them to construct sentences and paragraphs with proper grammar and syntax. These skills are integral to overall writing ability, enabling writers to express themselves clearly and effectively in written form. In a longitudinal study conducted in 2004, Muter et al. investigated the correlation

between phonological awareness, word awareness, syntactic awareness, and writing ability; it aimed to understand how these factors develop and interact over time in the context of writing skills, providing insights into their developmental trajectory and interplay.[76] The study found that phonological awareness and word awareness were more important in less difficult writing tasks, while syntactic awareness played a more prominent role in more challenging writing tasks. This suggests that the significance of different meta-linguistic awareness skills may vary depending on the complexity of the writing task. In 2008, Baoguo Chen and Yali Chen conducted a study that examined the correlation between syntactic awareness, word awareness, and writing ability in primary school students in grades 2 and 4. The study sought to understand how these cognitive processes interact and influence writing skills in young students at different grade levels.[77] The results showed that for second graders, word awareness and syntactic awareness were found to be predictors of their ability to analyze language and interpret rules during writing tasks. However, for fourth graders, only syntactic awareness was found to significantly predict their ability to make grammatical judgments during writing tasks. This suggests that the role of word awareness and syntactic awareness may change as students develop academically, with syntactic awareness becoming a more prominent factor in grammatical judgments in writing tasks for students in the upper grades. In a 2021 study, Li and Ping examined the correlation between writing proficiency in English as a Second Language (ESL) among adult learners and syntactic awareness. The results of the study showed a strong relationship between syntactic awareness and writing abilities in English as a Second Language (ESL) among adult learners, proving that greater syntactic awareness was associated with superior writing abilities in the setting of adult ESL learning.

In conclusion, research has consistently demonstrated the importance of syntactic awareness in the improvement of writing ability, along with other factors such as word awareness and phonological awareness in meta-linguistic awareness. These findings have been observed across various age groups, from primary school students to adult ESL learners. Syntactic awareness has been shown to predict writing quality, fluency, coherence, and grammatical judgments in different writing tasks. Therefore, recognizing the importance of syntactic awareness is crucial in writing instruction and language development programs. Further research in this field can provide insights into the specific mechanisms underlying the correlation between syntactic awareness and writing ability, and inform effective writing instruction practices.

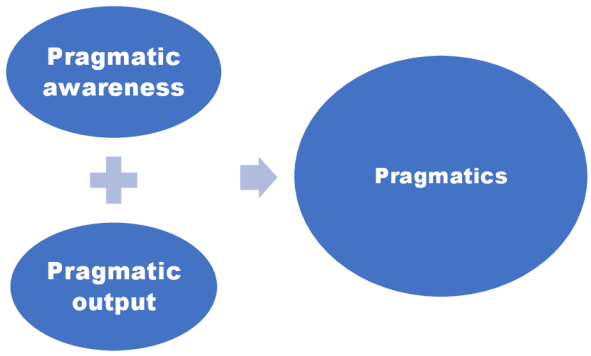
2.2.2.4 Pragmatic Awareness

Pragmatic awareness is a relatively ambiguous field in the study of meta-linguistic awareness, which focuses on learners' awareness of language use in certain contexts. Pragmatic awareness is the ability to use and understand language in an appropriate manner, taking into account various social, cultural and contextual factors. It involves understanding the implicit meaning, intentions, and presuppositions behind language use, and adapting one's own language to achieve effective communication. Obtaining pragmatic awareness is a gradual and ongoing process that develops through various means.[78] (1) Language input: Exposure to diverse language input, including observing and listening to how others use language in different social and cultural backgrounds,

can contribute to the development of pragmatic awareness in learner. (2) Interaction: Engaging in meaningful communication allows learners to practice and refine their pragmatic skills by observing and adapting to different language uses and contexts. (3) Reflection and analysis: Reflecting on past language interactions and critically examining social and cultural norms helps learners develop a deeper understanding of pragmatic awareness. (4) Instruction: Explicit instruction and guidance on pragmatic principles, strategies, and cultural norms provide learners with a framework for understanding and using language in context. (5) Feedback: Receiving feedback from native speakers, language instructors, or peers helps learners refine their pragmatic skills. (6). Cultural exposure: Exposure to the target culture's customs, traditions, and social norms increases learners' awareness of the cultural context in which the language is used. (7). Contextualized practice: Engaging in role-plays, simulations, and real-life scenarios provides learners with opportunities to apply their pragmatic skills in context and develop their awareness of how language use varies in different situations.

Some scholars believe that pragmatics includes pragmatic awareness and pragmatic output.[79] Pragmatic awareness includes two levels of meaning. Firstly, it includes an individual's awareness of the relationship between sentences and the quality of their context/relationship. This may encompass cognitive context, situational knowledge, or other details surrounding the discourse. Secondly, it involves knowledge of the rules and conventions that govern the appropriate use of language in a given communicative situation and among members of a linguistic community. With regard to pragmatic output, it refers to the appropriate use of the target language in a specific social and cultural context, demonstrating knowledge of the pragmatic rules and conventions that govern language use (See Figure 2.7).

Figure 2.7 The structure of pragmatic awareness



In linguistics and allied fields, the study of pragmatics examines how context affects the meaning of language. It investigates the use of human language in social interaction and the dynamic relationship between interpreters and interpretations. Pragmatics encompasses a broad spectrum of phenomena, including implication, speech acts, relevance, dialogue, and non-verbal communication.[80] Theories in pragmatics are closely intertwined with semantic theories and syntactic theories, which examine sentence structure, principles, and relations. Understanding the intentional meaning of another speaker is known as pragmatic competence in pragmatics.[81] Pragmatic

competence, considered as a crucial aspect of pragmatic awareness, involves understanding the connection between discourse and the actions conveyed through language, as well as recognizing the contextual features that facilitate appropriate language use. The relationship between discourse and action is linked to the influential role of discourse, while context pertains to the sociolinguistic conventions that are pertinent to language use. Consequently, in addition to language users' conscious, reflective, and explicit knowledge of pragmatics, pragmatic awareness also refers to the understanding of social and cultural context-related aspects.

Scholars have studied the pragmatic awareness and pragmatic competence mostly from the perspective of speech acts. In the study of pragma-linguistic competence in requests, conducted by Olshtain and Blum-Kulka, it was observed that advanced learners demonstrated the ability to vary the syntactic form of their requests; however, intermediate learners primarily relied on the use of the polite word "please".[82] The findings suggest that pragmatic awareness and language use in requests may vary among different proficiency levels of non-native speakers of English. Advanced learners are more likely to exhibit a greater range of pragmatic competence, while intermediate learners may rely on more formulaic strategies to convey politeness. In 2005, Jorda conducted a study to investigate the pragmatic awareness and pragmatic competence of language learners.[83] Jorda's research indicated that pragmatic awareness and pragmatic competence were significantly associated with multilingual learning and played a significant role in improving learners' language proficiency. This suggests that understanding pragmatics and using pragmatic language appropriately in various contexts can contribute to overall language proficiency in multilingual learning situations. In 2008, Liu, et al., noted that pragmatic awareness and pragmatic competence can play an important function in assisting language learners in identifying and understanding social and cultural factors within a given context, and in using the target language appropriately in accordance with the specific social and cultural background.[84] In 2020, He Yang and Wei Ren's study found that pragmatic awareness, was significantly correlated with students' attitudes towards the second language learning and their expected learning effort. The findings suggest that higher levels of pragmatic awareness may be linked to positive attitudes towards the second language and increased motivation to invest effort into the learning process. This demonstrates how pragmatic awareness may influence students' motivation and attitudes toward learning a second language.

In conclusion, pragmatic awareness and competence are essential factors in language acquisition and usage, particularly in cultural and social settings. Advanced learners tend to exhibit higher pragmatic competence, while intermediate learners may rely on more formulaic strategies. Pragmatic awareness and competence are effective in helping learners recognize social and cultural factors and use the target language appropriately. Moreover, attitudes towards the second language acquisition, and expected learning effort are significantly correlated with pragmatic awareness. In this regard, developing pragmatic awareness and competence can contribute to improved language proficiency and effective communication in multilingual contexts.

2.2.3 Research on Meta-linguistic Awareness in China

The research on meta-linguistic awareness in China started towards the end of the twentieth century, and due to its relatively late involvement, the results of research have been fewer and less in-depth compared to other fields. Currently, research on meta-linguistic awareness in China primarily focuses on two fields: the meta-linguistic awareness of English majors in colleges or universities, and the correlation between meta-linguistic awareness and reading ability among junior high school students.

Firstly, within the context of English majors, meta-linguistic awareness refers to their understanding of the English language and their ability to analyze and manipulate its linguistic features. It involves the ability to reflect on the structure, form and function of language, and to use this ability to analyze and deal with language in different contexts. Studies on meta-linguistic awareness among English majors in China has been conducted in diverse contexts, including different universities or colleges, ethnic groups and educational settings. These studies aim to investigate the level of meta-linguistic awareness among English majors, identify influential factors in its development, and explore implications for language teaching and learning. The results of these studies may vary depending on the context and research design, but some general findings related to the meta-linguistic awareness of English majors in China's universities or colleges may include the following aspects. (1) Higher language proficiency: English majors with advanced English language skills tend to show higher levels of meta-linguistic awareness, as their proficiency and exposure to English may facilitate their understanding of the language's linguistic features. (2) Language exposure and usage: English majors who experience English in diverse contexts and actively use it for communication and academic purposes may develop high levels of meta-linguistic awareness, as they have increased chances to analyze and manipulate language features in real-world settings. (3) Formal education and instruction: English majors who receive explicit instruction on language structure, form, and meaning through formal education and pedagogical approaches that emphasize meta-linguistic awareness may show higher levels of meta-linguistic awareness compared to those who do not receive such formal education. (4) Language background: English majors with a native English-speaking background or prior exposure to English as a first language may show higher levels of meta-linguistic awareness compared to those who have learned English as a second or foreign language. (5) Contextual factors: Cultural, social, and educational contexts may also impact the improvement of meta-linguistic awareness among English majors, as language learning is influenced by the specific context in which it occurs. It's important to note that findings on the meta-linguistic awareness of English majors may vary depending on the specific context and research design. Further research is needed to comprehensively understand the meta-linguistic awareness of English majors and its implications for language teaching and learning in diverse contexts.

Several studies have been conducted on the meta-linguistic awareness of English majors in China's universities or colleges. In 2010, Li Jiang conducted a study on the correlation between meta-linguistic awareness and second language proficiency among English majors in colleges.[85] The study sought to examine the correlation between meta-linguistic awareness and second language proficiency among English majors in

colleges. The results may provide insight into the potential impact of meta-linguistic awareness on second language learning and proficiency development in college settings. In 2014, Liu conducted a study on meta-linguistic awareness (MLA) and language learning strategies (LLS) of English majors in Chinese universities.[86] The study reveals that English majors demonstrate moderate MLA levels and utilize diverse LLS, with cognitive strategies being prominent. Higher MLA levels are positively associated with increased use of LLS. The study recommends incorporating explicit MLA instruction in language courses to enhance language learning strategies. In 2015, Yang Lijuan and Gao Peijun conducted a comparative study to investigate the differences in meta-linguistic awareness between Mongolian and Han Chinese English majors in terms of phonological awareness and word awareness.[87] The findings indicated that Mongolian English majors exhibited higher levels of meta-linguistic awareness in both phonological and word awareness compared to Han Chinese English majors. It indicates that cultural and linguistic influences may play an important part in shaping meta-linguistic awareness among English majors from different ethnic backgrounds in China.

Secondly, the correlation between junior high school students' meta-linguistic awareness and reading ability has been a hot topic in the study of language education. In China, many studies have investigated the correlation between meta-linguistic awareness and reading ability, which involves the comprehension and interpretation of written texts. Studies have examined the correlation between meta-linguistic awareness and reading ability, and findings indicate a positive correlation between these two variables. Junior high school students who exhibit higher levels of meta-linguistic awareness tend to demonstrate improved reading skills, including higher reading comprehension, vocabulary acquisition, and reading fluency. Meta-linguistic awareness enables these students to consciously reflect on the structure, form, and meaning of language, which can enhance their understanding and interpretation of written texts. By actively analyzing and manipulating language as an object of analysis, these students are able to improve their comprehension of the nuances and complexities of written texts, leading to more proficient reading abilities. Furthermore, interventions and instructional approaches that explicitly target the development of meta-linguistic awareness have shown positive impacts on students' reading ability. These interventions may involve activities that promote meta-cognitive strategies, such as monitoring, analyzing, and evaluating one's own language use and understanding. Strengthening meta-linguistic awareness among junior high school students has been found to be beneficial for their overall language proficiency and reading performance, indicating the importance of incorporating meta-linguistic awareness instruction in language education to improve students' reading abilities.

In a study conducted in 2015 by Min Lu and Hui Zhang titled "The relationship between meta-linguistic awareness, word awareness, and reading ability in junior high school students", 106 junior high school students were tested for phonological awareness, word awareness, syntactic awareness and pragmatic awareness to investigate the correlation between meta-linguistic awareness and reading ability.[88] The study found that word awareness had the greatest impact on junior high school students' reading

ability, while syntactic and pragmatic awareness followed. However, phonological awareness was not a strong predictor of reading ability in junior high school students. As a result, scholars suggest that foreign language education should focus on developing students' word awareness in order to improve their reading comprehension skills. Zhang Ying conducted a study in 2018 to examine the correlation between meta-linguistic awareness and reading motivation among junior high school students.[89] The findings indicated that higher levels of meta-linguistic awareness, including phonological awareness, word awareness, and pragmatic awareness, were positively correlated with reading motivation. This suggests that developing meta-linguistic awareness skills may also have an impact on students' motivation to engage in reading activities, which in turn can contribute to improved reading ability. In 2019, the study by Yang, Liu, and Liu provides evidence for a positive correlation between meta-linguistic awareness and reading comprehension among junior high school students in China.[90] Stronger meta-linguistic awareness, including vocabulary knowledge, morphological awareness (knowledge of word structure), and syntactic awareness, is correlated with higher levels of reading comprehension skills, like text comprehension and inferential reading. It suggests that students with a good understanding of vocabulary, word structure, and sentence structure are more likely to comprehend texts deeply and make inferences while reading. In 2021, Zheng Jiayuan conducted a study investigating the correlation between meta-linguistic awareness and English reading ability among junior high school students.[91] The study found a substantial link between junior high school students' meta-linguistic awareness and English reading proficiency. The findings revealed that word awareness and syntactic awareness were identified as significant predictors of English reading level. Hence, this study recommends that English teachers should enhance students' word awareness during the language instruction process to facilitate their better understanding of textual content.

In conclusion, the above studies highlight the crucial role of meta-linguistic awareness in junior high school students' reading ability and motivation. Factors such as word awareness, pragmatic awareness, syntactic awareness, and phonological awareness have been shown to be significant in enhancing English reading comprehension and reading ability in this age group. Developing meta-linguistic awareness skills, particularly in areas such as vocabulary, word structure, and sentence structure, may contribute to improved reading ability and motivation to read. Therefore, incorporating strategies that foster meta-linguistic awareness skills into foreign language education could potentially promote better reading skills and motivation among junior high school students in China.

2.3 Research on Trilingual Acquisition

2.3.1 The Definition of Trilingual Acquisition

The term "trilingual acquisition" is most frequently used to refer to someone who can speak or comprehend three languages, especially fluently. It differs from bilingual acquisition, which is the acquisition of additional language by monolingual speakers. As a result, trilingual acquisition is the learning of a non-native language by a language learner who has already acquired two other languages or is doing so; the acquisition of

the first two languages might be simultaneous or continuous. The degree of trilingual acquisition can be influenced by factors such as the learner's age and acquired languages. Research suggests that early exposure to multiple languages during childhood or the critical period for language development can lead to more proficient trilingual acquisition. However, individuals who start learning additional languages later in life can still achieve high levels of proficiency with consistent exposure and practice. In bilingual and multilingual settings where two or more languages are spoken, trilingual learning is frequent; it is particularly frequently seen among immigrant communities and ethnic minority language speakers.[92] Some scholars have pointed out that trilingual acquisition can involve more than two languages being taught in schools, as long as the goal is multilingualism and multiculturalism. While this definition is based on languages being taught as school subjects rather than as instructional languages, in many cases, some of these languages may still be used for instruction. Therefore, at the curriculum level, all languages must be taught as school subjects, but not necessarily all languages need to be used as instructional languages.

From the first international seminar on trilingual and multilingual acquisition held in Innsbruck, Austria in 1999, to the sixth international conference in Bozen-Bolzano, Italy in September 2009, the study of trilingual acquisition has rapidly developed. Over time, the research objectives of trilingual acquisition have become clearer, and its scope has expanded beyond linguistic theories to encompass the explanation of the language acquisition process among trilingual learners. It is no longer solely focused on describing the linguistic characteristics of trilingual learners, but also aims to explain how they acquire languages.[93] Research on trilingual acquisition is interdisciplinary and draws from various fields, including second language acquisition, modern linguistics, sociology, sociolinguistics, pedagogy, intercultural communication, and statistics. It is not solely based on linguistic theories, but incorporates insights from these diverse disciplines to gain a comprehensive understanding of trilingual language acquisition. Based on the current development of trilingual acquisition both internationally and domestically, it has emerged as an interdisciplinary and independent field of study. It incorporates insights from various disciplines and has gained recognition as a distinct area of research.

2.3.2 The Difference between Second and Third Language Acquisition

Research on second language acquisition started in the late 1960s and has since experienced significant growth. Over the past few decades, the scope of research has expanded and the questions investigated have become more in-depth, covering all aspects of second language acquisition. Two different definitions of a second language exist. Firstly, in a narrow sense, a second language refers to a language that is learned and used as a non-native language, while also being recognized legally and socially in the country where it is spoken. For example, French for English-speaking Canadians, Chinese for Tibetan-speaking minorities, etc. Secondly, in a broad sense, any language other than one's native language or first language is referred to as a second language. Ellis suggests that a neutral or superordinate term is needed to encompass a wide range of languages other than an individual's native language.[94] Ellis notes that the acquisition of languages besides the native language shares similarities and common

features. These include being acquired after the native language, being less proficient than the native language, and typically being acquired through schooling or self-learning rather than natural acquisition. The process of learning a second language after mastering a first language is examined in this field, along with how the first language affects second language acquisition and how these two aspects interact. Moreover, it also investigates the psychological states, cognitive levels, and individual differences among second language learners as they engage in the process of language learning. In 1994, Rod Ellis summarized the research on second language acquisition into four main aspects, which include:

(1). How do language learners acquire a second language?
(2). What do language learners learn from a second language?
(3). How do language learners differ in the acquisition of a second language?
(4). What is the impact of classroom teaching on the second language learning? [95]

These four aspects provide a comprehensive framework for understanding the complex and multidimensional nature of second language acquisition. Trilingual acquisition is the acquisition of one or more languages (Ln) in addition to the learner's native language (L1) and the second language (L2) that the learner has already acquired. It does not necessarily indicate mastery of all three languages, but rather the active learning of one or more additional languages in addition to the native language and a second language. Austrian scholars Philip Herdina and Ulrike Jessner have proposed the Dynamic System Theory (DST) as a psycholinguistic theoretical model for understanding trilingual and multilingual acquisition. The Dynamic System Theory (DST) integrates cognitive and social perspectives on language development and emphasizes the dynamic nature of language acquisition in a social context. In this theoretical model, the language learner is seen as a sub-dynamic system within a larger social system, and various cognitive and socio-psychological factors, such as intentionality, cognitive ability, motivation, native language, second language, etc., are considered as part of the learner's cognitive balance system. The Dynamic System Theory (DST) acknowledges that learning a new language is a complicated and dynamic process that is impacted by a number of factors, and it considers how these factors in shaping the language development trajectory of trilingual or multilingual learners. The cognitive balance system of the learner is influenced by various factors including the learner's exposure to the language, physiological maturity, level of education, as well as the social-ecological system in which the learner is situated. The learner's environment, which includes social, cultural, and ecological factors, plays an important part in shaping the cognitive balance system and subsequently impacting the language acquisition process. The Dynamic System Theory (DST) recognizes that language learning is not just an individual cognitive process, but it is also influenced by the social and ecological context in which the learner is embedded. Based on this theory, the interaction between cognitive, social, and ecological elements is highlighted, underscoring the dynamic and multidimensional aspect of language learning. Language development in trilingual acquisition is characterized by three distinct features: language attrition, language interdependence, and cognitive characteristics.

These features result from the complex influence of multiple languages on the learner's cognitive balance system, distinguishing trilingual acquisition from bilingual acquisition. Most scholars use the term "second language acquisition" as a general term that encompasses both second language acquisition in a narrow sense (acquiring a second language after the native language) and trilingual or multilingual acquisition. This is because both types of acquisition involve the process of language learning, individual differences in language learning, and aspects of language teaching. However, some scholars do acknowledge that there may be significant differences between second and third language acquisition in certain aspects.

2.3.2.1 Language Interdependence

In the process of acquiring a third language (L3), language interdependence plays a significant role, as the previously acquired languages (L1 and L2) can have an influence, either positive or negative, on the acquisition of the third language (L3).[96] This phenomenon is evident in cross-linguistic transfer, where knowledge of one language can impact the acquisition of another language, either facilitating or hindering the process. Positive cross-linguistic transfer refers to the phenomenon where knowledge of one language facilitates the acquisition of another language. For instance, if a learner has a solid foundation in their first language (L1) and second language (L2), they may be able to transfer their linguistic skills, such as grammar rules or vocabulary, to the acquisition of a third language (L3), thus expediting the language learning process. Negative cross-linguistic transfer, on the other hand, refers to the phenomenon where the structures or rules of previously acquired languages conflict with those of the target language (L3), leading to errors or interference. For instance, if the first language (L1) and second language (L2) of a learner have different word order patterns than the third language (L3), the learner may unintentionally apply the word order rules of L1 or L2 to L3, resulting in errors or interference in their language production or comprehension. In conclusion, third language acquisition (TLA) is characterized by the phenomenon of language interdependence, where previously acquired languages (L1 and L2) can influence the acquisition of a third language (L3).

2.3.2.2 Language Attrition

Language attrition is the phenomenon where bilingual learners living in a second language environment experience a degradation and loss of their native language knowledge and skills. It can also refer to the degradation and loss of second language knowledge and skills due to prolonged non-use after receiving second language instruction.[97] Firstly, the learner has a strong capacity for language acquisition, therefore, maybe he or she also has a great potential for language attrition. Secondly, in the process of trilingual acquisition, the first and second languages acquired by the learner will interfere with the learning of the third language. Due to this, trilingual learners are more likely to experience language attrition and require more energy and effort to maintain the new language than bilingual learners. If we treat third language acquisition as equivalent to second language acquisition, we may overlook the potential for language attrition and the effort required by trilingual learners to maintain their new language during the acquisition process. Furthermore, there is a correlation between the level of individual effort required during language acquisition and the extent of

language attrition experienced. When the individual effort is reduced to a certain level, the degree of language attrition tends to intensify. In the second language acquisition (SLA), learners may experience attrition in their L1 if they are immersed in a new linguistic and cultural environment where the L2 is dominant. In the third language acquisition (TLA), learners may face attrition not only in the L1 and L2, but also in previously acquired languages if they do not have opportunities to maintain and use them regularly. The risk of language attrition may increase with each additional language learned, as learners may have limited time and opportunities to maintain proficiency in multiple languages.

2.3.2.3 Cognitive Characteristics

The quality of the learner's language system is enhanced through multilingual learning, which also fosters the growth of language management, learning, and maintenance abilities. The analysis of language knowledge and the control of language processing serve as examples of how these advancements help multilingual learners' cognitive capacities improve. Study indicates that cognitive processes, including memory, attention, and executive functions, are crucial in language acquisition.[98] Learners may develop cognitive strategies for processing and storing new linguistic information in second language acquisition (SLA), and may also leverage cognitive skills from their first language (L1). In trilingual acquisition (TLA), learners may require improved cognitive flexibility and meta-linguistic awareness to effectively manage multiple languages in their repertoire. This includes the ability to switch between languages and prevent interference or confusion among them. Therefore, many studies have confirmed that trilingual acquisition can promote learners' cognitive development and learners who learn a third language after mastering the first and second languages show more cognitive advantages than learners who learn a second language based on the first language.

2.3.2.4 The Complexity of Language Transfer

Trilingual acquisition can be more complex as it involves learning three languages simultaneously, and it is influenced by variables such as the learner's age, exposure, competency, and linguistic similarities/differences among the languages being learned. This may require trilingual learners to engage in more complex psychological activities during the process of language transfer compared to bilingual learners, who are acquiring only two languages. In 2006, Jessner proposed a model for the development of multilingual proficiency.[99] This model has contributed to our understanding of how multilingual learners acquire and develop proficiency in multilingual context, and has been used as a framework for further research in the field of multilingualism.

LS1+LS2+LS3+LSn+CLIN+M=MP
LS=Language System
CLIN=Cross-linguistic interaction
M=Multilingual-factor
MP=Multilingual Proficiency

This model indicates that the learner's existing language system (first, second, third language, etc.), cross-linguistic interaction, and multilingual factors will all have an

impact on multilingual learners' language development and ultimately determine their language proficiency. In this regard, trilingual acquisition can be more complex than second language acquisition in terms of language transfer, as trilingual learners are simultaneously influenced by two acquired languages.

Firstly, the linguistic similarity of languages is one of the factors that facilitate language transfer. Hammarberg's 2001 study examined how the first language (English) and second language (German) influenced the acquisition of a third language (Swedish). The findings indicated that the roles of the first and second languages in trilingual acquisition differed from each other.[100] The first language plays the role of error correction, and the second language plays the role of instrumental assistance, but these two roles were later assumed by the third language. However, as the trilingual learner's proficiency in the third language (L3) improves, the roles of the first language (L1) and second language (L2) may shift. The L3 may gradually assume both the roles of error correction and instrumental assistance, indicating that the learner may rely less on the L1 and L2 for language assistance and correction. In 2001, Odlin highlighted that when learners are proficient in two languages, both languages can impact the acquisition of a third language through language transfer.[101] This means that existing knowledge of languages learned previously can be transferred to the third language in terms of phonetics, grammar, vocabulary, etc. Language transfer can facilitate or hinder third language acquisition depending on the linguistic similarities or differences between the languages involved, and is influenced by various factors. Thus, understanding language transfer provides insights into the complex process of trilingual acquisition.

Secondly, psychological perception also affects the transfer between languages. Learners' psychological perception of the distance between the two languages is a crucial factor that directly impacts language transfer. This means that the transfer of previous language knowledge to the target language depends on the learners' understanding of the target language. If learners perceive the two languages as similar, they are more likely to transfer their knowledge. However, if they perceive the languages as different or distant, they may be less inclined to transfer their knowledge. This perception of distance between languages can either facilitate or hinder the transfer process in trilingual acquisition, and it is an important aspect to consider in comprehending the complex dynamics of language transfer in multilingual contexts. In 2001, Cenoz conducted a study with two groups of primary school students and junior high school students who had Basque as L1, Spanish as L2, and were currently learning English as L3.[102] The study sought to examine the acquisition of content words and function words in English by trilingual learners. The research results revealed that junior high school students with prior bilingual experience in Basque and Spanish were more likely to transfer their linguistic knowledge from Spanish to the acquisition of English as a third language. This was possibly due to their developed meta-linguistic awareness, which allowed them to perceive Spanish and English as linguistically similar. This highlights the role of learners' cognitive and meta-cognitive processes in language transfer and its effect on the acquisition of a third language.

2.3.2.5 The Diversity of Language Acquisition Process

In general, there are two acquisition sequences for bilingual acquisition, the second

language is acquired after the first language (L1→L2), or the first and second languages are acquired simultaneously (L1+L2). However, trilingual acquisition shows at least four acquisition sequences, from first to second to third sequentially (L1→L2→L3); acquisition of the first language followed by simultaneous acquisition of the second and third languages (L1→L2/L3); simultaneous acquisition of the first and second languages followed by acquisition of the third language (L1/L2 →L3); and even simultaneous acquisition of the first, second and third languages (L1/L2/L3) (See Table 2.2). This different sequence of language acquisition will directly lead to cognitive differences in the learners' language learning process, thus affecting the efficiency and effectiveness of language learning.

Table 2.2 Language acquisition sequence in second and third language acquisition

Second Language Acquisition	Third Language Acquisition
1. L1→L2	1. L1→L2→L3
2. L1+L2	2. L1→L2/L3
	3. L1/L2→L3
	4. L1/L2/L3

2.3.3 Research on Trilingual Acquisition Abroad

Although the research on trilingual acquisition started relatively late, this field has attracted increasing attention from modern linguists in recent years and has become one of the hot spots in linguistic research. In 1987, Rimgbom's book "The Role of the First Language in Foreign Language Learning" was published. In this publication, trilingual acquisition research got its start by examining how learning Swedish and Finnish affected the acquisition of English as a third language. Before Rimgbom's publication in 1987, trilingual acquisition had received limited attention in linguistic research. However, Rimgbom's study paved the way for further investigation into the unique challenges and processes involved in acquiring three languages, and has since spurred growing interest and research in the field of trilingual acquisition. The Charter of Fundamental Rights of the European Union, adopted in 2000, emphasizes the importance of language diversity and requires the EU to respect it. When the European Community (EC) was established, the four official languages - French, German, Italian, and Dutch - were granted equal political status. Up to date, there are 23 official languages in the EU. However, the EU's multilingual policy goes beyond the official languages and also recognizes and respects more than 60 minority or regional languages within its member states, which underscores the EU's commitment to promoting linguistic diversity and protecting the rights of minority and regional languages within its member countries. At the 2002 annual meeting of the European Council in Barcelona, the leaders established the objective of European citizens being able to speak two foreign languages in addition to their native language. The EU's multilingual policy is interconnected through two dimensions. Firstly, individuals who are proficient in a foreign language are able to travel or relocate to another country more easily and are

often more accepting of its cultural customs and religious beliefs. Secondly, those who can speak a foreign language are generally received with greater respect and hospitality in that country. In its efforts to promote multilingualism, the EU places significance on implementing multilingual policies and encourages and supports member states in their pursuit of multilingualism. This includes promoting foreign language education and cultivating the multilingual talents. As result, the study of trilingual acquisition plays a significant part in ensuring political and economic integration in Europe, as well as supporting the diverse language policy of the EU aimed at promoting effective communication and mutual understanding among European countries.

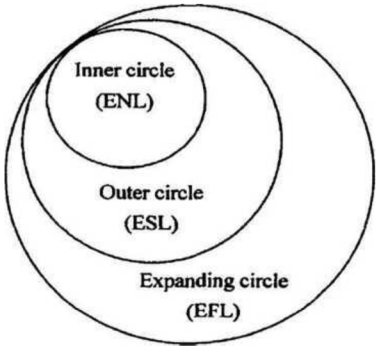
Spain's ethnic group, language and national language policy. The majority of Spain's population of over 40 million inhabitants are Castilians (in 2000, Castilians or Spaniards made up about 3/4 of the country's total population) and they speak Spanish (the country's official language). Apart from the Castilians, the country has three main ethnic groups, the Catalan, the Basque and the Galician, whose languages are Catalan, Basque and Galician respectively. The new Spanish Constitution recognizes Spanish as the country's official language and also recognizes that the various languages spoken in Spain are the common heritage of the Spanish people and must be preserved and passed on. Article 2 of the new Constitution recognizes and guarantees the autonomy of Spain's ethnic minority areas, and ethnic minority languages have the same status as Spanish as official languages within the autonomous communities. From the first year of primary school, the ethnic minority language is used as the language of instruction, with Spanish being introduced as a subject in the third or fourth year. In the fifth or sixth year, the study of foreign languages begins, and Spanish ethnic minority students have the option to choose between English and French as their third language. As a result, trilingual acquisition has gained significant popularity in the field of Spanish linguistics, leading to a substantial number of publications dedicated to this field.

"Mosaic" Multicultural Education in Canada. The Canadian federal government has issued a series of policies, regulations and measures that have contributed to multilingual education in this country. In Canada, in addition to bilingual education between English and French, there is also language education aimed at preserving minority languages and cultures of immigrants from overseas, which allows children to be educated in their own minority language. In the Canadian provinces of Monitoba, British Columbia, Saskatchewan and Alberta, minor languages such as Ukrainian, Italian, German, Hebrew, Chinese, Arabic and Polish are used as languages of instruction at a rate of up to 50%, with the aim of preventing the extinction of these minor languages. The main driving force behind Canada's multilingual education programs aimed at promoting cross-cultural and cross-linguistic communication. The success of multilingual education in Canada has contributed to national unity, surviving the constitutional crisis and avoiding national division. Mosaic multicultural education has not only contributed to the multilingual education in English and French, but has also inspired all minority groups to preserve, inherit and disseminate their unique languages and cultures, making Canada a "Mosaic" multicultural society.

With over 1.35 billion users and 350 million native speakers globally, English has emerged as a world language. It is widely utilized for communication across many

different fields, including business, education, science, technology, and interpersonal relationships. As a result, especially in multiethnic countries, English is frequently selected as a third language. Kachru's three concentric circles model serves as widely recognized framework for understanding the global spread and use of English as a foreign language (EFL). Proposed by renowned linguist Braj Kachru in the late 20th century, this model helps elucidate the diverse roles of English in different regions around the world. Kachru's three concentric circles model categorizes countries into three circles based on the role and significance of English in those countries. The model includes the Inner Circle, the Outer Circle, and the Expanding Circle (See Figure 2.8).[103] Each circle represents a group of countries where English has similar significance but is used in different ways. The Inner Circle comprises countries where English is the native language of the majority of people; the Outer Circle comprises countries where people have different native languages but use English for national and international communication; the Expanding Circle comprises countries where English is learned as a foreign language and used mainly for international communication.[104][105] The inner circle consists of countries that are the traditional base for the English language, which includes the United Kingdom, Canada, New Zealand, Australia, the United States, and Canada. In these countries, English is the official language and the most of people in these countries speak English as native language. The outer circle consists of countries that have their own native language, but English is still important in certain fields, for example in business, trade or social communication. It includes those countries that adopted English in the Second Diaspora (i.e. the former colonies of the British Empire), which are India, Pakistan, the Philippines, Egypt and a number of other countries. The extending circle consists of all the other countries of the world. The countries within the extending circle speak their own native language and English is not as important in the social, historical or official context. Examples of countries in the expanding circle include China, Brazil, Russia, Japan, and many more countries. Therefore, in these countries, English is defined as a foreign language or 'Lingua Franca' (a common language between non-native speakers), which is usually studied in schools and used to communicate with countries in both the inner and outer circles. Within these three circles, the contact of English with other languages and the spread of English within the outer and extending circles has produced a large number of trilingual speakers. Especially in Europe, English is now the primary language used for communication between native speakers and people from other European countries. For instance, one of the most unique aspects of the Luxembourg education system is the trilingual education system. Luxembourg has integrated three languages into its national education system, Luxembourgish, German and French. In pre-school education, students learn in Luxembourgish. In primary education, students transition to learning in German until lower secondary school. In upper secondary school, students are educated in French, with English as an elective language subject. Another example is, in South Tyrol, Italy, which was part of Austria and became part of Italy after the First World War, the majority of people in this region speak German and Italian and learn English as a third language at school for future work and life.

Figure 2.8 The three circles and the position of English in each circle



2.3.4 Research on Trilingual Acquisition in China

In China's ethnic minority areas, bilingual education typically involves teaching two languages, the ethnic minority language and Chinese, from primary to secondary levels. Third-year primary school students are also required to learn English, making the term "trilingual" relevant in these areas, as it denotes the ability to use three languages - the ethnic minority language, Chinese, and English.

2.3.4.1 Research on Challenges of English Education in Ethnic Minority Areas

Research in this field mainly concentrates on identifying and analyzing the challenges that affect the development of English education in ethnic minority areas. In 1998, Liao Weina conducted a study titled "A Trial of English Teaching Management in Ethnic Colleges and Universities," which proposed a series of reform measures aimed at strengthening English teaching and management in ethnic colleges and universities in China.[106] These measures included curriculum development, teacher training, culturally relevant teaching materials, improved infrastructure and resources, and appropriate evaluation and assessment methods. In the same year, the study "On the Reform of English Teaching in Ethnic Universities and Colleges in Remote Provinces," Li Shiqiang highlighted the need for reforms in English teaching in ethnic universities and colleges located in remote provinces in China.[107] He pointed out that the existing problems in English teaching could only be addressed by breaking stereotypes and implementing scientific reforms in English education. In 2002, the study "The Current Situation and Development of English Teaching Management in Ethnic Minority Areas: A Survey on English Teaching Management in Ethnic Minority Areas of Yunnan," Li Shao-ling aimed to examine the status and development of English teaching management in ethnic minority areas of Yunnan province in China.[108] Li Shao-ling highlighted the specific issues faced in English education in these areas, such as limited resources, lack of qualified teachers, and cultural and linguistic barriers. In addition, Li Shao-ling pointed out the importance of government support and policy initiatives to address the unique needs of English education in these areas. In 2003, the study "Accelerating the Balanced Development of Foreign Language Education in Western China: Raising the Level of Foreign Language Education and Paying Attention to the Foreign Language Education of Ethnic Minorities" was published. [109] In this study, the authors Yang and Duan analyzed the unbalanced development of foreign language

education in the ethnic minority areas of western China, and advocated for policy support from the national government to address this issue. They proposed measures such as increasing investment in educational resources, improving teacher training, developing culturally relevant and inclusive teaching materials to enhance the quality of foreign language education in ethnic minority areas. In their 2006 study, Jiang Quxia and Liu Quanguo, among others, analyzed the current situation of English teachers in ethnic minority areas of northwest China.[110] Jiang Quxia's study highlighted the critical issue of a significant shortage of qualified English teachers in ethnic minority areas of China, with many of them lacking a professional educational background in English. This shortage of qualified English teachers is one of the factors that hinder the development of English education in ethnic minority areas. In 2021, a recent study conducted by Liu Ming, Zhang Wei, and Wang Xin titled "Exploring the Impact of Socio-Economic Factors on English Education in Ethnic Minority Areas of China: Challenges and Strategies" aimed to investigate the influence of socio-economic factors, including poverty, migration, and access to educational resources, on the development of English education in ethnic minority areas of China.[111] This study found that socio-economic factors like poverty and migration significantly impact English education in ethnic minority areas of China. Structural barriers, such as inadequate infrastructure, limited resources, insufficient qualified teachers, and cultural differences, exacerbate the challenges faced by ethnic minority students in developing English language skills. Addressing these challenges requires targeted efforts, including improving infrastructure, increasing access to quality resources, enhancing teacher qualifications and training, as well as promoting a culturally inclusive learning environment.

In conclusion, research on English education in ethnic minority areas of China has revealed various challenges and barriers, including the shortage of English teachers, low professional quality of teachers, limited access to educational resources, poverty, migration, and cultural differences. These challenges have significantly impacted ethnic minority students' access to high-quality English education resources. Thus, further research and efforts are needed to effectively tackle these issues and promote equitable access to quality English education for all students in ethnic minority areas of China.

2.3.4.2 Research on Difficulties of Ethnic Minority Students in Learning English

The research in this field mainly focuses on analyzing the factors that contribute to the difficulties faced by ethnic minority students in learning English. According to a study conducted in 1999, Hou believed that the main factors affecting the English listening and speaking levels of ethnic minority students were phonological factors, psychological factors, limited opportunities for English listening and speaking exercises, and a lack of cultural knowledge about English-speaking countries.[112] Hou suggested implementing measures such as offering elective courses on English phonetics and the culture of English-speaking countries, as well as providing training courses for English listening and speaking to students. Furthermore, he recommended providing in-service training for English teachers in ethnic minority areas during holidays, focusing on improving their skills in reading, listening, writing, and speaking in English language, to enhance their professional expertise. In 2004, Guo Xianzhe conducted an analysis of the challenges faced by ethnic minority college students in

Qinghai in their English learning, and proposed appropriate measures to address them.[113] Guo Xianzhe believed that several factors contributed to the challenges faced by ethnic minority college students in learning English, including geographical factors, economic factors, cultural factors, and ethno-psychological factors. In 2005, Li Hua conducted an investigation on the English learning strategies employed by ethnic minority students at Minzu University of China.[114] The survey revealed that a majority of the students tended to rely on rote memory as a strategy for English learning, and preferred mechanical exercises to improve their language skills. In addition, some students lacked awareness of compensatory strategies, emotional strategies, and social strategies in English language learning. Furthermore, certain students often relied on Chinese translation strategies or ethnic language translation strategies when learning English. These factors collectively contributed to their difficulties in English learning. In 2017, Zhang, Liu, and Liu conducted a study that explored the challenges faced by ethnic minority students in rural China while learning English. The findings revealed that language barriers, limited exposure to English, cultural differences, and socio-economic challenges posed significant difficulties for these students in their English language learning journey.

In conclusion, studies on ethnic minority students' difficulties in learning English highlight challenges such as language barriers, limited exposure to English, cultural differences, socio-economic challenges, and ineffective learning strategies. Targeted interventions such as additional support, cultural and contextualized English courses, effective learning strategies, and addressing socio-economic disparities are crucial to addressing these challenges. Thus, further research and efforts are needed for inclusive and equitable English education for ethnic minority students.

2.3.4.3 Research on Motivations of Ethnic Minority Students in Learning English

Research in this field mainly focuses on investigating the motivations of ethnic minority students in learning English and the correlation with their English proficiency. China's diverse population includes 56 recognized ethnic minority groups, each with its own distinct cultural heritage, language, and religious beliefs. These unique cultural and religious factors can impact the motivation and attitude of ethnic minority students towards learning English in different ways. In 2004, Zhang Yanyan conducted a study with Xinjiang Uyghur college students as the research subjects. The study utilized a questionnaire survey to investigate the English learning situation among these students, with a focus on their emotions and motivation towards learning English as a third language.[115] The survey revealed that many students showed negative emotions and motivation towards English learning, which have a significant impact on their active engagement and learning progress. Moreover, challenges such as limited access to resources and opportunities for practice were also identified. These findings shed light on the unique English learning situation among Xinjiang Uyghur college students and have implications for English language teaching in ethnic minority areas of China. In 2006, Jiang Qiuxia and Liu Quanguo et al. conducted a study to investigate the English learning situation of ethnic minority students in northwest China.[116] The findings revealed that English learning motivation was lower among ethnic minority students in northwest China as compared to Han Chinese students in mainland China. These

students also displayed differing attitudes towards learning English culture, which may be influenced by their cultural background. Furthermore, ethnic minority students faced unique challenges in the process of learning English, which could be attributed to factors such as linguistic differences, ethno-psychology, and socioeconomic context. Yuan Yichuan's "Empirical Research on the Attitude and Motivation of Ethnic Minority Students in Learning English" is a notable study conducted in 2007 that explored the attitudes and motivations of ethnic minority students in China towards learning English.[117] The results indicated that positive learning attitudes, characterized by high motivation, active engagement, and effective learning approaches, were associated with higher levels of English proficiency. Conversely, negative learning attitudes, including low motivation, lack of engagement, and ineffective learning approaches, were linked to lower levels of English proficiency. These findings underscored the importance of cultivating positive learning attitudes in ethnic minority students to enhance their English language proficiency. In 2008, Tan Qing conducted a study analyzing the English learning motivation and emotions of Daur secondary school students, who belong to an ethnic minority group residing in northern China.[118] This study indicated that in comparison to Han Chinese students, ethnic minority students, specifically Daur secondary school students, displayed lower levels of motivation and emotions towards learning English as a third language. This study analyzed that these lower levels of motivation and emotions may be influenced by various factors, including limited exposure to English language and culture, language barriers, cultural differences, socioeconomic factors, and lack of role models and support. In a study conducted in 2015, Huang and Wang examined the motivation of Mongolian students in China towards learning English.[119] The findings revealed that factors such as interest in English, parental support, and English language proficiency significantly influenced the motivation levels of Mongolian students. The study suggested that enhancing English language proficiency and creating a supportive learning environment could improve the motivation of Mongolian students in learning English. In 2018, a study conducted by Xiong and Liu on Kazakh students in China found that factors such as parental support, teacher effectiveness, and perceived English proficiency significantly influenced the motivation and attitudes of Kazakh students towards learning English. These results highlight the significance of taking cultural and contextual elements into account when analyzing ethnic minority students' motivations and attitudes toward learning English.

Chinese scholars conducted a study on the motivations of Tibetan students in learning English from a cross-cultural perspective in 2020. These findings suggest that Tibetan students' motivations for learning English are multifaceted, encompassing both instrumental and integrative motivations, and are influenced by their cultural context. Instrumental motivation, centered around utilitarian reasons like improving job prospects and academic performance, emerges as a key motivation. Integrative motivation, which reflects the desire to integrate into the global community and communicate across cultures, is also significant for Tibetan students. Additionally, cultural factors, such as Tibetan cultural values, societal expectations, and family support, play a vital role in shaping their motivation to learn English.

In conclusion, studies on ethnic minority students' English language learning in China

have shown that positive learning attitudes are associated with higher English proficiency, while negative attitudes are linked to lower proficiency. Ethnic minority students, such as Uyghur, Daur, and Kazakh students, may exhibit lower motivation and emotions towards English learning compared to Han Chinese students. Cultural and contextual factors, such as limited exposure to English language and culture, language barriers, cultural differences, socioeconomic factors, and lack of support, can influence their motivation and difficulties in English learning. Other factors like parental support, teacher effectiveness, and perceived English proficiency also impact ethnic minority students' motivation and attitudes towards learning English. These findings emphasize the need to consider cultural and contextual factors and design effective English language teaching strategies for ethnic minority students in China.

2.3.4.4 Research on English Learning of a Particular Ethnic Minority Group

Research in this field mainly focuses on English learning among a specific ethnic minority group. China is a cohesive multi-ethnic nation with a diversified population that comprises Han Chinese as well as 55 ethnic minorities. In China, there are approximately 80 different ethnic minority languages spoken, and 53 of the 55 ethnic minority groups have their own distinct language and writing system. Based on the international classification of language families, the ethnic minority languages in China mainly belong to two language families: Sino-Tibetan languages and Altaic languages. The Sino-Tibetan language family includes Chinese, Tibetan-Burmese, Miao-Yao, Zhuang-Dong, and several other languages spoken in China and neighboring countries. The Altaic language family includes Turkic, Mongolian, and Manchu-Tungus languages spoken in China and other parts of Central Asia. Differences in language background, cultural practices, religious beliefs, and economic status of ethnic minority groups can significantly impact individual differences in learning a third language, English. For instance, the phonetic characteristics of the Altaic languages, including their vowel sounds, exhibit a greater similarity to English, which has made it comparatively easier for Mongolia learners to acquire English vowels in comparison to other students.[120] In 2006, Jin Guichun conducted a study that examined the challenges faced by Mongolian college students in Inner Mongolia Autonomous Region when learning English, and the factors that influence their English learning process. The results of Jin Guichun's study indicated that Mongolian college students identified English grammar as the most challenging aspect of English learning. However, the challenge of English listening appeared to decrease as the grade level of the students increased, suggesting a possible improvement in listening skills over time. Furthermore, the study highlighted factors such as teaching materials, learning and teaching methods, and individual effort exerted an influence on the perceived difficulty of English learning among Mongolian college students. In 2006, Liu Xuelian conducted a study on the challenges of English learning among Tibetan university students in four ethnic universities.[121] The study found that that the majority of Tibetan university students had low academic achievement in English learning, and attributed this to factors such as ethnic culture, ethnic psychology, and religious beliefs. In 2018, "Language Learning Strategies of Dai Minority College Students in China" - This study, conducted by Li and Huang, investigated the language learning strategies used by Dai minority college

students in China, and explored the correlation between their language learning strategies and English proficiency. Additionally, recent studies, such as "English Learning among Zhuang Students in Guangxi, China," have examined the English learning experiences of Zhuang students, an ethnic minority group in Guangxi, China. It concentrated on the difficulties faced by Zhuang students in developing correct phonological awareness in English, particularly in phonetics.

In conclusion, studies on English learning among specific ethnic minority groups in China, such as Mongolian, Tibetan, and Zhuang students, have shed light on the challenges they face in acquiring English skills. These challenges may include differences in phonetic characteristics, grammar, listening skills, teaching materials, learning and teaching methods, individual effort, as well as cultural, psychological, and religious factors. These studies highlight the need for tailored language education approaches that consider the distinct linguistic, cultural, and social backgrounds of these students. Thus, further research in this area can contribute to a better understanding of the specific challenges faced by ethnic minority students in China in their English language learning journey and help inform effective strategies for language education and support.

2.3.4.5 Research on the Medium for Learning Third Language English

Research in this field mainly focuses on the medium for ethnic minority students to learn the third language English. In 2008, Li Li et al. conducted two experiments to investigate how Chinese-English bilinguals acquire vocabulary in a third language.[122] The study aimed to investigate the cognitive processes involved in acquiring vocabulary in a third language, with a particular focus on bilingual individuals who have already acquired proficiency in two languages. Experiment one was conducted with balanced Chinese-English bilinguals whose third language was Japanese, while experiment two was conducted with balanced Chinese-English bilinguals whose third language was French. The research results indicated that for balanced Chinese-English bilinguals, regardless of whether their third language was Japanese or French, they predominantly used Chinese as the medium for their third language learning. However, there is another situation in which bilingual individuals learn a third language by using their second language.

Most Tibetan students in China learn a third language, English, by using their second language, Chinese. Tibetan script, also referred to as the Tibetan alphabet or Sanskrit script, is a phonetic writing system for the Tibetan language. It utilizes consonant symbols and additional marks to represent various consonant sounds, and vowel symbols for representing vowels. Chinese characters, commonly known as Hanzi, are logographic characters that represent meanings or concepts rather than single phonemes or phonetic symbols. Each Chinese character has its own unique meaning and concept, and they can be combined to form words and sentences. English is a phonetic script that uses the Latin alphabet to represent phonemes, which are the sounds of the language. In English, letters generally do not directly represent the meanings of words, but rather represent the sounds of speech that can be combined to form words and sentences. Research has revealed that Chinese and English are distinct languages with differing linguistic systems. However, they also share some similarities, including loanwords,

cognates, and grammar patterns. First, in terms of loanwords, both Chinese and English have borrowed words from other languages, where words from one language are borrowed and adopted into the other. For instance, in English, words like "kung fu" and "Tofu" are borrowed from Chinese, while in Chinese, words like "咖啡" (kāfēi, coffee) and "巧克力" (qiǎokèlì, chocolate) are borrowed from English. Second, in terms of cognates, Chinese and English also demonstrate linguistic similarities through cognates, which are words that have similar forms and meanings in both languages due to their shared linguistic origins. For instance, words such as "电话" (diànhuà, telephone) and "餐厅" (cāntīng, restaurant) exhibit similarities in both Chinese and English, with equivalent written forms and meanings in both languages. Third, while Chinese and English have different grammar structures, they do share some common patterns in terms of grammar usage. For instance, subject-verb-object (SVO) is a typical word order in both languages and both of them use this word order to communicate meaning. Therefore, many Tibetan students typically use their second language Chinese as a medium for learning English as the third language. Moreover, for those ethnic minority students whose native language is similar to Chinese in terms of grammar or vocabulary, learning English by using Chinese can provide a linguistic bridge or scaffolding, as they can leverage their existing knowledge of Chinese to facilitate the acquisition of English. In conclusion, while Chinese and English are distinct languages with their own linguistic characteristics, they do share commonalities in terms of loanwords, cognates, and grammar usage, which enables most ethnic minority students to learn the third language English by using Chinese. These similarities show the interdependence of languages in the process of language learning and acquisition and can act as a bridge for students from ethnic minorities, utilizing their prior knowledge of Chinese to facilitate their learning of English.

2.4 The Limitations of Previous Research

2.4.1 The Limitations of Research Subject

From the above literature review, we can see that most of the studies on meta-linguistic awareness have been conducted with junior high school students and university students. Studies have shown that phonological awareness is positive correlated with students' vocabulary spelling ability and phonological awareness training is crucial for enhancing students' vocabulary learning skills; word awareness is positively correlated with junior high school students' reading ability, and it can also predict students' reading levels; while syntactic awareness is positively correlated with university students or adults' writing ability. Therefore, there are fewer studies have been conducted with primary school students, especially in ethnic minority areas of China.

2.4.2 The Limitations of Research Scope

Foreign research has shown that bilingual learning promotes improvements in the quality of the learner's language system, leading to the development of language learning skills, language management skills, and language maintenance skills. These improvements, in turn, contribute to the development of learners' meta-linguistic awareness in learning a third language. However, these studies had been tested in which the first, second, and third languages belonged to the same language family (L1/L2/L3).

Because they have a high degree of linguistic similarity, tend to cause positive transfer between languages. Therefore, the general objective of this research is to test whether bilingual learners who learn the L1 Tibetan and L2 Chinese, which belong to the Sino-Tibetan language family, and followed by the L3 English, which belongs to the Indo-European language family, still show the advantages in meta-linguistic awareness (LI/L2+L3).

2.4.3 The Limitations of Research Content

At present, there is no research on the advantages of meta-linguistic awareness in third language learning for Tibetan primary school students in the context of Tibetan-Chinese bilingual education. Research on the Tibetan primary school students' third language learning have mainly focused on their motivations, attitudes and difficulties in learning English. Therefore, the advantages of meta-linguistic awareness that Tibetan students gain from the Tibetan-Chinese bilingual education haven't been fully identified and utilized.

2.4.4 The Limitations of Research Methods

The previous research on Tibetan primary school students' third language learning have mainly used the research methods like questionnaires and interviews to investigate their motivations, attitudes and difficulties in learning English. At present, there is no research on the advantages of meta-linguistic awareness in third language learning for Tibetan primary school students in the context of Tibetan-Chinese bilingual education. Therefore, the Meta-linguistic Awareness Test (MAT) hasn't been used for testing Tibetan students' meta-linguistic awareness during the process of third language learning.

2.5 The Improvements of This Research

Based on a review of previous research, it is evident that there are several limitations that need to be addressed in order to improve upon the existing body of research. This research aims to address these limitations and make significant contributions to the field. First, in terms of the research subject, this study focuses on primary school students, especially the Tibetan primary school students in ethnic minority areas of China. Second, in terms of the research scope, at present, it is unknown that whether Tibetan students have the advantages of meta-linguistic awareness in learning the third language English in the context of Tibetan-Chinese bilingual education. Since the three languages belong to different language families. Therefore, this research studies the advantages of meta-linguistic awareness based on different language families. Third, in terms of the research content, the categories of meta-linguistic awareness include phonological awareness, word awareness, and syntactic awareness. Among them, the phonological awareness includes phonetic and phonology, syllable, phonemes; the word awareness includes word ambiguity, word formation and part of speech; the syntactic awareness includes comprehension, synonymy, acceptability, and grammar function. Therefore, the specific objective of this research is to test the differences in meta-linguistic awareness among Tibetan-Chinese bilingual students with different bilingual levels when learning English as a third language. Fourth, in terms of the research method, the Meta-linguistic Awareness Test (MAT), designed by Italian psychologists, is introduced

for the first time to test Tibetan primary school students' meta-linguistic awareness during the process of third language learning. The Meta-linguistic Awareness Test (MAT) is divided into three different types. MAT-1 is suitable for testing the children aged 4-6; MAT-2 is suitable for testing students aged 9-13; MAT-3 is suitable for testing adolescents or adults aged >=16. Because the subjects of this research are fifth grade students in primary school with an age distribution between 9 and 14 years old, the MAT-2 is selected as the research instrument. Therefore, the test results will have a certain degree of international recognition.

Chapter Three Research Design

3.1 Research Hypothesis

First, according to the control and analysis theory proposed by Canadian psychologists Bialystok and Ryan, meta-linguistic awareness can be divided into two distinct processes: analyzing language knowledge, and controlling language processing. These two components of cognition are responsible for understanding language structure and accessing mental representations. In this regard, language knowledge appears to become more explicit and processing more fluent as analysis and control continue to modify the mental representations. Second, according to the threshold hypothesis proposed by Cummins, two thresholds are set to represent the two levels of bilingual ability that learners must achieve in their bilingual learning process. When learners reach the first threshold, the negative effects of bilingual learning will be avoided; when learners reach the second threshold, the positive effects of bilingual learning will be manifested, and promoting the development of bilingual learners' cognitive abilities, especially in third language learning. Third, according to the dynamic system theory proposed by Austrian scholars Herdina and Jessner, language development presents three features, language attrition, language interdependence, and cognitive characteristics. Thus, multilingual learning promotes improvements in the quality of the learner's language system, leading to the development of language learning skills, language management skills, and language maintenance skills. These improvements, in turn, contribute to the development of learners' cognitive abilities in learning a third language. The dynamic system theory further states that in the process of monolingual learning, the development of language system is always a straight-line; but in the process of multilingual learning, the development of language system is a curve rather than a straight line. Based on the above theories, ethnic minority students should have advantages of meta-linguistic awareness in learning a third language after receiving bilingual education. Therefore, there are three research hypotheses have been proposed:
(1). The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of phonological awareness in third language English learning, especially in phonetics and phonology, syllable, phonemes.

(2). The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of word awareness in third language English learning, especially in word ambiguity, word formation, and part of speech.

(3). The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of syntactic awareness in third language English learning, especially in comprehension, synonymy, acceptability and grammar function.

3.2 Research Subject

3.2.1 Selection of Sample Area

The Tibetan Autonomous Prefecture Garzê, located in western Sichuan Province, China, is an autonomous prefecture with Kangding as its capital. Kangding, a significant plateau city is renowned for its rich and diverse Tibetan cultural heritage. It serves as the central hub for political, economic, and cultural activities within the Tibetan Autonomous Prefecture Garzê. Moreover, Kangding is the main center of Tibetan settlement in this region, as the Tibetan population accounts for a significant 78.4% of the total population. The author chose Kangding as the study's sample area due to its role as the capital of Prefecture Garzê and its status as the largest Tibetan population center in Sichuan Province.

3.2.2 Selection of Sample School

Kangding Tibetan Primary school is selected as the sample school by the convenient sampling. Two reasons for this selection: first, the author had a one-year internship experience as an English teacher in Kangding Tibetan Primary school, and is familiar with the school situation and have good interpersonal relationships with school leaders and teachers, so this study is also strongly supported by them. Second, the proportion of Tibetan students in Kangding Tibetan Primary School is also the highest among all primary schools in Prefecture Garzê. Tibetan students account for 97.8% of the total number of students in this school, and most of the students were born into Tibetan-speaking families and have a good foundation in Tibetan language, which can effectively ensure the representativeness of research subjects.

3.2.3 Language Proficiency Test and Grouping

According to the distinction between balanced bilinguals and unbalanced bilinguals by Tunmer and Pratt, balanced bilinguals refer to language learners who are proficient in two languages, and the level of the two languages is equivalent; unbalanced bilinguals refer to language learners who are proficient in one of the two languages, and generally have higher native language proficiency than second language proficiency. The fifth-grade students of Kangding Tibetan primary school were selected as the research subjects, and the Student Language Assessment Scale (SLAS) was used to assess students' language proficiency in Tibetan and Chinese. According to the assessment results, 208 students were divided into two groups, the balanced Tibetan-Chinese group and the unbalanced Tibetan-Chinese group, to take the subsequent Meta-linguistic Awareness Test-2 (MAT-2) (See Table 3.1).

Table 3.1 Basic information of the two groups of samples

Items	N	Gender		Age			Ethnicity	
		M	F	9-10	11-12	13-14	Tibetan	Han
Balance Group	98	41	57	28	43	27	96	2
Unbalance Group	110	67	43	29	49	32	105	5

3.3 Research Instrument

3.3.1 The Student Language Assessment Scale (SLAS)

The Student Language Assessment Scale (SLAS) is used to assess ethnic minority students' language proficiency in China, which was designed by Chinese linguists. The Student Language Assessment Scale (SLAS) is divided into three parts: the first part is the basic information about the students, such as name, age, gender, place of birth, and ethnicity. The second and third parts are the assessment of Tibetan language proficiency and Chinese language proficiency, which consist of 10 questions. The questions in these two parts are closed-ended and each question is provided with five options to choose from. The total score of the scale is 50 points, and the score of Tibetan language assessment and Chinese language assessment are 25 points respectively. If a student's language assessment score is between 20 and 25 points is defined as proficiency. If a student's language assessment score is less than 15 points is defined as unproficiency. As the students are almost born into Tibetan language families, their Tibetan language proficiency is relatively good. Therefore, the division is mainly based on the assessment scores in their second language, Chinese.

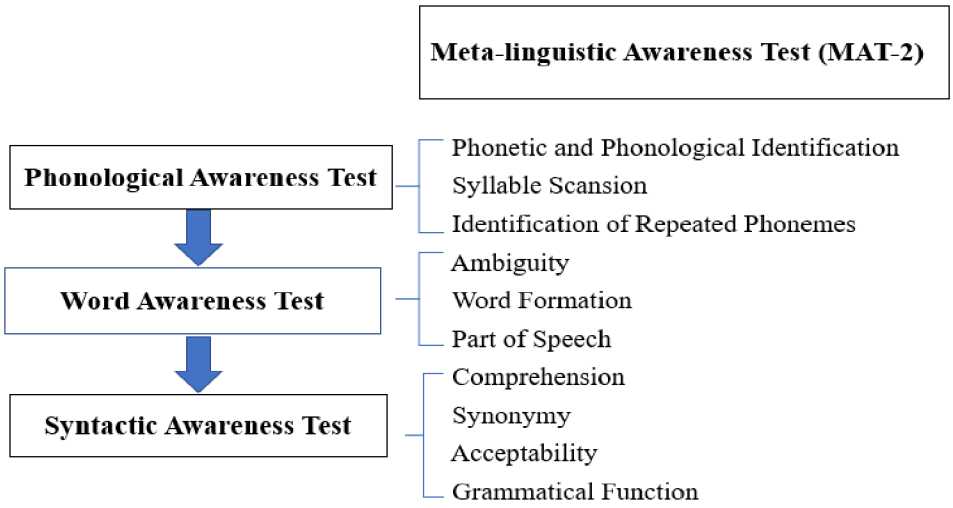
3.3.2 The Standardized English Proficiency Test (SEPT)

The Standardized English Proficiency Test (SEPT) is used as a criterion to measure students' English academic level in China, which is designed by the Ministry of Education. The Standardized English Proficiency Test (SEPT) is a test that is administered and scored in a consistent, or criterion manner. It is designed in such a way that questions and explanations are consistent, which are administered and scored in a pre-determined criterion manner. Therefore, in this research, the Standardized English Proficiency Test (SEPT) is used to test the criterion validity of MAT-2.

3.3.3 The Meta-linguistic Awareness Test-2 (MAT-2)

The Meta-linguistic Awareness Test (MAT) is used internationally to test students' meta-linguistic awareness during the language learning, which was designed by Italian psychologists Maria Antonietta Rinto, Renzo Titone, and Italian linguist Francesca Trusoo. It is the most reliable and comprehensive measure of meta-linguistic awareness. The Meta-linguistic Awareness Test (MAT) is divided into three different types. MAT-1 is suitable for testing the children aged 4-6; MAT-2 is suitable for testing students aged 9-13; and MAT-3 is suitable for testing adolescents aged >=16. Because the subjects of this research are fifth grade students in primary school with an age distribution between 9 and 14 years old, therefore, the author chose the MAT-2 as the research instrument. The Meta-linguistic Awareness Test-2 (MAT-2) consists of the three parts, the phonological awareness test, the word awareness test and the syntactic awareness test. The phonological awareness test includes phonetic and phonology, syllable, phonemes. The word awareness test includes word ambiguity, word formation and part of speech. The syntactic awareness test includes comprehension, synonymy, acceptability, and grammar function (See Figure 3.1). To ensure students' comprehension of each task, illustrative examples are provided.

Figure 3.1 The Items of MAT-2



3.3.3.1 The Phonological Awareness Test

Phonological awareness refers to the students' ability to recognize and manipulate the sound structure of words. To measure phonological awareness, a test is administered that includes three parts: the phonetic and phonological identification test, the syllable scansion test, and the identification of repeated phonemes test.

3.3.3.1.1 Phonetic and Phonological Identification Test

The phonetic and phonological identification test is designed to assess students' ability to recognize and distinguish the differences in sounds that make up spoken language. It consists of three groups of words that look similar but have different meanings, and the students are required to identify the differences in the sounds that make up each word. For example:

1. Sound/ Round

A. What makes them similar?

_____

B. What makes them different?

_____

2. Ship/ Sheep

A. What makes them similar?

_____

B. What makes them different?

_____

3.3.3.1.2 Syllable Scansion Test

The syllable scansion test is designed to assess students' ability to identify and differentiate the number of syllables in a given word. It consists of three distinct words,

each containing a different number of syllables, and students are required to differentiate the number of syllables in each word. For example:
1. Dog

How many syllables are in the word "dog"?

_____

2. Police

How many syllables are in the word "Police"?

_____

3.3.3.1.3 Identification of Repeated Phonemes Test

The identification of repeated phonemes test is designed to assess students' ability to recognize and differentiate the number of repeated phonemes in a given word. It consists of three distinct words, each containing repeated phonemes, and students are required to recognize and count the number of repeated phonemes in each word. For example:
1. Usual

A. What phoneme is repeated?

_____

B. How many times does it repeat?

_____

2. Pessimistic

A. What phoneme is repeated?

_____

B. How many times does it repeat?

_____

3.3.3.2 The Word Awareness Test

Word awareness is the recognition that a sentence is composed of individual words and the capacity to differentiate the individual words in a spoken or written sentence. To measure word awareness, a test is administered that includes three parts: the word ambiguity test, the word formation test, and the part of speech test.

3.3.3.2.1 Word Ambiguity Test

The word ambiguity test is designed to assess students' ability to identify the ambiguous word in each sentence. It consists of two sentences, each containing a word with more than one meaning, and students are required to identify the ambiguous word in each sentence, as well as the different possible meanings of the word in the given context. For example:
1. The bank did a good job.

A. What is the meaning of the word "bank" in this sentence?

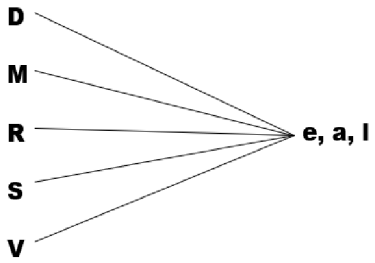
_____

B. What are the other different meanings of the word "bank"?

_____

3.3.3.2.2 Word formation Test

The word formation test is designed to assess students' ability to form new words by combining individual letters with the rest of the word. It consists of two groups of words, each containing five words, and students are required to compose the words they know. For example:



1a.

_____

_____

_____

_____

_____

3.3.3.2.3 Part of speech Test

The part of speech test is designed to assess students' ability to identify the parts of speech of words. It consists of two groups of words, each containing five words, and students are required to identify the parts of speech (verb, adjective, adverb, noun or pronoun) of the words they formed above. For example:

1b. Are they verbs, adverbs, adjectives, nouns or pronouns?

_____

_____

_____

_____

3.3.3.3 Syntactic Awareness Test

Syntactic awareness refers to the ability to reflect on the grammar structure of language, in which the students direct their attention from the meaning of the sentence to the structure of the sentence. To measure syntactic awareness, a test is administered that includes four parts: the comprehension test, the synonymy test, the acceptability test and the grammar function test.

3.3.3.3.1 Comprehension Test

The comprehension test is designed to assess students' ability to comprehend and interpret different sentence structures. It consists of seven groups of sentences, each containing two similar sentences with different grammar structures, and students are required to read and comprehend both sentences in each group, and then identify the differences in their meaning. For example:

1. The queen kissed the frog.

Who was kissed ?

_____

2. The queen was kissed by the frog.

Who was kissed ?

_____

3. The queen kissed the frog.

The queen was kissed by the frog.

Do they have the same meaning or not ?

_____

3.3.3.3.2 Synonymy Test

The synonymy test is designed to assess students' ability to recognize and understand synonyms. It consists of three groups of sentences, each containing sentences with different grammar structures that express the same meaning. Students are required to read and comprehend each sentence in the group, and then identify whether the sentences express the same meaning or not. For example:

1. The nurse was called by the doctor.

2. It’s the nurse that the doctor called.

A. Do they have the same meaning or not ?

_____

B. What makes you sure of that?

_____

3.3.3.3.3 Acceptability Test

The acceptability test is designed to assess students' ability to judge the logic and acceptability of sentences. It consists of four different sentences, each containing a statement or piece of information that may not be logically acceptable, and students are required to judge the acceptability of each sentence by determining whether the information in the sentence contradicts logic. For example.

1. The teacher was reading a story.

Can you say like this?

_____

2. The teacher was reading a hen.

Can you say like this?

_____

3.3.3.3.4 Grammar Function Test

The grammar function test is designed to assess students' ability to recognize and identify different grammatical components in a sentence. It consists of five different sentences, each containing different grammar components, such as subject, predicate, object, attributive, adverbial, etc., and students are required to distinguish the grammar components in each sentence respectively. For example:

1. Mary is combing her hair.

Who is doing the action?

_____

2. James broke the glass.

What was broken?

_____

3. Peter is a good boy.

What's being said about peter?

_____

3.4 Reliability and Validity Testing

3.4.1 Reliability

Reliability is the overall consistency of a measure in statistics and psychometrics; if a measurement consistently generates consistent findings, it is considered to have a high level of reliability.[123] Cronbach's alpha, a reliability statistic, offers a way to assess the test's internal consistency. It quantifies the level of agreement on a standardized 0 to 1 scale. Generally speaking, the Cronbach's Alpha reliability coefficient of the test is preferably above 0.8, and is acceptable between 0.7 and 0.8. According to the published data, the Cronbach's Alpha reliability coefficient of the MAT-2 is 0.807, which indicates that the MAT-2 has high reliability (See Table 3.2).[124]

Table 3.2 MAT-2 Cronbach's alpha reliability coefficient

Cronbach's Alpha	Items
0.807	10

3.4.2 Validity

Criterion validity evaluates how well a measure or test predicts an external criterion or outcome, and is an important aspect of the validity of research measures. To evaluate criterion validity, calculate the correlation coefficient between the measurement results and the criterion measurement results. A high correlation indicates that your test is measuring its intended construct. The criterion measurement in this research is the Standardized English Proficiency Test (SEPT) for fifth grade students in China. The Pearson correlation analysis between the measurement results of MAT-2 and the criterion measurement results of SEPT is to test the criterion validity of MAT-2. Therefore, the correlation coefficient is r=.478**, p<0.01, which indicates that the MAT-2 has validity (See Table 3.3).

Table 3.3 MAT-2 validity coefficients

		MAT-2 Results	SEPT Results
MAT-2 Results	Pearson Correlation	1	.478**
	Sig. (2-tailed)		.000
	N	208	208
SEPT Results	Pearson Correlation	.478**	1
	Sig. (2-tailed)	.000	
	N	208	208

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

3.5 Procedures for Data Collection

Data collection in this research is divided into three stages:
The first stage, on June 13, 2022, 9:00 am - 10:00 am. The Student Language Assessment Scale (SLAS) was used to assess students' language proficiency in Tibetan and Chinese. According to the assessment results, 208 students were divided into two groups, the balanced Tibetan-Chinese group and the unbalanced Tibetan-Chinese group, to take the subsequent Meta-linguistic Awareness Test-2 (MAT-2).

The second stage, on June 20, 2022, 9:00 a.m. - 10:30 am. The Standardized English Proficiency Test (SEPT) for fifth grade students in Kangding Tibetan primary school was held. The Pearson correlation analysis was used to analyzed the correlation coefficient between students' SEPT results and subsequent MAT-2 results to test the validity of the MAT-2.

The third stage, on June 27, 2022, 9:00 am - 10:30 am. The Meta-linguistic Awareness Test-2 (MAT-2) was used to test two groups of students' English meta-linguistic awareness, and by the descriptive statistics, the Shapiro-Wilk test, the Levene test, and the independent sample t-test to test the research hypotheses.

3.6 Procedures for Data Analysis

In this research, the author uses SPSS 28.0 to process and analyze the data.
First, the Pearson Correlation Analysis is used to test the criterion validity of the MAT-2. The Pearson correlation coefficient between the measurement and criterion measurement is sometimes called the validity coefficient, which has a value between -1 and 1. For instance, a value of -1 denotes a totally negative linear correlation between two variables, a value of 0 denotes a complete lack of a linear correlation between two variables, and a value of 1 denotes a complete positive linear correlation between two variables. Thus, the Pearson correlation analysis between the measurement results of MAT-2 and the criterion measurement results of SEPT is to test the criterion validity of MAT-2.

Second, the Descriptive Statistics is used to analyze the data of the two groups on the items of MAT-2. The Descriptive Statistics are divided into measures of central tendency and measures of variability. Measures of central tendency include the mean, median, and mode, while measures of variability include, the minimum and maximum values of the variables, kurtosis and skewness. So, the descriptive statistics in this research can be useful for two purposes: 1) to provide basic information about variables in a dataset and 2) to highlight potential relationships between variables.

Third, the Shapiro-Wilk test is used to assess how close the data of the two groups on the items of MAT-2 fit to a normal distribution. The Shapiro-Wilk test is a normality test designed to detect all departures from normality. The test rejects the hypothesis of normality when the p-value is less than or equal to 0.05. And the normality test is used

to determine whether the sample data has been drawn from a normally distributed population within some tolerance. A number of statistical tests, such as the independent samples t-test and the one-way and two-way ANOVA, require a normally distributed sample population.

Fourth, the Levene test is used to assess if the data of two groups on the items of MAT-2 have equal variances respectively. In statistics, the Levene test is an inferential statistic used to assess the equality of variances for two or more groups. If the p-value for the Levene test is greater than 0.05, then the variances are not significantly different from each other. If the p-value for the Levene test is less than or equal to 0.05, then there is a significant difference between the variances. A number of statistical tests, such as the independent samples t-test and the one-way and two-way ANOVA, require equal variance in the sample population.

Fifth, the independent samples t-test is used to test the differences between the two groups on the items of MAT-2, in order to validate the research hypotheses. The independent samples t-test in this research is used to compare the means of two independent groups on the items of MAT-2 in order to determine whether there is statistical evidence that the means of two independent groups on the items of MAT-2 are significantly different.

Chapter Four Result and Discussion

4.1 Phonological Awareness Test

Research on phonological awareness dates back to the 1960s and has centered on the correlation between learners' phonological awareness and vocabulary spelling ability. Phonological awareness refers to a learner's ability to recognize and manipulate the sound structure of words.[125] Many studies have shown that phonological awareness is a reliable predictor of later vocabulary spelling ability. Therefore, phonological awareness training is important for the improvement of vocabulary learning ability. However, scholars have different views on the development of phonological awareness. The developmental progression hypothesis states that phonological awareness acquisition is a natural development process similar to early language acquisition, and it relies on general language abilities. Conversely, the developmental independence hypothesis notes that phonological awareness development is influenced by previous language instruction and that different components of phonological awareness may develop independently of each other. English as a typical phonetic script, phonological awareness is essential for mastering its spelling principles. Thus, students can use their phonological knowledge to spell and identify words by understanding that words can be divided into single phonemes and combined to form new words. The Meta-linguistic Awareness Test-2 (MAT-2) is a measurement tool designed by the Italian psychologist Pinto, as described in his book "Metalinguistic Awareness: Theory, Development, and Measurement Tools." The phonological awareness test consists of the following aspects, the phonetic and phonological identification test, the syllable scansion test, and the identification of repeated phonemes test. Therefore, based on the Dynamic System Theory (DST) as well as the Control and Analysis Theory, there are three research hypotheses have been proposed:

A1: The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of phonological awareness in third language English learning, especially in phonetics and phonology.

A2: The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of phonological awareness in third language English learning, especially in syllable.

A3: The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of phonological awareness in third language English learning, especially in phonemes.

4.1.1 Research Result

4.1.1.1 Phonetic and Phonological Identification Test

Different languages differ in the characteristics and patterns of pronunciation, as well as in the number and nature of phonetics. Correctly identifying phonetic and phonological differences between languages can facilitate positive transfer between languages. The phonetic and phonological identification test is to assess students' ability to identify the phonetic and phonological differences from each group of words, which is a very important component of the phonological awareness measure. The following

tables show the results of the phonetic and phonological identification test for two groups of students.

Table 4.1 The descriptive statistics results of phonetic and phonological identification test

Group	*N*	*MIN*	*MAX*	*M*	*SD*
The Balanced Tibetan-Chinese Group	98	2.00	9.00	5.65	1.53
The Unbalanced Tibetan-Chinese Group	110	1.00	8.00	5.08	1.56

Table 4.2 The Shapiro-Wilk test results of phonetic and phonological identification test

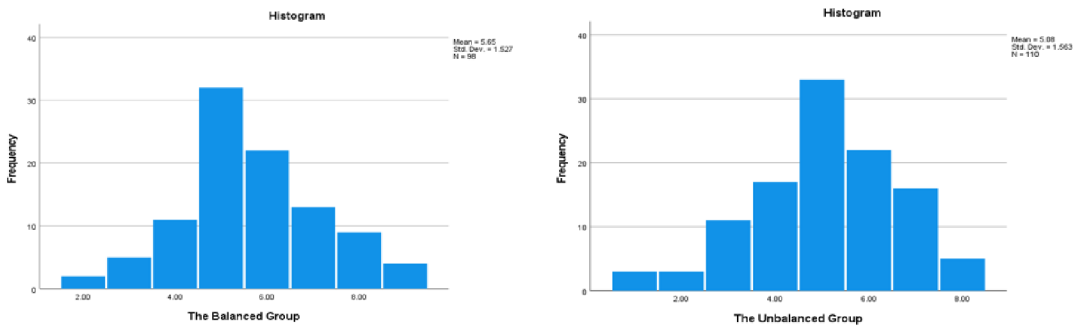


Table 4.3 The Levene's test results of phonetic and phonological identification test

Group	*F*	*Sig*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	0.40	0.84

Table 4.4 The independent sample t-test results of phonetic and phonological identification test

Group	*t*	*Sig*	*Cohen d*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	2.66	0.00	0.37

The Table 4.1 shows the minimum, maximum, mean and standard deviation of the two groups in the phonetic and phonological identification test. The descriptive statistics results are, for the balanced Tibetan-Chinese group, the minimum is 2.00, the maximum is 9.00, the mean is 5.65 and the standard deviation is 1.53; for the unbalanced Tibetan-Chinese group, the minimum is 1.00, the maximum is 8.00, the mean is 5.08 and the standard deviation is 1.56. By comparison, it is clear that the difference between the means of the two groups is 0.57. The Table 4.2 shows the results of Shapiro-Wilk test, which indicate that the results of two groups in the phonetic and phonological identification test are almost normally distributed. The Table 4.3 shows the equality of variances of the two groups in the phonetic and phonological identification test. The Levene's test results are F=0.40, P>0.05 (P=0.84), which indicate that the variance of the two groups is equal. The Table 4.4 shows the t-test analysis results are t=2.66, P<0.01 (P=0.00), Cohen d=0.37, which indicate that there is a significant difference between the two groups in the phonetic and phonological identification test.

4.1.1.2 Syllable Scansion Test

A syllable is a unit of speech sound organization that typically includes a vowel or a vowel with one or more consonants in terms of phonological structure. The syllable scansion test is to assess students' ability to correctly identify the number of syllables in a word, which is a very important component of the phonological awareness measure. The following tables show the results of the syllable scansion test for two groups of students.

Table 4.5 The descriptive statistics results of syllable scansion test

Group	*N*	*MIN*	*MAX*	*M*	*SD*
The Balanced Tibetan-Chinese Group	98	0.00	3.00	1.82	0.80
The Unbalanced Tibetan-Chinese Group	110	0.00	3.00	1.62	0.80

Table 4.6 The Shapiro-Wilk test results of syllable scansion test

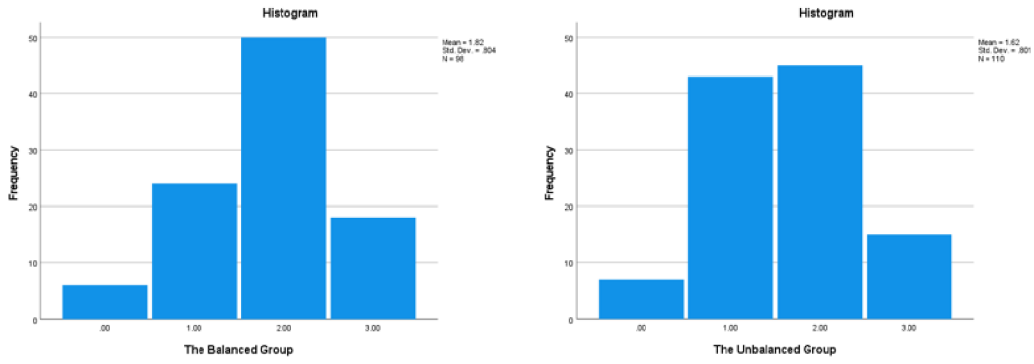


Table 4.7 The Levene's test results of syllable scansion test

Group	*F*	*Sig*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	1.13	0.29

Table 4.8 The independent sample t-test results of syllable scansion test

Group	*t*	*Sig*	*Cohen d*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	1.78	0.04	0.25

The Table 4.5 shows the minimum, maximum, mean and standard deviation of the two groups in the syllable scansion test. The descriptive statistics results are, for the balanced Tibetan-Chinese group, the minimum is 0.00, the maximum is 3.00, the mean is 1.82 and the standard deviation is 0.80; for the unbalanced Tibetan-Chinese group, the minimum is 0.00, the maximum is 3.00, the mean is 1.62 and the standard deviation is 0.80. By comparison, it is clear that the difference between the means of the two groups is 0.20. The Table 4.6 shows the results of Shapiro-Wilk test, which indicate that the results of two groups in the syllable scansion test are almost normally distributed. The Table 4.7 shows the equality of variances of the two groups in the syllable scansion test. The Levene's test results are $F=1.13$, $P>0.05$ ($P=0.29$), which indicate that the variance of the two groups is equal. The Table 4.8 shows the t-test analysis results are $t=1.78$, $P<0.05$ ($P=0.04$), Cohen $d=0.25$, which indicate that there is a significant difference between the two groups in the syllable scansion test.

4.1.1.3 Identification of Repeated Phonemes Test

Different languages differ greatly in the number of phonemes in the linguistic systems. The identification of repeated phonemes test is to assess students' ability to correctly identify the phonemes that are repeated in a word and explain how many times they are repeated, which is a very important component of the phonological awareness measure. The following tables show the results of the identification of repeated phonemes test for two groups of students.

Table 4.9 The descriptive statistics results of identification of repeated phonemes test

Group	*N*	*MIN*	*MAX*	*M*	*SD*
The Balanced Tibetan-Chinese Group	98	0.00	6.00	3.53	1.28
The Unbalanced Tibetan-Chinese Group	110	0.00	6.00	3.25	1.29

Table 4.10 The Shapiro-Wilk test results of identification of repeated phonemes test

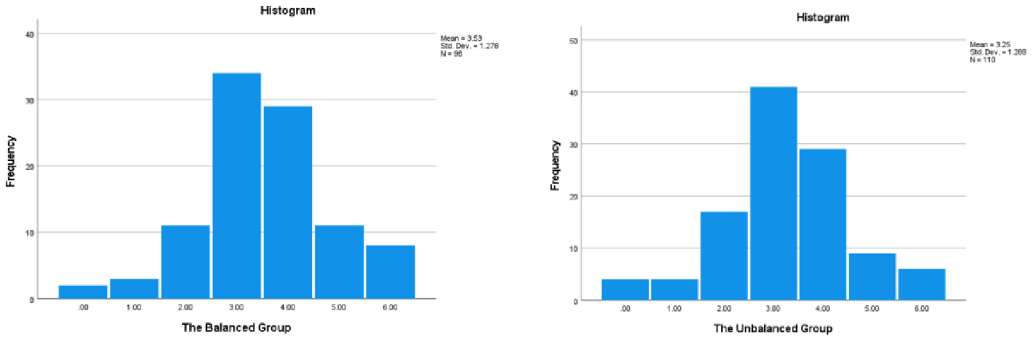


Table 4.11 The Levene's test results of identification of repeated phonemes test

Group	*F*	*Sig*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	0.09	0.77

Table 4.12 The independent sample t-test results of identification of repeated phonemes test

Group	*t*	*Sig*	*Cohen d*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	1.55	0.06	0.22

The Table 4.9 shows the minimum, maximum, mean and standard deviation of the two groups in the identification of repeated phonemes test. The descriptive statistics results are, for the balanced Tibetan-Chinese group, the minimum is 0.00, the maximum is 6.00, the mean is 3.53 and the standard deviation is 1.28; for the unbalanced Tibetan-Chinese group, the minimum is 0.00, the maximum is 6.00, the mean is 3.25 and the standard deviation is 1.29. By comparison, it is clear that the difference between the means of the two groups is 0.28. The Table 4.10 shows the results of Shapiro-Wilk test, which indicate that the results of two groups in the identification of repeated phonemes test are almost normally distributed. The Table 4.11 shows the equality of variances of the two groups in the identification of repeated phonemes test. The Levene's test results are F=0.09, P>0.05 (P=0.77), which indicate that the variance of the two groups is equal. The Table 4.12 shows the t-test analysis results are t=1.55, P>0.05 (P=0.06), Cohen d=0.22, which indicate that there is no significant difference between the two groups in the identification of repeated phonemes test.

4.1.2 Discussion and Analysis

The above results show that the balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of phonological awareness in third language English learning, especially in phonetics and phonology, syllable. However, when it comes to phonemes, there is no significant difference between the two groups. Therefore, the results are not completely consistent with the research hypotheses. The analysis and discussion of the above results can be approached from the following aspects.

Firstly, in terms of phonetic and phonological identification test, the results confirmed the research hypothesis A1. Being aware of phonetic and phonological variations across different languages is crucial for effective communication, as each language has distinct pronunciation patterns and unique sets of phonemes. By accurately recognizing these differences, language learners can improve their overall proficiency and facilitate transfer between languages. Herdina and Jessner's dynamic systems theory proposes that multilingual development is a dynamic process involving a combination of learning and unlearning mechanisms. The learning mechanisms involve the acquisition of new languages or language features, while the unlearning mechanisms involve modifying or suppressing previously acquired language features to accommodate the new languages or features. This theory suggests that the richness and complexity of the multilingual system, like the human mind, can be best explained by a combination of fixed innate principles and variable interactive aspects. The term "fixed innate principles" describes the inherent linguistic abilities that are present in all humans, while the term "variable interactive aspects" refers to the manner in which these abilities are molded and refined through exposure to linguistic encounters and interactions. Therefore, the dynamic systems theory highlights the advantages of multilingualism, including increased cognitive flexibility, meta-linguistic awareness, meta-pragmatic awareness, and sociocultural awareness. Based on this theory, the meta-linguistic abilities of a bilingual learner will generate a catalytic (extremely facilitating) effect upon learning a third or subsequent languages, which will indicate that a qualitative change in the L3 acquisition process, compared to the acquisition of an L2. This is because the meta-linguistic abilities developed through bilingualism, such as the ability to analyze and reflect on language structures, can facilitate the transfer of linguistic knowledge and skills from one language to another. In addition, according to this theory, multilingual learning promotes improvements in the quality of the learner's language system, leading to the development of language learning skills, language management skills, and language maintenance skills. These improvements, in turn, contribute to the development of the learners' meta-linguistic awareness when learning a third language. It is worth noting that learners' meta-linguistic awareness is influenced by their language proficiency in each language. As learners become more proficient in previously acquired languages, their meta-linguistic awareness enabling them to engage in higher-order thinking about language and apply their meta-linguistic knowledge to support their language learning and language use in a third language. The results of this test confirmed this theory.

Secondly, in terms of syllable scansion test, the results confirmed the research

hypothesis A2. Different syllables make different words, students need to correctly identify the number of syllables in a word. The phonological definition of a vowel is that it is a syllabic sound, serving as the peak of a syllable. The number of vowel sounds in a word, as determined by its phonetic form, typically determines the number of syllables it contains. In most cases, a syllable is comprised of either a single vowel or a combination of a vowel and one or more consonants. Therefore, syllable scansion is to assess students' ability to analyze syllables in a word, which relates to the analysis of language knowledge. According to the control and analysis theory proposed by Bialystok, the processing of language by meta-linguistic awareness is divided into two processes: the analysis of language knowledge and the control of language processing. The analysis of language knowledge is the skill responsible for constructing, organizing and interpreting learner's implicit language knowledge, and it plays a role in tasks that need to analyze and understand language knowledge. Bialystok believes that bilingual students have experience in dealing with two different linguistic systems that this experience, in her words, accelerates the extraction of abstract linguistic structures, rules or concepts. In addition, this advantage is only for bilingual students whose knowledge of both languages has been analyzed, which means that bilingual students with limited knowledge of one language will lack this advantage. Therefore, Bialystok notes that in tasks requiring analysis, only bilingual students who are proficient in both languages showed an advantage, and the results of this test confirmed this theory.

Thirdly, in terms of identification of repeated phonemes test, the results didn't confirm the research hypothesis A3. Perhaps the reasons can be analyzed from the following aspects. First, Chinese and English have notable linguistic differences. Chinese is a tonal language with 23 consonant sounds and 36 vowel sounds, whereas English is an intonation language with 24 consonant sounds and 20 vowel sounds. For example, in Chinese, there are four main tones, which can change the meaning of a word even if the consonants and vowels is the same. For example, the word "ma" pronounced with a first tone (high) means "mother", a second tone (rising) means "hemp", a third tone (falling-rising) means "horse", and a fourth tone (falling) means "curse". In contrast, English is not a tonal language, so changes in tone are not used to differentiate the meaning of words. Second, Chinese has no difference in vowel length, while English has a distinction between long and short vowels. Therefore, many Chinese speakers usually have great difficulty distinguishing between the word 'beat' and 'bit' as well as 'fool' and 'full'. Because most Chinese speakers cannot hear the difference between long and short vowels, and they have difficulty pronouncing these vowel sounds as well. Third, the English linguistic system has several consonant sounds that do not exist in Chinese. Many Chinese speakers struggle with /v/ and /w/, because these sounds do not exist in Chinese linguistic system. Therefore, many Chinese speakers have difficulty learning how to make these new sounds with their mouths and tongue placement. Fourth, there are almost no consonants at the end of Chinese syllables. But in English, it is common to have consonant clusters at the end of a word, such as "fast" and "and". Therefore, many Chinese speakers place too much emphasis on the final consonants of a word that "fast" becomes "faster" and "and" becomes " anda"; as a result, they add an extra syllable. Other Chinese speakers want to sound more fluent, so they accidentally

leave out the last consonant or syllable, with "fast" becomes "fas" and "government" becomes "govment." As a result, Chinese speakers may find it more difficult to produce and comprehend English words that end with consonant clusters, as the absence of such clusters in Chinese makes it challenging for them to distinguish between the individual consonant sounds. After analysis, the above factors are the reasons why there is no significant difference between the two groups in the identification of repeated phonemes test. The results of this test didn't confirm the research hypothesis A3.

4.1.3 Summary

The above results confirm that even though the three languages belong to different language families (Tibetan, Sino-Tibetan language family; Chinese, Sino-Tibetan language family; English, Indo-European language family), bilingual learners who are proficient in two languages still show more cognitive advantages in meta-linguistic awareness, especially in terms of phonological awareness when learning a third language, as compared to those who are not proficient. These advantages are primarily evident in measures of phonetics and phonology, syllable. However, when it comes to phonemes, there is no significant difference between the two groups.

4.2 Word Awareness Test

Research on word awareness dates back to the 1980s and has centered on the correlation between learners' word awareness and reading ability. Word awareness refers to both the recognition that a sentence or phrase is comprised of individual words, as well as the capacity to manipulate words within a phrase or sentence. This manipulation can involve playing with compound words, identifying rhyming words, counting syllables, recognizing alliteration, segmenting sentences into individual words, and identifying syllables within a given word. By increasing word awareness, individuals can experience an immediate improvement in phonological awareness. This is due to the fact that both word awareness and phonological awareness involve the analysis and processing of language units, such as words, syllables, and phonemes. In fact, some studies suggest that "words" may be the most significant component of phonological awareness. Thus, phonological awareness and word awareness work together to assist language learners in processing, comprehending, and utilizing the individual components of the language. This is particularly essential when it comes to developing reading skills. Learning to read requires both establishing control over the essential information and formal components of language to extract meaning, as well as recognizing the characteristics and functions of reading.[126] Many studies have demonstrated that deficiencies in any of these areas are correlated with lower literacy rates, highlighting the connection between reading ability and word awareness. The Meta-linguistic Awareness Test-2 (MAT-2) is a measurement tool designed by the Italian psychologist Pinto, as described in his book "Metalinguistic Awareness: Theory, Development, and Measurement Tools." The word awareness test consists of the following aspects, the word ambiguity test, the word formation test, and the part of speech test. Therefore, based on the Threshold Hypothesis as well as the Control and Analysis Theory, there are three research hypotheses have been proposed:

B1: The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness

than the unbalanced Tibetan-Chinese group in terms of word awareness in third language English learning, especially in word ambiguity.

B2: The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of word awareness in third language English learning, especially in word formation.

B3: The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than unbalanced Tibetan-Chinese group in terms of word awareness in third language English learning, especially in part of speech.

4.2.1 Research Result

4.2.1.1 Word Ambiguity Test

Word ambiguity means it has more than one interpretation, explanation or meaning in the language to which the word belongs, especially if that meaning cannot be determined from its context. The word ambiguity test is to assess students' ability to distinguish the ambiguous word in each sentence respectively, which is a very important component of the word awareness measure. The following tables show the results of the word ambiguity test for two groups of students.

Table 4.13 The descriptive statistics results of word ambiguity test

Group	*N*	*MIN*	*MAX*	*M*	*SD*
The Balanced Tibetan-Chinese Group	98	0.00	6.00	3.19	1.49
The Unbalanced Tibetan-Chinese Group	110	0.00	6.00	2.85	1.39

Table 4.14 The Shapiro-Wilk test results of word ambiguity test

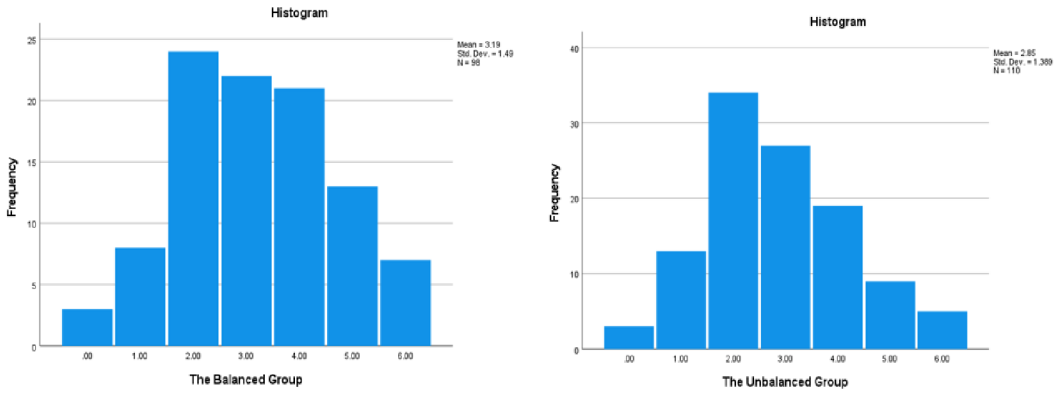


Table 4.15 The Levene's test results of word ambiguity test

Group	*F*	*Sig*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	0.94	0.34

Table 4.16 The independent sample t-test results of word ambiguity test

Group	*t*	*Sig*	*Cohen d*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	1.75	0.04	0.24

The Table 4.13 shows the minimum, maximum, mean and standard deviation of the two groups in the word ambiguity test. The descriptive statistics results are, for the balanced Tibetan-Chinese group, the minimum is 0.00, the maximum is 6.00, the mean is 3.19 and the standard deviation is 1.49; for the unbalanced Tibetan-Chinese group, the minimum is 0.00, the maximum is 6.00, the mean is 2.85 and the standard deviation is 1.39. By comparison, it is clear that the difference between the means of the two groups is 0.34. The Table 4.14 shows the results of Shapiro-Wilk test, which indicate that the results of two groups in the word ambiguity test are almost normally distributed. The Table 4.15 shows the equality of variances of the two groups in the word ambiguity test. The Levene's test results are F=0.94, P>0.05 (P=0.34), which indicate that the variance of the two groups is equal. The Table 4.16 shows the t-test analysis results are t=1.75, P<0.05 (P=0.04), Cohen d=0.24, which indicate that there is a significant difference between the two groups in the word ambiguity test.

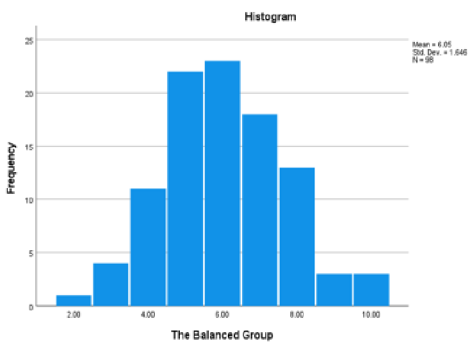
4.2.1.2 Word Formation Test

Word formation means the process by which words can be changed, or new words created in a particular language. The word formation test is to assess students' ability to form a word by connecting the individual letters with the rest of the word, which is a very important component of the word awareness measure. The following tables show the results of the word formation test for two groups of students.

Table 4.17 The descriptive statistics results of word formation test

Group	*N*	*MIN*	*MAX*	*M*	*SD*
The Balanced Tibetan-Chinese Group	98	2.00	10.00	6.05	1.65
The Unbalanced Tibetan-Chinese Group	110	2.00	10.00	5.07	1.57

Table 4.18 The Shapiro-Wilk test results of word formation test



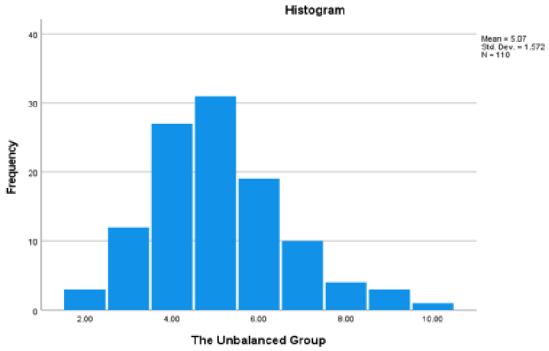


Table 4.19 The Levene's test results of word formation test

Group	*F*	*Sig*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	0.50	0.48

Table 4.20 The independent sample t-test results of word formation test

Group	*t*	*Sig*	*Cohen d*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	4.38	0.00	0.61

The Table 4.17 shows the minimum, maximum, mean and standard deviation of the two groups in the word formation test. The descriptive statistics results are, for the balanced Tibetan-Chinese group, the minimum is 2.00, the maximum is 10.00, the mean is 6.05 and the standard deviation is 1.65; for the unbalanced Tibetan-Chinese group, the minimum is 2.00, the maximum is 10.00, the mean is 5.07 and the standard deviation is 1.57. By comparison, it is clear that the difference between the means of the two groups is 0.98. The Table 4.18 shows the results of Shapiro-Wilk test, which indicate that the results of two groups in the word formation test are almost normally distributed. The Table 4.19 shows the equality of variances of the two groups in the word formation test. The Levene's test results are F=0.50, P>0.05 (P=0.48), which indicate that the variance of the two groups is equal. The Table 4.20 shows the t-test analysis results are t=4.38, P<0.01 (P=0.00), Cohen d=0.61, which indicate that there is a significant difference between the two groups in the word formation test.

4.2.1.3 Part of Speech Test

Part of speech refers to a class of words with similar grammar properties. The part of

speech test is to assess students' ability to identify the parts of speech (verb, adjective, adverb, noun or pronoun) of the words they formed above, which is a very important component of the word awareness measure. The following tables show the results of the part of speech test for two groups of students.

Table 4.21 The descriptive statistics results of part of speech test

Group	*N*	*MIN*	*MAX*	*M*	*SD*
The Balanced Tibetan-Chinese Group	98	2.00	10.00	5.22	1.93
The Unbalanced Tibetan-Chinese Group	110	2.00	9.00	4.85	1.60

Table 4.22 The Shapiro-Wilk test results of part of speech test

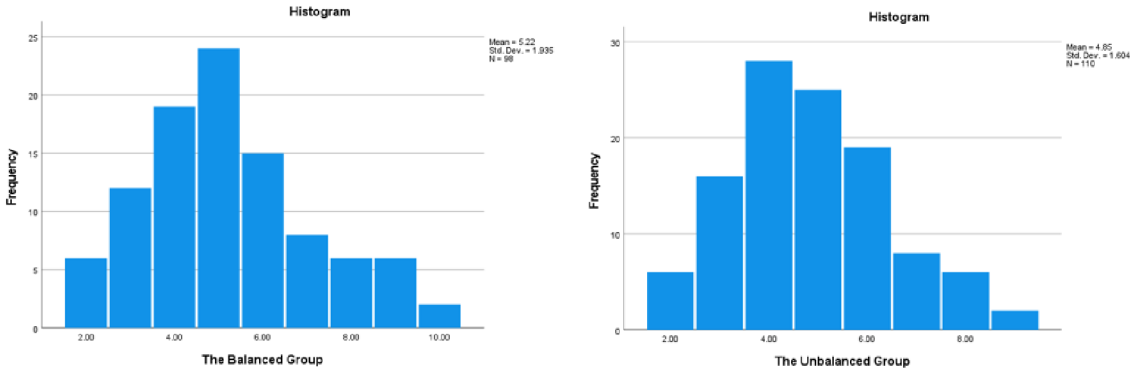


Table 4.23 The Levene's test results of part of speech test

Group	*F*	*Sig*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	2.75	0.10

Table 4.24 The independent sample t-test results of part of speech test

Group	*t*	*Sig*	*Cohen d*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	1.54	0.06	0.21

The Table 4.21 shows the minimum, maximum, mean and standard deviation of the two groups in the part of speech test. The descriptive statistics results are, for the balanced Tibetan-Chinese group, the minimum is 2.00, the maximum is 10.00, the mean is 5.22 and the standard deviation is 1.93; for the unbalanced Tibetan-Chinese group, the minimum is 2.00, the maximum is 9.00, the mean is 4.85 and the standard deviation is 1.60. By comparison, it is clear that the difference between the means of the two groups is 0.37. The Table 4.22 shows the results of Shapiro-Wilk test, which indicate that the results of two groups in the part of speech test are almost normally distributed. The Table 4.23 shows the equality of variances of the two groups in the part of speech test. The Levene's test results are F=2.75, P>0.05 (P=0.10), which indicate that the variance of the two groups is equal. The Table 4.24 shows the t-test analysis results are t=1.54, P>0.05 (P=0.06), Cohen d=0.21, which indicate that there is no significant difference between the two groups in the part of speech test.

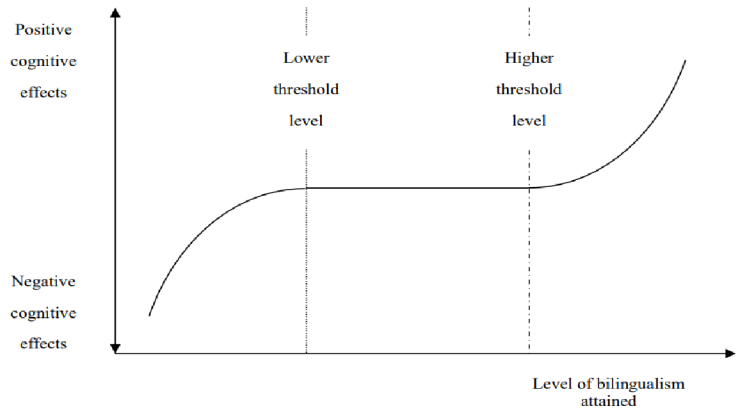
4.2.2 Discussion and Analysis

The above results show that the balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of word awareness in third language English learning, especially in word ambiguity, word formation. However, when it comes to part of speech, there is no significant difference between the two groups. Therefore, the results are not completely consistent with the research hypotheses. The analysis and discussion of the above results can be approached from the following aspects.

Firstly, in terms of word ambiguity test, the results confirmed the research hypothesis B1. The word ambiguity test requires students to engage their cognitive abilities to identify ambiguous words in sentences with multiple meanings, analyzing the context, and choosing the correct meaning to improve comprehension and communication skills. According to the threshold hypothesis, there may be a minimum degree of bilingualism that students must reach in order to benefit from and prevent negative effects on their cognitive development (See Figure 4.1).[127] Cummins divided the language level of bilingual learners into three levels, and explained the relationship between each level and their cognitive development. The low level means that bilingual learners who are not proficient in both languages, and this language state will have a negative effect on their cognitive development; in other words, if Tibetan students are not proficient in Tibetan and Chinese, this language state will inevitably have a negative effect on their cognitive development. The intermediate level means that the bilingual learners who are proficient in one of the two languages, and this language state will have no effect on their cognitive development, i.e., it neither facilitates nor hinders the cognitive development of bilingual learners; that is to say, if Tibetan students are proficient in either Tibetan or Chinese, this language state will have no effect on their cognitive development. The high level means that bilingual learners who are proficient in two or more languages, and this language state will promote their cognitive development; in other words, if Tibetan students are proficient in Tibetan, Chinese, or more languages, this language state will have a positive effect on their cognitive development. The results of this test indicated that there was a significant difference between the balanced bilingual group and the unbalanced group on the word ambiguity test, and the balanced

group performed better than the unbalanced group. Based on the threshold hypothesis, the bilingual level of the balanced group had reached the second threshold and therefore showed a higher cognitive advantage in third language learning; the bilingual level of the unbalanced group still remained at the first threshold and therefore this language state had neither a positive nor a negative effect on their cognitive development. The threshold hypothesis can help explain how a student's bilingual level affects their cognitive development. The results of this test confirmed this theory.

Figure 4.1 The cognitive effect in the threshold hypothesis



Secondly, in terms of word formation test, the results confirmed the research hypothesis B2. The word formation test assesses students' ability to analyze the components of a word, such as the initial, root, and suffix of a linguistic unit. This understanding of the building blocks of language can enhance their language skills by developing a deeper comprehension of language structure. Therefore, word formation is to assess students' ability to analyze components of a word, which relates to the analysis of language knowledge. Bialystok's control and analysis theory notes that the ability to analyze language knowledge improves as mental representations develop. The construction of mental representations is a continuous process that occurs in three recognizable stages or levels: conceptual, formal, and symbolic representations. Conceptual representations are the most fundamental level of mental representation, providing the initial understanding of an object or concept.[128] The relationship between "dog and bone" is based on conceptual representations linked through meaning, whereas the relationship between "dog and cat" is based on formal representations linked taxonomically. Symbolic representations differ from the previous levels (conceptual and formal) in that they are organized by utilizing a system of categories and notational language to represent complex ideas and concepts.[129] For example, dog, cat and bone are symbolic because they are nouns. These representations explain how the linguistic knowledge of the learner is stored, presented explicit, and connected to other forms of knowledge. Therefore, this theory states that in tasks requiring analysis, which involves detailed language knowledge and highly demands for analysis of mental representation, only bilingual students who are proficient in both languages showed an advantage. Based on

this theory, students in the balanced bilingual group have an advantage in analyzing language knowledge and will continue to demonstrate this advantage in tasks that requiring analysis when learning a third language. The results of this test confirmed this theory.

Thirdly, in terms of part of speech test, the results didn't confirm the research hypothesis B3. Perhaps the reasons can be analyzed from the following aspects. First, in Chinese, the function of a word in a sentence is often determined by its position within the sentence, rather than its part of speech. This means that in Chinese, it is possible to convey meaning and grammatical function without necessarily identifying the part of speech of each word. Second, in English, we would say "the red apple" to indicate that the adjective "red" modifies the noun "apple." In Chinese, however, the adjective "红" (hóng), meaning "red," is simply placed before the noun "苹果" (píngguǒ), meaning "apple," to indicate that it is being described. Third, Chinese uses the particle (auxiliary word) and other grammatical structures to indicate tense and grammatical functions, rather than relying on verb changes as in English. For example, in Chinese, the particle (auxiliary word) "了" (le) can be used to indicate the completion of an action. It is often placed at the end of a sentence or verb phrase to indicate that the action has taken place or has been completed. Fourth, it is generally believed that an important difference between English and Chinese lies in hypotaxis and parataxis. Hypotaxis is a grammatical arrangement where a subordinate clause or phrase is used to modify or complete the meaning of a main clause; this creates a hierarchical relationship between the clauses or phrases, with one being functionally more important than the other; an example of hypotaxis is when one syntactic unit is subordinated to another in a complex sentence.[130] Parataxis uses coordinating conjunctions or no conjunctions at all to create short, simple sentences, in contrast to the complex structures of hypotaxis and syntaxis, which use subordinating conjunctions.[131] In fact, English focuses on hypotaxis, which uses syntactic devices or lexical devices to achieve internal connections or connections between sentences; while Chinese focuses on parataxis, which uses semantic connection to achieve internal connection or connection between sentences. In English, the connection between the components of a sentence or between sentences often uses appropriate connectives to indicate its complete structure; but in Chinese, the connection between the components of a sentence or between sentences depends on semantics. Thus, in Chinese language education, students are able to make correct words and complete sentences without analyzing the part of speech of a word or the grammatical components of a sentence. However, in English learning, mastering part of speech is crucial to determine the correct definition of words and make sentences conform to grammatical rules. Therefore, due to the unique linguistic structure of Chinese, students have not formed an awareness of part-of-speech learning. After analysis, the above factors are the reasons why there is no significant difference between the two groups in the part of speech test. The results of this test didn't confirm the research hypothesis B3.

4.2.3 Summary

The above results confirm that even though the three languages belong to different language families (Tibetan, Sino-Tibetan language family; Chinese, Sino-Tibetan

language family; English, Indo-European language family), bilingual learners who are proficient in two languages still show more cognitive advantages in meta-linguistic awareness, especially in terms of word awareness when learning a third language, as compared to those who are not proficient. These advantages are primarily evident in measures of word ambiguity and word formation. However, when it comes to part of speech, there is no significant difference between the two groups.

4.3 Syntactic Awareness Test

Research on syntactic awareness dates back to the 1980s and has centered on the correlation between learners' syntactic awareness and writing ability. Syntactic awareness is the ability to reflect on the grammar structure of language, in which the learner directs their attention from the meaning of the sentence to the structure of the sentence. Syntactic awareness is also a student's ability to engage in mental representations related to the structural aspects of language. This includes applying inference and pragmatic rules, which can be assessed through tasks that involve correcting sentences with word order violations.[132] Linguists define syntax as the collection of rules that determine how words are arranged to form longer, more meaningful units such as phrases, clauses, and sentences; as a result, developing a strong understanding of syntax is crucial for building a solid foundation in structural language knowledge.[133] Syntactic awareness and syntactic knowledge have been found to be relevant and helpful in improving the student's writing ability. They are related but separate concepts. Syntactic awareness assesses a student's meta-linguistic ability to manipulate language as an object, whereas syntactic knowledge evaluates their proficiency in understanding and producing different grammatical structures within a sentence. Therefore, syntactic awareness, as a meta-linguistic ability, is not developed independently of syntactic knowledge. Advanced syntactic knowledge can correlate with more developed syntactic awareness in students. In essence, these two concepts are intertwined and improving one can potentially enhance the other. The Meta-linguistic Awareness Test-2 (MAT-2) is a measurement tool designed by the Italian psychologist Pinto, as described in his book "Metalinguistic Awareness: Theory, Development, and Measurement Tools." The word awareness test consists of the following aspects, the comprehension test, the synonymy test, the acceptability test and the grammar function test. Therefore, based on the Control and Analysis theory, there are four research hypotheses have been proposed:

C1: The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of syntactic awareness in third language English learning, especially in comprehension.

C2: The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of syntactic awareness in third language English learning, especially in synonymy.

C3: The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than unbalanced Tibetan-Chinese group in terms of syntactic awareness in third language English learning, especially in acceptability.

C4: The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness

than unbalanced Tibetan-Chinese group in terms of syntactic awareness in third language English learning, especially in grammar function.

4.3.1 Research Result

4.3.1.1 Comprehension Test

Comprehension involves the ability to comprehend and interpret the meaning or concepts conveyed by words. The comprehension test is to assess students' ability to correctly understand the meaning of sentences with different grammar structures, which is a very important component of the syntactic awareness measure. The following tables show the results of the comprehension test for two groups of students.

Table 4.25 The descriptive statistics results of comprehension test

Group	*N*	*MIN*	*MAX*	*M*	*SD*
The Balanced Tibetan-Chinese Group	98	2.00	7.00	4.71	1.39
The Unbalanced Tibetan-Chinese Group	110	1.00	7.00	4.13	1.56

Table 4.26 The Shapiro-Wilk test results of comprehension rest

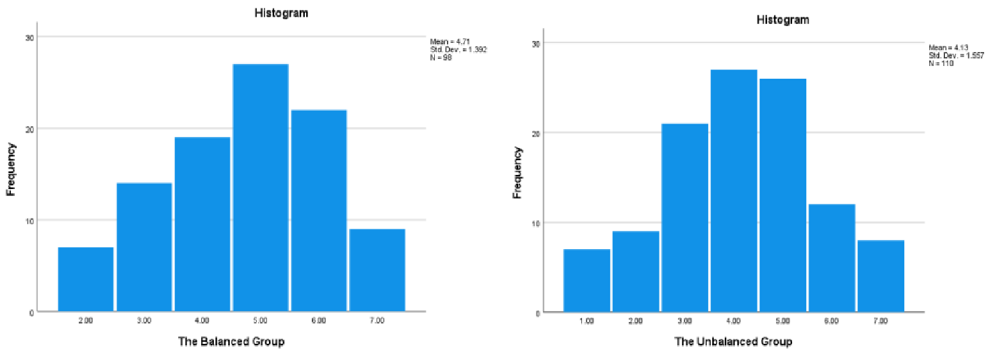


Table 4.27 The Levene's test results of comprehension rest

Group	*F*	*Sig*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	0.50	0.48

Table 4.28 The independent sample t-test results of comprehension test

Group	*t*	*Sig*	*Cohen d*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	2.85	0.00	0.40

The Table 4.25 shows the minimum, maximum, mean and standard deviation of the two groups in the comprehension test. The descriptive statistics results are, for the balanced Tibetan-Chinese group, the minimum is 2.00, the maximum is 7.00, the mean is 4.71 and the standard deviation is 1.39; for the unbalanced Tibetan-Chinese group, the minimum is 1.00, the maximum is 7.00, the mean is 4.13 and the standard deviation is 1.56. By comparison, it is clear that the difference between the means of the two groups is 0.58. The Table 4.26 shows the results of Shapiro-Wilk test, which indicate that the results of two groups in the comprehension test are almost normally distributed. The Table 4.27 shows the equality of variances of the two groups in the comprehension test. The Levene's test results are F=0.50, P>0.05 (P=0.48), which indicate that the variance of the two groups is equal. The Table 4.28 shows the t-test analysis results are t=2.85, P<0.01 (P=0.00), Cohen d=0.40, which indicate that there is a significant difference between the two groups in the comprehension test.

4.3.1.2 Synonymy Test

Synonymy refers to the semantic qualities or relationships that exist between words or sentences with closely related meanings. The synonymy test is to assess students' ability to correctly distinguish the meaning of sentences with different grammar structures, which is a very important component of the syntactic awareness measure. The following tables show the results of the synonymy test for two groups of students.

Table 4.29 The descriptive statistics results of synonymy test

Group	*N*	*MIN*	*MAX*	*M*	*SD*
The Balanced Tibetan-Chinese Group	98	0.00	3.00	1.79	0.83
The Unbalanced Tibetan-Chinese Group	110	0.00	3.00	1.54	0.76

Table 4.30 The Shapiro-Wilk test results of synonymy test

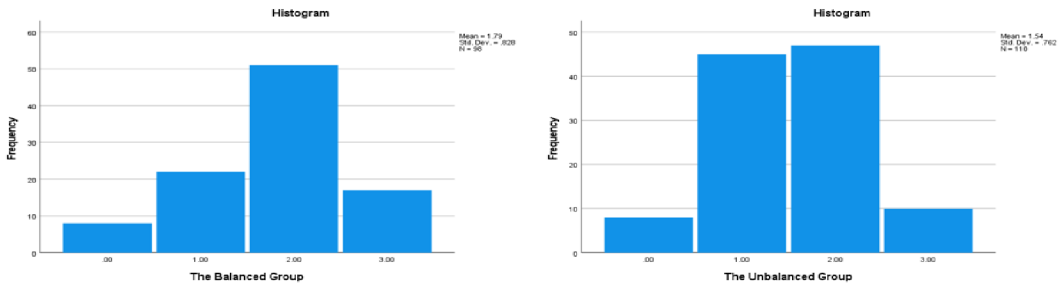


Table 4.31 The Levene's test results of synonymy test

Group	*F*	*Sig*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	0.09	0.77

Table 4.32 The independent sample t-test results of synonymy test

Group	*t*	*Sig*	*Cohen d*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	2.26	0.01	0.31

The Table 4.29 shows the minimum, maximum, mean and standard deviation of the two groups in the synonymy test. The descriptive statistics results are, for the balanced Tibetan-Chinese group, the minimum is 0.00, the maximum is 3.00, the mean is 1.79 and the standard deviation is 0.83; for the unbalanced Tibetan-Chinese group, the minimum is 0.00, the maximum is 3.00, the mean is 1.54 and the standard deviation is 0.76. By comparison, it is clear that the difference between the means of the two groups is 0.25. The Table 4.30 shows the results of Shapiro-Wilk test, which indicate that the results of two groups in the synonymy test are almost normally distributed. The Table 4.31 shows the equality of variances of the two groups in the synonymy test. The Levene's test results are F=0.09, P>0.05 (P=0.77), which indicate that the variance of the two groups is equal. The Table 4.32 shows the t-test analysis results are t=2.26, P<0.05 (P=0.01), Cohen d=0.31, which indicate that there is a significant difference between the two groups in the synonymy test.

4.3.1.3 Acceptability Test

Acceptability refers to a quality that meets the standards for approval or agreement. The acceptability test is to assess students' ability to judge whether the information presented in a sentence contradicts the underlying logic, which is a very important component of the syntactic awareness measure. The following tables show the results of the acceptability test for two groups of students.

Table 4.33 The descriptive statistics results of acceptability test

Group	*N*	*MIN*	*MAX*	*M*	*SD*
The Balanced Tibetan-Chinese Group	98	1.00	4.00	2.64	0.90
The Unbalanced Tibetan-Chinese Group	110	1.00	4.00	2.36	0.86

Table 4.34 The Shapiro-Wilk test results of acceptability test

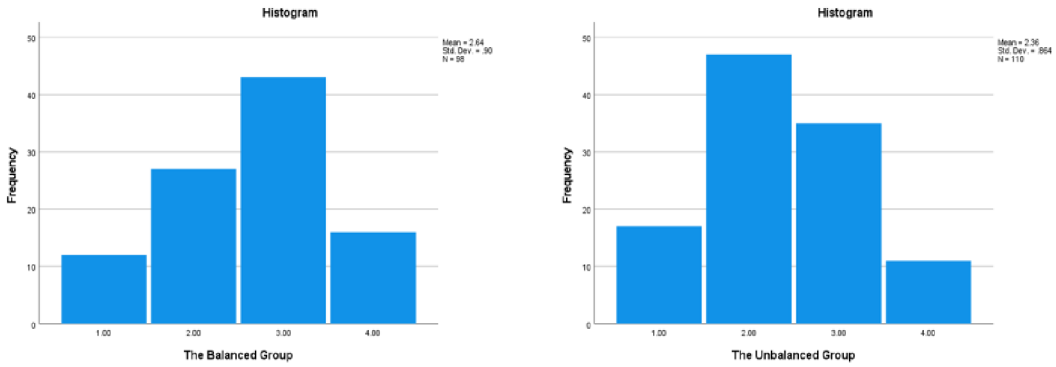


Table 4.35 The Levene's test results of acceptability test

Group	*F*	*Sig*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	0.14	0.71

Table 4.36 The independent sample t-test results of acceptability test

Group	*t*	*Sig*	*Cohen d*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	2.28	0.01	0.32

The Table 4.33 shows the minimum, maximum, mean and standard deviation of the two groups in the acceptability test. The descriptive statistics results are, for the balanced Tibetan-Chinese group, the minimum is 1.00, the maximum is 4.00, the mean is 2.64 and the standard deviation is 0.90; for the unbalanced Tibetan-Chinese group, the minimum is 1.00, the maximum is 4.00, the mean is 2.36 and the standard deviation is 0.86. By comparison, it is clear that the difference between the means of the two groups is 0.28. The Table 4.34 shows the results of Shapiro-Wilk test, which indicate that the results of two groups in the acceptability test are almost normally distributed. The Table 4.35 shows the equality of variances of the two groups in the acceptability test. The Levene's test results are F=0.14, P>0.05 (P=0.71), which indicate that the variance of the two groups is equal. The Table 4.36 shows the t-test analysis results are t=2.28, P<0.05 (P=0.01), Cohen d=0.32, which indicate that there is a significant difference between the two groups in the acceptability test.

4.3.1.4 Grammar Function Test

Grammar function refers to the specific syntactic function of a word or phrase in a clause or sentence structure. The grammar function test is to assess students' ability to correctly distinguish the grammar components in each sentence, such as, subject, predicate, object, attributive, adverbial, etc., which is a very important component of the syntactic awareness measure. The following tables show the results of the grammar function test for two groups of students.

Table 4.37 The descriptive statistics results of grammar function test

Group	*N*	*MIN*	*MAX*	*M*	*SD*
The Balanced Tibetan-Chinese Group	98	0.00	5.00	2.93	1.26
The Unbalanced Tibetan-Chinese Group	110	0.00	5.00	2.57	1.24

Table 4.38 The Shapiro-Wilk test results of grammar function test

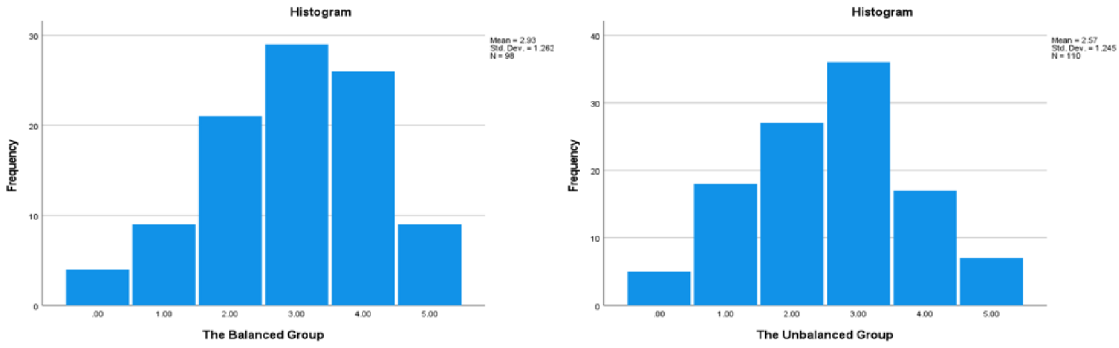


Table 4.39 The Levene's test results of grammar function test

Group	*F*	*Sig*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	0.14	0.71

Table 4.40 The independent sample t-test results of grammar function test

Group	*t*	*Sig*	*Cohen d*
The Balanced Tibetan-Chinese Group The Unbalanced Tibetan-Chinses Group	2.05	0.02	0.28

The Table 4.37 shows the minimum, maximum, mean and standard deviation of the two groups in the grammar function test. The descriptive statistics results are, for the balanced Tibetan-Chinese group, the minimum is 0.00, the maximum is 5.00, the mean is 2.93 and the standard deviation is 1.26; for the unbalanced Tibetan-Chinese group, the minimum is 0.00, the maximum is 5.00, the mean is 2.57 and the standard deviation is 1.24. By comparison, it is clear that the difference between the means of the two groups is 0.36. The Table 4.38 shows the results of Shapiro-Wilk test, which indicate that the results of two groups in the grammar function test are almost normally distributed. The Table 4.39 shows the equality of variances of the two groups in the grammar function test. The Levene's test results are $F=0.14$, $P>0.05$ ($P=0.71$), which indicate that the variance of the two groups is equal. The Table 4.40 shows the t-test analysis results are $t=2.05$, $P<0.05$ ($P=0.02$), Cohen $d=0.28$, which indicate that there is a significant difference between the two groups in the grammar function test.

4.3.2 Discussion and Analysis

The above results show that the balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of syntactic awareness in third language English learning, especially in comprehension, synonymy, acceptability, and grammar function. Therefore, the results are completely consistent with the research hypotheses. The analysis and discussion of the above results can be approached from the following aspects.

In terms of comprehension test, synonymy test, acceptability test and grammar function test, the results confirmed the research hypotheses C1, C2, C3, C4. Based on the components of the MAT-2, the phonological awareness test and the word awareness test are related to the analysis of language knowledge, while the syntactic awareness test is related to the control of language processing. Bialystok and Ryan have proposed two potential methods for improving the control of language processing. The first method involves school education, where students can benefit from structured teaching to restructure their language knowledge. The second method involves bilingual education, where mastering two languages simultaneously enhances students' ability to handle complex language systems. Bialystok suggests that bilingual students have a more advanced control of language processing, and their experience with using two languages enables them to easily perceive the relationship between language structure and meaning.

According to Bialystok's control and analysis theory, language acquisition can be explained through two cognitive processing components: the analysis of language knowledge and the control of language processing. These two components work together to improve students' language proficiency. Despite the fact that the control and analysis theory proposed by Bialystok suggests that the analysis of language knowledge and the control of language processing work together to improve language proficiency, there is no direct relationship between a student's performance on meta-linguistic tasks that rely on high levels of knowledge analysis and their performance on meta-linguistic tasks that rely on high levels of attentional control. This is because these two cognitive components are independent and are responsible for different aspects of language processing. In other words, these are the processes that are responsible for changing the

mental representations, and changes in mental representations are the basis of language learning. The analysis of language knowledge involves the representation of increasingly explicit and abstract structures. It enables the reorganization of mental representations based on implicit knowledge into explicit knowledge. The control of language processing involves selecting information from mental representations and directing attention to specific aspects of the stimulus situation to solve a problem. It is particularly important in situational tasks that may mislead or distract learners. Bialystok believes that bilingual students' advantage in meta-linguistic awareness can actually be attributed to their advantage in control of language processing. That is to say, in syntactic awareness tasks, higher levels of bilingual students show an advantage in attentional control, i.e., they are better able to selectively direct their attention to sentence structure rather than to sentence meaning; in tasks requiring analysis, only bilingual students who are proficient in both languages show an advantage.

In addition, the control and analysis theory further states that cognition originates from mental representations, and it is essential to have a mechanism for directing attention towards a specific representation or relevant aspects of it that serve a particular purpose. In this regard, the syntactic awareness test was designed to assess student's ability to selectively focus on specific aspects of mental representations, particularly in misleading or distracting situations. Assessment in this context consists three aspects: selecting specific items of knowledge or information; coordinating the selected information; automating the selection and coordination process. Thus, in the syntactic awareness test, the ability to comprehend syntax becomes more pronounced when the sentence contains ambiguity or conflict. Moreover, the degree of attentional control manifested in the syntactic awareness test is reliant on the student's language proficiency. That is, only the balanced bilingual students showed an advantage in attentional control, as they are better able to direct their attention to the sentence structure rather than to sentence meaning. The results of this test confirmed this theory.

4.3.3 Summary

The above results confirm that even though the three languages belong to different language families (Tibetan, Sino-Tibetan language family; Chinese, Sino-Tibetan language family; English, Indo-European language family), bilingual learners who are proficient in two languages still show more cognitive advantages in meta-linguistic awareness, especially in terms of syntactic awareness when learning a third language, as compared to those who are not proficient. These advantages are primarily evident in in measures of comprehension, synonymy, acceptability, and grammar function.

Chapter Five Conclusion

Foreign studies noted that bilingual learners who are proficient in two languages will show more cognitive advantages in meta-linguistic awareness when learning a third language than bilingual learners who are not proficient. However, these studies had been tested in which the first, second, and third languages belonged to the same language family (L1/L2/L3). For example, the learner's first language is Italy, second language is German, and third language is English, which all belong to the Indo-European language family. Therefore, the general objective of this research is to test whether bilingual learners who learn the first language Tibetan (Sino-Tibetan language family) and the second language Chinese (Sino-Tibetan language family), followed by the third language English (Indo-European language family) still show the advantages in meta-linguistic awareness (LI/L2+L3). The specific objective of this research is to test the differences in meta-linguistic awareness among Tibetan-Chinese bilingual students with different bilingual levels when learning English as a third language. Research results show that even though the three languages belong to different language families (Tibetan, Sino-Tibetan language family; Chinese, Sino-Tibetan language family; English, Indo-European language family), bilingual learners who are proficient in two languages still show more cognitive advantages in meta-linguistic awareness when learning a third language than those who are not proficient. However, the Meta-linguistic Awareness Test-2 (MAT-2) consists of different components, including phonological awareness test, word awareness test, and syntactic awareness test, each of which focuses on a specific aspect of language. Therefore, Tibetan-Chinese bilingual students with different bilingual levels performed differently on the MAT-2, which is evident in the following aspects.

Firstly, in terms of phonological awareness test. The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of phonological awareness in third language English learning, especially in phonetics and phonology, syllable. However, when it comes to phonemes, there is no significant difference between the two groups. Based on the dynamic system theory (DST), the results of this test explain that the meta-linguistic abilities of a bilingual learner will generate a catalytic (extremely facilitating) effect upon learning a third or subsequent languages, which will indicate that a qualitative change in the L3 acquisition process, compared to that of the L2, and the level of this ability is determined by the learner's bilingual level. As a result, there is a significant difference between the two groups in the phonetic and phonological identification test and syllable scansion test. In the identification of repeated phonemes test, due to the differences in consonant and vowel systems between languages, especially in vowel length. Chinese language has no difference in vowel length, while English language has a distinction between long and short vowels, which leads to many students usually have great difficulty distinguishing repeated phonemes in an English word. As a result, there is no significant difference between the two groups in the identification of repeated phonemes test.

Secondly, in terms of word awareness. The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms

of word awareness in third language English learning, especially in word ambiguity, word formation. However, when it comes to part of speech, there is no significant difference between the two groups. Based on the threshold hypothesis, the results of this test explain that the bilingual level of the balanced Tibetan-Chinese group had reached the second threshold and showed a higher cognitive advantage in third language English learning; the bilingual level of the unbalanced Tibetan-Chinese group still remained at the first threshold and this language state had neither a positive nor a negative effect on their cognitive development. Thus, in the word ambiguity and word formation test, the balanced Tibetan-Chinese group were privileged in their advanced awareness of the arbitrary relationship between words and their meanings, as well as structures and meanings. As a result, there is a significant difference between the two groups in the word ambiguity and word formation test. In terms of part of speech test, due to the unique linguistic system of Chinese language, there is no significant difference between the two groups. First, in Chinese, part of speech is not as important as in English, because the function of a word in a sentence is often determined by its position, rather than its part of speech. Therefore, the grammar of Chinese language relies more on word order, particles (auxiliary word) and other grammar structures. Second, English language places more emphasis on hypotaxis that utilizes subordinating conjunctions to join dependent and independent clauses to form complex sentences. Chinese language places more emphasis on parataxis that conveys meaning through particles (auxiliary word) and context. It creates simple sentences using coordinating conjunctions to connect independent clauses. Therefore, Chinese students have not formed an awareness of part of speech learning, which is crucial to determine the correct definition of words and make sentences conform to grammatical rules in English. As a result, there is no significant difference between the two groups in the part of speech test.

Thirdly, in terms of syntactic awareness test. The balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in terms of syntactic awareness in third language English learning, especially in comprehension, synonymy, acceptability, and grammar function. Based on the control and analysis theory, the results of this test explain that the analysis of language knowledge and control of language processing are the two processing components of cognition, which are responsible for the structure and access to mental representations. These two processes develop with language proficiency and lead to increased competence in cognition. Language knowledge appears to become more explicit and processing more fluent as analysis and control continue to modify the mental representations. Therefore, in tasks that require control of attention, all bilingual students are able to perform well. However, when it comes to problems that require high control of attention in language processing, only balanced bilingual students show an advantage. As a result, there is a significant difference between the two groups in the comprehension test, synonymy test, acceptability test and grammar function test.

In conclusion, this study sheds light on the development of English meta-linguistic awareness among Tibetan students in the context of Tibetan-Chinese bilingual education. It is found that meta-linguistic awareness develops concurrently with

language acquisition, particularly in terms of knowledge analysis and attention control. This developmental process allows Tibetan students to identify errors in listening, speaking, reading, and writing, demonstrating their meta-linguistic abilities. Therefore, the main conclusions of this study are as follows. Firstly, even though the three languages belong to different language families (Tibetan, Sino-Tibetan language family; Chinese, Sino-Tibetan language family; English, Indo-European language family), bilingual students who are proficient in two languages still show more cognitive advantages in meta-linguistic awareness when learning a third language than those who are not proficient. Secondly, Tibetan-Chinese bilingual students have experience in dealing with two different language systems that this experience accelerates the extraction of abstract linguistic structures, rules and concepts in a third language. This advantage is only for Tibetan-Chinese bilingual students whose knowledge of both languages has been analyzed, which means that Tibetan-Chinese bilingual students with limited knowledge of one language will lack this advantage. Thirdly, when Tibetan-Chinese bilingual students learn English as a third language, the disadvantages of meta-linguistic awareness are mainly reflected in phonemes and part of speech. This is mainly due to the differences in consonant and vowel systems between languages, especially in vowel length and the role of parts of speech in different languages. Fourthly, based on the threshold hypothesis, it is generally confirmed that there are two thresholds for Tibetan students to learn a third language English based on the Tibetan-Chinese bilingual education. The bilingual level of the balanced Tibetan-Chinese group had reached the second threshold and showed a higher cognitive advantage in third language English learning; the bilingual level of the unbalanced Tibetan-Chinese group still remained at the first threshold and this language state had neither a positive nor a negative effect on their cognitive development.

As Jordá says, it makes more sense to consider the multilingual learner's language system as a whole, because multilingual learning does not simply cause a change in the quantity of language, but also an improvement in the quality of the learner's language system.[134] The acquisition of a new language leads to the development of new language skills, which in turn improves the quality of the multilingual learner's language system and leads to a faster and better development of meta-linguistic awareness.

Chapter Six Benefits for Pedagogy

Meta-linguistic awareness, as one of the most crucial elements in developing students' language abilities in listening, speaking, reading and writing, and is also considered a key skill in the process of knowledge analysis and attention control.[135] For ethnic minority students, identifying and utilizing the advantages of meta-linguistic awareness that they gain from bilingual education will better help them learn the third language English, and explore the world with more confidence. For English teachers, making full use of students' strengths and weaknesses in meta-linguistic awareness is of great importance to improve their teaching quality and promote the development of English education in ethnic minority areas of China. Therefore, this study will illustrate its benefits for pedagogy from the following aspects: formulating English education policies for Tibetan minorities; compiling English textbooks for Tibetan minorities; training English teachers for Tibetan minorities; guiding the English teaching for Tibetan minorities.

6.1 Formulating English Education Policies for Tibetan Minorities

The results of this study can serve as a basis for national government to formulate English education policies specifically tailored for Tibetan minorities. The Han Chinese is the largest ethnic group in mainland China. In 2010, the Han Chinese population accounted for 91.51% (1.2 billion) of the country's total population. In addition to the Han majority, there are currently 55 other ethnic minorities in China, numbering around 105 million (8%). These ethnic minority groups are spread across different regions of China, contributing to the country's rich cultural diversity. In China, the multilingual education policy is usually described in three ways: (1) The improvement of bilingual proficiency for ethnic minority groups (native languages and Chinese); (2) The improvement of bilingual proficiency for non-ethnic minority groups (Chinese and a foreign language, English); (3) The development of trilingual proficiency for ethnic minority groups (native languages, written and spoken Chinese and English). English is compulsory subject at all levels of schooling in China's curriculum system and is also used as a means for schools to evaluate and choose talented individuals. But compared with mainland China, the development of English education in ethnic minority areas has always been lagging behind due to various reasons. Therefore, according to the findings of this study, the national government can take the following aspects into account when formulating English education policies for Tibetan minorities.

6.1.1 Which Foreign Languages Should Be Provided for Ethnic Minorities?

Studies have found that linguistic similarity is one of the factors that facilitate transfer between languages. That is to say, the more similar the language family to which the two languages belong, the easier it is to facilitate the transfer between them. Currently, the foreign language education in China is dominated by English, an Indo-European language family, while the languages of our neighboring countries such as Vietnamese, Lao, Thai, Mongolian and Korean have no corresponding policies and regulations for the learning and using. Foreign languages that are similar to Chinese ethnic minority languages, such as Lao and Thai, belong to the Miao-Yao language group and the

Zhuang-Dong language group in Sino-Tibetan language family, along with the Zhuang, Miao, Sui, Maonan, Mulao, Dai, Bouyei and Dong Chinese ethnic minority languages. Foreign languages that are similar to Chinese ethnic minority languages, such as Burmese, belong to the Tibetan-Burmese group in Sino-Tibetan language family, along with the Bai, Nakhi, Nu, and Yi Chinese ethnic minority languages. Foreign languages that are similar to Chinese ethnic minority languages, such as Cambodian, belong to the Mon-Khmer group in Austroasiatic language family, along with the Wa, De'ang, and Blang Chinese ethnic minority languages. And the foreign language, such as Vietnamese, is the same as our ethnic minority language, Gin. Therefore, this study suggests that when the national government formulates policies on foreign language education for ethnic minorities, should consider offering languages that are similar to our ethnic minority languages, the reasons are as follows. On the one hand, it is relatively easy for ethnic minority students to learn such languages, which can easily facilitate transfer between languages; on the other hand, learning such languages can promote international trade and exchange with these neighboring countries and contribute to the economic development in ethnic minority areas.

6.1.2 When Should Tibetan Minorities Receive English Education?

English was made a compulsory subject in the national primary school curriculum in 2001, with schools that have qualified English teachers required to teach the subject starting from third grade. Therefore, both Han Chinese and Tibetan students are expected to begin learning English in the third year of primary school. However, the study found that numerous primary schools in Tibetan areas provide English courses in the first or second grade, assuming that earlier exposure to English translates to better language acquisition. Consequently, students from Tibetan areas often commence English studies at a much younger age. In fact, according to the results of this study, among 208 Tibetan fifth grade students, only 98 have achieved a balanced bilingual level, accounting for 47% of the total numbers of students. That is to say, 53% of Tibetan fifth grades students learn English as a third language even without learning Tibetan and Chinese well. It can be assumed that if Tibetan students learn a third language without reaching a certain bilingual level, this language state may not help or even hinder their third language learning. Based on the threshold hypothesis proposed by Cummins, the cognitive advantages of bilingual learning only exist in balanced bilinguals, because their bilingual level reaches the second threshold. For the limited bilinguals, their bilingual level still remains at the first threshold, and this language state will have a negative effect on third language learning. When the national government formulate policies, the age for Tibetan students to receive English education should not completely follow that of Han Chinese students after the third year of primary school. This is because if Tibetan students' bilingual proficiency does not reach a certain level, this language state will not help or even hinder their third language learning. Therefore, this study suggests that the age for Tibetan students to receive English education should be extended to junior high school.

6.1.3 What Support Should the National Government Provide?

Without the support of the national government, the advancement of English education in Tibetan areas is unattainable. Currently, the study has identified four educational

issues that must be addressed in Tibetan areas. In terms of the teaching staff, as most Tibetan areas are economically backward, wages are relatively low, coupled with the remote geographical location and special climatic condition, many university graduates and experienced teachers are discouraged from working there, which has a significant impact on the professional quality of English teachers in these areas. In addition, most primary schools in mainland China are staffed with foreign teachers and expert teams; conversely, due to the shortage of English teachers in Tibetan areas, most of them are teachers of other subjects in school and do not have a professional background in English education. In terms of teaching materials, both Han Chinese and Tibetan students use the same English textbooks in schools, which seriously ignores the ethnic identity of Tibetan students. The English textbooks used by Tibetan students are compiled for Han Chinese students in mainland China. These English textbooks involve more Han culture, and it is difficult to arouse Tibetan students' interest in learning English. Meanwhile, in addition to English textbooks, the English syllabus and curriculum standards for Tibetan students are also the same as those used for Han Chinese students in mainland China. In terms of infrastructure, most school buildings in Tibetan areas are dilapidated, and classrooms are very small, usually 50 to 60 students crowded into a classroom. Moreover, due to the lack of sufficient classrooms, students of different grades even crammed into one classroom to take turns in class. Additionally, in Tibetan areas, most schools do not have canteens, let alone language laboratories and sports venues. In terms of financial support, it is evident that the primary reason for the above issues is the inadequate financial support provided by the national government. The national government provides an annual special grant of 100 million CNY for primary education infrastructure construction, aimed at supporting basic education in revolutionary base areas, ethnic minority areas, border areas, mountainous areas, and poor areas.[136] However, on average, the funds allocated to the Tibetan areas are very small. This lack of funding makes it difficult to address the challenges faced by these areas adequately. Therefore, this study suggests that the national government should increase its support for Tibetan areas, especially in teaching staff, teaching materials, infrastructure, and financial support to promote greater equity and inclusion in education for all people.

In conclusion, relevant policies in law are crucial for the sustainable development of English education in Tibetan areas. However, it's important to consider the unique situation of English education in Tibetan areas and not simply adopt policies tailored for Han Chinese students in mainland China. Meanwhile, in order to narrow the education gap between Tibetan areas and mainland China, the national government should increase its support in these areas, especially in teaching staff, teaching materials, infrastructure, and financial support. Therefore, according to the conclusions of this study, the national government can take the above aspects into account when formulating English education policies for Tibetan minorities.

6.2 Compiling English Textbooks for Tibetan Minorities

The results of this study can serve as a basis for the national government to compile English textbooks specifically tailored for Tibetan minorities. In China, both Tibetan

and Han Chinese students use the same English textbooks in schools, that is to say, the English textbooks used by Tibetan students are compiled for Han Chinese students in mainland China. These English textbooks involve more Han culture, and it is difficult to arouse Tibetan students' interest in learning English. Meanwhile, apart from English textbooks, the English syllabus and curriculum standards for Tibetan students are also the same as those used for Han Chinese students in mainland China. In general, the content of current English textbooks does not incorporate the unique culture and customs of ethnic minority groups in China, and the compilation of such language textbooks does not take into account the multilingual learning background, meta-linguistic awareness, and cognitive abilities of students from ethnic minority backgrounds as well. Such English textbooks may not be well-suited for them. Therefore, according to the findings of this study, the national government can take the following aspects into account when compiling English textbooks for Tibetan minorities.

6.2.1 Enhance Tibetan students' Meta-linguistic Awareness

Meta-linguistic awareness tasks evaluate an individual's comprehension of language rules and its components, including syntax, semantics, phonology, and orthography. These tasks help develop an individual's ability to reflect on language as a system, leading to heightened consciousness about language usage, error identification, and better understanding of language meaning. Bialystok classified the meta-linguistic awareness tasks into: explain errors, correct sentences, count words in strings, attributes of words, rhyme, synonymy, detect errors, judge correct sentences, count words in sentences, segment text, judge synonymous sentences, symbol substitution, phoneme segmentation, and sun-moon.[137] These tasks assess different aspects of language, including identifying and correcting errors, counting words in text or sentences, segmenting text into smaller parts, identifying attributes of words, producing words that rhyme or synonyms, evaluating sentence correctness or similarity in meaning, substituting symbols or letters in text, and breaking down words into their individual sounds or phonemes. The meta-linguistic awareness tasks can help individuals develop their meta-linguistic awareness and improve their language learning and usage skills by enabling them to reflect on and manipulate different aspects of language as a system. Developing meta-linguistic awareness through these tasks can lead to better language learning and usage skills. With an increased awareness of language as a system, individuals can learn new languages more effectively and accurately. In addition, meta-linguistic awareness also can help correct common language errors, such as spelling or grammatical mistakes, and improve the clarity and effectiveness of communication. Therefore, incorporating meta-linguistic awareness tasks into English textbooks can benefit Tibetan students by enhancing their meta-linguistic abilities and improving their English learning efficiency.

6.2.2 Based on the Multilingual Learning Background of Tibetan Students

Considering the multilingual learning background of Tibetan students, it is recommended that the content of English textbooks should incorporate the following aspects. Firstly, the content of English textbooks should be designed to reflect the traditional culture and customs of the Tibetan minority group and also to be relevant to

the daily lives of Tibetan students. This will help to stimulate their interest in learning English and make the content more engaging for them. Providing a well-rounded and inclusive content in this regard can foster ethnic confidence and ethnic identity among Tibetan students and inspire them to learn with greater motivation. Meanwhile, by recognizing and incorporating the uniqueness of their culture, Tibetan students will feel acknowledged and seen in the educational space, ultimately leading to better academic outcomes. Second, the content of English textbooks should also reflect China's mainstream culture, in order to help Tibetan students adapt to modern life and better integrate into mainstream society in the future. This can provide them with a broader understanding of Chinese culture and society, which will be beneficial for their social and cultural integration in the long run. Providing a well-rounded and inclusive content in this regard can assist Tibetan students in adapting to new sociocultural surroundings and foster a deeper understanding of diversity and inclusion. In this way, Tibetan students can feel empowered and connected to the broader community, fully embracing the opportunities available to them. Third, the content of English textbooks should also include foreign classical culture, in order to help Tibetan students develop an understanding of Western civilization. This can broaden their horizons and expose them to diverse cultural perspectives, which is important for their global awareness and intercultural competence. Providing a well-rounded and inclusive content in this regard can broaden Tibetan students' perspectives and enable them to appreciate the historical and cultural heritage of Western society. Including this type of content would also help to foster a sense of cross-cultural understanding and facilitate better communication between different groups. Therefore, the English textbooks designed for Tibetan students should incorporate a well-rounded and inclusive content that reflects the traditional culture and customs of the Tibetan minority group, China's mainstream culture, and foreign classical culture.

6.2.3 Follow the Cognitive Abilities of Tibetan Students

The compilation of English textbooks should take into consideration the cognitive development of Tibetan students, and follow the principle of gradual progression from simple to complex, from easy to difficult. To achieve this, the content of the English textbook should be carefully designed to gradually increase in complexity as the Tibetan students progress through the material. Concepts and vocabulary should be introduced in a logical sequence, building on previous knowledge and skills learned. In addition, the materials should be presented in a clear and concise manner, with examples and illustrations that are relevant and meaningful to Tibetan students. This approach will effectively improve their English proficiency by ensuring that the content is appropriate for their cognitive abilities and language learning stage, and that it provides a systematic and structured progression of difficulty levels. Thus, it is crucial to make sure that teaching materials are appropriately organized to reflect this principle and that they are presented in a way that facilitates the better understanding and active participation of Tibetan students. This principle guarantees that Tibetan students obtain a better understanding of the English language knowledge, enabling them to advance to complicated language components with ease. Meanwhile, by following this principle, English teachers can enhance the overall learning experience of Tibetan students and

help them to achieve their English language learning goals. In short, this would not only benefit the Tibetan students themselves but would also contribute to the broader goals of improving English education in Tibetan areas and promoting cultural exchange and understanding between Tibetans and other English speakers. Therefore, the English textbooks should be designed to reflect the cognitive development of the Tibetan students and follow the principle of gradual progression from simple to complex, from easy to difficult.

In conclusion, to ensure the long-term development of English education in Tibetan areas, it is necessary to compile English textbooks suitable for Tibetan students. The compilation process should take into account the actual situation of Tibetan students, such as meta-linguistic awareness, multilingual learning background, and cognitive abilities. Therefore, according to the conclusions of this study, the national government can take the above aspects into account when compiling English textbooks for Tibetan minorities.

6.3 Training English Teachers for Tibetan Minorities

The results of this study can serve as a basis for the national government to train high-quality English teachers specifically tailored for Tibetan minorities. The education level in ethnic minority areas have always lagged behind, largely due to the remote location and economic backwardness. Improving the theoretical knowledge and teaching competence of English teachers in these areas has emerged as a crucial strategy to address this range of issues. Therefore, according to the findings of this study, the national government can take the following aspects into account when training English teachers for Tibetan minorities.

6.3.1 Provide Targeted Training Programs

The foreign studies universities in China should provide professional training programs for English teachers in Tibetan areas. Firstly, the training programs should cover professional teaching theory and practice, such as pedagogical approaches, classroom management, assessment strategies, and curriculum development. Special attention is given to the unique cultural, linguistic, and educational characteristics of Tibetan minority to ensure that the training is contextually relevant and effective. In addition to theoretical knowledge, practical training is crucial. Through opportunities for teaching practice, observation, and feedback in real classroom settings, English teachers can apply the knowledge and skills they acquire. This hands-on experience helps them develop their teaching skills, adapt to the challenges of teaching English in Tibetan areas, and enhance their overall teaching effectiveness. Secondly, incorporating courses on meta-linguistic awareness in professional training programs can be highly beneficial. Meta-linguistic awareness refers to the ability to reflect on and understand the structure and rules of language, which can help teachers better analyze and teach English to their students. By equipping English teachers with a deeper understanding of language structures and rules, training programs can empower them to provide more accurate and effective language instruction to their students, ultimately contributing to the overall quality of English language education in Tibetan areas. In this sense, it is important to consider including meta-linguistic awareness as a component of the training programs

to ensure that English teachers are well-prepared to meet the language learning needs of their students in Tibetan areas. Therefore, such targeted training programs can provide English teachers with the necessary skills and expertise to improve the teaching quality, and contribute significantly to the overall academic achievement of Tibetan students.

6.3.2 Combine Online and Offline Training Methods

Incorporate a hybrid approach that combines online and offline training methods to enhance the effectiveness of teacher training in Tibetan areas. Such a hybrid approach can optimize the learning process of teachers and achieve favorable training outcomes. When considering training methods for English teachers in Tibetan areas, it is important to recognize the remoteness and rugged terrain of these areas, which can make regular travel a burden for them. Given these circumstances, a hybrid approach should be considered, which utilizes both online and offline training methods for English teacher in Tibetan areas. Such an integrated and flexible approach could provide an effective and accessible solution for these teachers, ensuring that their professional development is not hindered by geographical challenges. English teachers in Tibetan areas can broaden their teaching knowledge and improve their teaching skills by personally participating in targeted training programs provided by foreign studies universities in mainland China during the summer and winter holidays. In addition, during weekends or holidays, they can use online learning platforms provided by these universities to further study and stay up-to-date with the latest teaching techniques and trends. Therefore, by leveraging these online and offline training platforms, English teachers in Tibetan areas can enrich their teaching theory, improve their teaching skills, and enable them to better cater to the diverse needs of Tibetan students. Adopting such an approach not only enhances the learning effectiveness of English teachers in Tibetan areas, but also creates a supportive learning environment, ultimately facilitating academic achievement for Tibetan students.

6.3.3 Optimize the Training Evaluation System

High-qualitied training program stems from a strict management system and a sound evaluation system. These components are crucial for ensuring the effectiveness and sustainability of the training program. First, establish specific, measurable, achievable, relevant, and time-bound (SMART) evaluation criteria to accurately assess the effectiveness of the training program. By establishing SMART evaluation criteria, the evaluation of the training program can be well-defined, measurable, and aligned with the goals and objectives of the training program. Second, utilize multiple evaluation methods, such as pre- and post-assessments, observations, surveys, interviews, and feedback from trainers and trainees. Multiple evaluation methods offer diverse perspectives and insights into different facets of the training program, culminating in a comprehensive and holistic assessment. Third, collect and analyze both quantitative and qualitative data to identify strengths, weaknesses, areas for improvement, and trends that can inform decision-making. Integrating the findings from both types of data can lead to more informed and data-driven decision-making. Fourth, provide timely and constructive feedback that is specific and actionable to guide improvements in the training program. It helps trainees understand their strengths and areas for further

development, and provides them with practical suggestions for improving their teaching quality. Fifth, continuously improve the training program by making necessary adjustments to the training content, delivery methods, and resources to ensure its effectiveness and relevance. It involves evaluating teachers' performance and feedback, analyzing the curriculum and learning resources, and making necessary adjustments to the training content, delivery methods, and resources. Finally, monitor and review the evaluation system to ensure consistent adherence to established criteria and guidelines. By regularly reviewing the evaluation system, the training program can identify areas for improvement and make necessary adjustments to ensure that the program remains effective and relevant. In this way, teachers can become more skilled and effective in their teaching practices, ultimately leading to better outcomes for their students. Therefore, through the optimization of training evaluation system, teacher training can become more effective.

6.3.4 Attach Importance to the Post-training Guidance

Post-training guidance involves providing English teachers with assistance and resources once they have completed a training program, which can aid them in applying their newly acquired knowledge and skills to their teaching practice. After a training program, post-training guidance may consist of various resources such as follow-up assessments, mentoring, coaching, job aids, online resources and communities, or access to subject matter experts. Therefore, taking advantage of modern distance education, the post-training guidance team should be established with educational experts and experienced teachers to assist English teachers in resolving issues that arise after training and challenges they face during their teaching process. Proper post-training guidance is indispensable in order to ensure efficient and effective implementation of the training. It not only consolidates the knowledge and skills acquired during the training, but also enables teachers to apply this knowledge effectively in subsequent teaching activities. Overlooking the necessity of post-training guidance can result in missed opportunities for enhancing skills and diminish the effectiveness of the training program. As such, it is recommended that post-training guidance team allocate adequate resources and efforts towards providing guidance and support to fully capitalize on the benefits of the training program. Therefore, post-training guidance for English teachers in Tibetan areas is crucial to ensure that they continue to develop their teaching skills and stay up-to-date with the latest language teaching trends and techniques. Additionally, it will also help to enhance the effectiveness of the overall training program, which can ultimately lead to better learning outcomes for their students.

In conclusion, to ensure the long-term development of English education in Tibetan areas, it is essential to train English teachers for Tibetan minorities. Related measures include providing targeted training programs, combine online and offline training methods, optimizing the training evaluation system, and attaching importance to post-training guidance. Therefore, according to the conclusions of this study, the national government can take the above aspects into account when training English teachers for Tibetan minorities.

6.4 Guiding the English Teaching for Tibetan Minorities

The results of this study can serve as a basis for the national government to guide English teaching specifically tailored for Tibetan minorities. Meta-linguistic awareness offers a range of benefits, such as improved language skills, enhanced communication abilities, increased critical thinking capabilities, improved language acquisition, heightened meta-cognitive skills, and cultivated cultural sensitivity. Developing meta-linguistic awareness can significantly contribute to more effective language use and communication in diverse personal, academic, and professional contexts. According to the findings of this study, English teachers can take the following aspects into account when teaching English for Tibetan students.

6.4.1 Phonological Awareness

According to the results of this study, the balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in phonetics and phonology, syllable. However, when it comes to phonemes, there is no significant difference between the two groups. Therefore, in addition to the daily teaching, it is crucial for English teachers to strengthen students' phonemic awareness training in their teaching activities.

First, the most complex - and the last to develop - is known as phonemic awareness. Foreign studies have shown that phonemic awareness can be defined as the cognitive capacity to perceive, analyze, and manipulate the distinct phonemes present within spoken words. Such manipulation of phonemes entails a range of activities, such as blending, extending, or modifying words. Therefore, phonemic awareness is a crucial skill for later reading and writing learning as it enables students to recognize and utilize sounds in words, which is vital for accurate word decoding and spelling. Based on the findings of this study, if Tibetan students find it difficult to hear and deal with the sounds that make up spoken words, it will be challenging for them to learn how to connect phonemes to letters when they encounter them in written language. Therefore, according to the Dr. Snider, an English linguist and education specialist, multiple strategies exist to enhance the phonemic awareness, teachers may consider the following strategies (See Figure 6.1).[138]

Second, this study found that due to the differences in the consonant and vowel systems between the languages, the blending or segmenting the onset and rime within a word is also a challenge for Tibetan students. The blending or segmenting the onset and rime within a word is a more complex activity and requires a great deal of cognitive engagement from the Tibetan students. Blending the onset and rime within a word is a phonemic awareness skill that involves combining the initial consonant sound (onset) with the remaining vowel and consonant sounds (rime) to form a complete word. Segmenting involves dividing a word into their onset and rime. According to linguistic theory, the onset is either a consonant or a cluster of consonants that occurs at the beginning of a syllable, while the rime encompasses the remaining sounds that follow. Thus, learning how to blend or segment the onset and rime within a word is crucial for Tibetan students to identify and differentiate between various sounds in words. By identifying patterns in onsets and rimes, Tibetan students can establish connections

between words that have similar sounds, which will help them decode unfamiliar words when reading. Additionally, the ability to recognize onsets and rimes will also help Tibetan students with spelling, as they can apply this knowledge to accurately spell words that follow certain patterns. Here are some examples of onset and rime along with associated English word families (See Figure 6.2).

Figure 6.1 The classification of phonemic awareness training

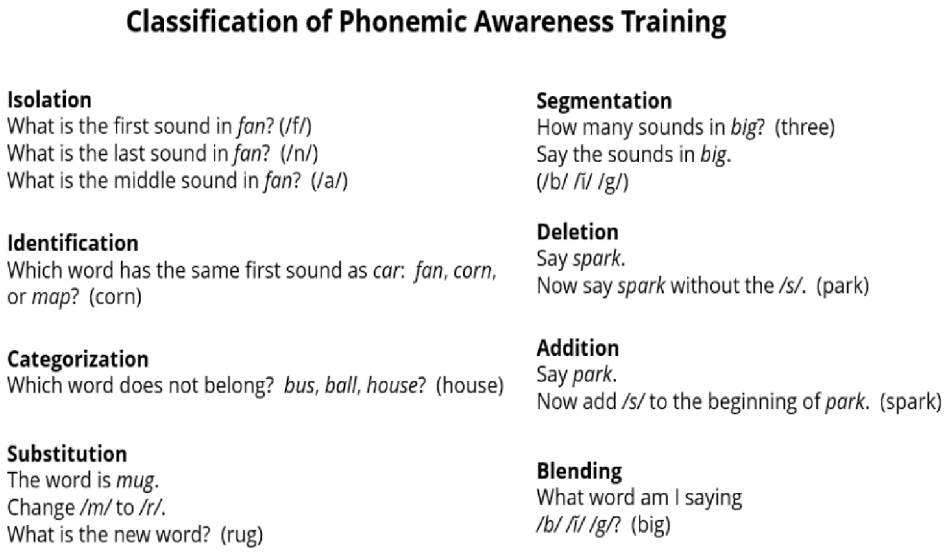


Figure 6.2 The examples of onset and rime along with associated English word families

'ake'	'ash'	'eat'
Bake - B/ake Cake - C/ake Take - T/ake	Mash - M/ash Sash - S/ash Dash - D/ash	Heat - H/eat Beat - B/eat Treat - Tr/eat
'ock'	'ight'	'ump'
Lock - L/ock Dock - D/ock Shock - Sh/ock	Light - L/ight Sight - S/ight Flight - Fl/ight	Dump - D/ump Pump - P/ump Clump - Cl/ump

Consequently, providing Tibetan students with various activities and approaches to practice blending and segmenting onsets and rimes is essential for the development of this skill. With consistent practice and repetition, Tibetan students will gradually build their proficiency in recognizing patterns of sounds within words and utilize this knowledge to improve their reading and spelling abilities. According to some linguists, here are some strategies for teaching blending and segmenting onset and rime within a word, teachers may consider the following strategies.

- Elkonin Boxes: Elkonin boxes are visual tools that teachers can use to teach their students how to segment and blend sounds in words. Different boxes in Elkonin boxes represent different sounds in the word, and students are required to place manipulatives into each box for each sound they heard in the word.
- Word Ladders: Word ladders are a word game that can enhance students' phonemic awareness skills, specifically in blending and segmenting sounds. Teachers may display a word on the board and subsequently ask students to gradually substitute one sound with another to form a new word.
- Picture Sorts: Picture sorts require categorizing pictures according to their onset and rime. For instance, pictures starting with the "b-" sound can be sorted into a labeled box with the letter "b. Picture sorts can help develop phonemic awareness skills, such as the ability to discriminate between sounds in words.
- Rhyme Time: Rhyming games and activities can help students identify and segment onsets and rimes in words. For example, teachers can ask students to produce multiple rhyming words for a given word. Rhyme Time is an activity that can develop phonemic awareness, and enhance reading and writing skills.
- Sound Boxes: Sound Boxes are a phonemic awareness activity that uses manipulatives to represent each sound in a word, which students blend to read the word. This improves their phonemic awareness skills and ability to segment and blend sounds in words.

In conclusion, in terms of phonological awareness, the balanced Tibetan-Chinese group's advantages of meta-linguistic awareness are mainly manifested in phonetics and phonology, syllable. However, when it comes to phonemes, there is no significant difference between the two groups. To address this issue, English teachers need to enhance students' phonemic awareness training in their teaching activities. Moreover, due to differences in consonant and vowel systems between languages, Tibetan students often struggle with blending or segmenting the onset and rime within a word. This skill is also essential for identifying and distinguishing between various sounds in English words, and teachers should help them improve this skill as well. Therefore, according to the conclusions of this study, English teachers can take the above instructions into account when teaching English for Tibetan students.

6.4.2 Word Awareness

According to the results of this study, the balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in word ambiguity, word formation. However, when it comes to part of speech, there is no significant difference between the two groups. Therefore, in addition to the daily teaching, it is crucial for English teachers to strengthen students' part of speech training in their teaching activities. For Tibetan students' English learning, word awareness is the ability to consciously reflect on and manipulate various aspects of words, including meaning, form, and structure. This involves identifying and understanding word parts like roots, prefixes, and suffixes, as well as recognizing and using vocabulary in context. It is also a key element of meta-linguistic awareness, which is the capacity to view language as a system and make use of that knowledge to develop language proficiency. Therefore, the improvement of word awareness is related to the following aspects.

- Word ambiguity: It involves recognizing words that have multiple meanings depending on the context, such as "bank" referring to a financial institution or the side of a river. For instance, the word "bank" is an example of a word with multiple meanings, including a financial institution, a riverbank, or a place for storage.
- Word formation: It involves recognizing how words are created using prefixes, suffixes, and roots to form new words. Example of affixation, "unhappy" being formed by adding "un-" to "happy." Example of compounding, "bookshelf" (combining "book" and "shelf") or "sunglasses" (combining "sun" and "glasses").
- Part of speech: It involves recognizing the grammar function of a word in a sentence and grammatical category that a word belongs to, such as whether it is a noun, verb, adjective, or adverb, as seen in the sentence "She runs quickly" where "runs" is a verb and "quickly" is an adverb.

The concept of parts of speech has been present in the study of grammar and linguistics for centuries, with the identification of the traditional eight parts of speech (nouns, pronouns, verbs, adjectives, adverbs, prepositions, conjunctions, and interjections) dating back to ancient Greece. In modern linguistics, part of speech refers to the grammatical category of a word in a sentence, indicating its function and relationship to other words. The part of speech of a word is determined by its syntactic and morphological properties, such as its form, position, and context within a sentence. A proper understanding of the part of speech of a word is essential for constructing coherent sentences and effective communication. However, due to the unique linguistic structure of Chinese language, students have not developed an awareness of part of speech learning. First, parts of speech are less important in Chinese, as the function of a word in a sentence is often determined by its position, word order, particles (auxiliary word), and other grammar structures, rather than its part of speech. Second, English grammar emphasizes hypotaxis, using subordinating conjunctions to form complex sentences. In contrast, Chinese grammar emphasizes parataxis, using coordinating conjunctions to create simple sentences. Therefore, in English language learning, mastering part of speech is crucial to determine the correct definition of words and make sentences conform to grammatical rules, and the reasons are as follows.

- Have a better understanding of parts of speech is essential for improving effective communication skills. This knowledge enables Tibetan students to use English language accurately and effectively. By comprehending how words operate within a sentence, Tibetan students can articulate their thoughts more clearly and interact with others in English more effectively.
- Mastery of the parts of speech is crucial for developing writing skills. These skills enable Tibetan students to construct sentences, paragraphs, and essays that are more complex and sophisticated. By becoming proficient in the parts of speech, Tibetan students can significantly improve their English writing ability.
- Comprehension of the parts of speech is crucial for achieving proficiency in grammar and syntax. Tibetan students who understand the functions of each part of speech within a sentence can enhance their sentence structure and avoid common grammatical errors. This knowledge is essential for improving overall English language proficiency.

- Familiarity with the parts of speech can enhance reading comprehension by assisting Tibetan students in deciphering the meaning of a text. By recognizing the parts of speech in a sentence, Tibetan students can discern the function of each word and grasp the author's intended message. This knowledge is valuable for improving English reading proficiency.

However, the variances in grammatical structures and categories of parts of speech across languages pose a significant challenge for Tibetan students in comprehending and employing English parts of speech effectively. To overcome this challenge, English teachers need to be aware of these differences and provide targeted instruction and practice to help Tibetan students improve their understanding and use of parts of speech. Therefore, here are some strategies to parts of speech training for Tibetan students, teachers may consider the following strategies.

- Use authentic language: It is recommend using authentic language and a variety of examples from different sources to teach the parts of speech. This approach prioritizes usage over terminology, emphasizing how the parts of speech are used to convey meaning. Students can apply their understanding of the parts of speech through writing and speaking to reinforce their learning and use the parts of speech confidently in their communication.
- Contextualize grammar: It is recommend contextualizing grammar when teaching the parts of speech instead of solely listing and defining them. This involves showing how each part of speech functions in a sentence and how they work together to create meaning. This approach helps students understand the practical application of the parts of speech in real-life situations, rather than just memorizing definitions.
- Focus on usage over terminology: It is recommend prioritizing the practical usage of the parts of speech in language over just memorizing their definitions. This involves emphasizing how each part of speech is used to convey meaning and how different parts of speech work together in creating meaning, rather than just focusing on their terminology.
- Teach through exploration and discovery: It is recommend adopting an inductive approach to teaching the parts of speech, where students have the chance to explore and discover the different parts of speech on their own instead of just being told what they are. This approach allows for a deeper understanding of the parts of speech and how they function in language. It is a more effective way of teaching than simply presenting the parts of speech as a set of rules or definitions.
- Use varied examples: It is recommend incorporating a variety of examples from different sources, such as literature, newspapers, and spoken language, to illustrate to students the diverse ways in which the parts of speech are used in real-life situations. This approach allows students to better understand the practical application of the parts of speech, and how they are used to convey meaning in different contexts.
- Provide opportunities for application: It is recommend providing opportunities for students to apply their understanding of the parts of speech in their own writing and speaking is essential. By doing so, they can reinforce their learning and

develop confidence in using the parts of speech correctly in their own communication.

In addition to the strategies mentioned above, Dr. Snider, an English linguist and education specialist, proposes other successful methods for instructing parts of speech, with the aim of fostering students' comprehension of the parts of speech and promoting their ability to utilize them appropriately in the speaking and writing context.[139]

- Start with simple sentence structure: To begin with, it is recommend introducing students to the simple sentence structure, including subjects, verbs, and objects, and how these elements work together to convey meaning. This foundation will serve as a basis for teaching different parts of speech in context.
- Introduce one part of speech at a time: To help students grasp the various parts of speech, concentrating on teaching one part at a time, like nouns or verbs. Additionally, offering numerous examples and practice exercises can further reinforce their learning and comprehension.
- Use real-life examples: To better connect with students and help them understand the practical applications of parts of speech, incorporating real-life examples, like newspaper articles or popular songs, can be beneficial. This enables students to see how parts of speech are utilized in daily language, which can help reinforce their learning and increase their engagement.
- Practice through games and activities: To make learning about parts of speech more enjoyable and interactive, incorporating games and activities, like Mad Libs or sentence-building exercises, can be effective. These activities allow students to practice using different parts of speech in a playful and engaging way, which can enhance their understanding and retention of the material.
- Encourage students to analyze language: Encouraging students to analyze language in context can help them understand how parts of speech function in real-life situations. To accomplish this, asking them to identify different parts of speech in texts they are reading or listening to can be beneficial. This provides them with an opportunity to practice their understanding of parts of speech in a practical setting.
- Provide feedback and correction: Providing constructive feedback and correction can be helpful to students as they practice using different parts of speech. It can help them identify and correct errors in their writing and speaking, improving their understanding and use of language.

In conclusion, in terms of word awareness, the balanced Tibetan-Chinese group’s advantages of meta-linguistic awareness are mainly manifested in word ambiguity, word formation. However, when it comes to part of speech, there is no significant difference between the two groups. The differences in grammatical structures and categories of parts of speech between languages can be a significant challenge for Tibetan students when it comes to comprehending and effectively employing parts of speech in English language. To address this, teachers need to strengthen students' part of speech training in their teaching activities. Therefore, according to the conclusions of this study, English teachers can take the above instructions into account when teaching English for Tibetan students.

6.4.3 Syntactic Awareness

According to the results of this study, the balanced Tibetan-Chinese group showed a higher meta-linguistic awareness than the unbalanced Tibetan-Chinese group in comprehension, synonymy, acceptability, and grammar function. However, due to the syntactic differences between languages, it also poses some challenges for Tibetan students to learn English. Therefore, in addition to the daily teaching, it is crucial for English teachers to strengthen Tibetan students' syntactic awareness training in their teaching activities. For Tibetan students' English learning, understanding and using the grammatical structure of the English language requires having syntactic awareness, which entails being able to manipulate the rules that determine how sentences and phrases are formed, such as word order, verb tense, subject-verb agreement, and sentence structure. Having syntactic awareness is crucial to the development of English as it enables Tibetan students to communicate effectively and comprehend the meaning of written and spoken language. Therefore, the improvement of syntactic awareness is related to the following aspects.

- Understanding sentence structure: Identifying sentence components such as subject, verb, object, adjectives, adverbs, prepositions, conjunctions, and interjections and their interactions are essential in forming grammatically correct sentences for clear and effective communication. Proper arrangement of these elements is crucial in conveying meaning and ensuring clarity.
- Word order: The conventional word order in English language is subject-verb-object (SVO), which means that the subject precedes the verb, and the object follows the verb. Constructing grammatically correct sentences involves understanding and employing the correct word order, as well as incorporating auxiliary verbs and prepositions where necessary.
- Verb tense: Verb tense is the form of a verb that signifies the time frame in which an action occurs, such as past, present, or future. Choosing the correct verb tense is essential for a sentence to accurately reflect the timing and duration of actions and events. This involves recognizing the different verb tenses and comprehending their role in conveying actions in the past, present, or future.
- Subject-verb agreement: Subject-verb agreement in English requires the subject and verb in a sentence to match in number, either singular or plural. This involves understanding the agreement between the subject and verb in a sentence with regards to number and person. If the subject is singular, so must be the verb, and if the subject is plural, so must be the verb.
- Use of grammatical markers: Grammatical markers modify or indicate the role of a word in a sentence, such as articles, prepositions, conjunctions, suffixes, prefixes, and inflections. They clarify relationships between words and indicate grammatical features like subject, object, tense, and aspect, enhancing overall meaning and comprehension.
- Complex sentence structures: A complex sentence has an independent clause and one or more dependent clauses connected by subordinating conjunctions, allowing for multiple ideas in a sentence. Knowledge of intricate structures like subordinate and relative clauses, and passive voice is essential for sophisticated writing.

Chinese and English differ in their syntactic structures. First, in terms of word order. Chinese and English have different word order patterns. Chinese generally follows a subject-verb-object (SVO) word order, while English typically follows a subject-verb-object (SVO) or subject-object-verb (SOV) word order. Second, in terms of verb tenses and grammar. Chinese verbs generally do not have inflections for tense, aspect, or agreement, while English verbs often do. In Chinese, verb tense and aspect are usually indicated through the use of adverbs, particles (auxiliary word), or context, whereas in English, verb tenses are marked by inflections such as -ed (past tense) or -ing (present participle). Third, in terms of noun modifiers. The placement of modifiers and other sentence elements can vary between the two languages. For instance, adjectives usually come before nouns in Chinese, while they come after in English. Fourth, in terms of pronouns. Chinese has fewer pronouns compared to English, and pronouns are often omitted in Chinese sentences when the context is clear. Fifth, another difference is that Chinese is a tonal language, with the meaning of a word determined by the different tone used, while English is non-tonal. These differences in syntax can make it challenging for students to learn English language. Therefore, strengthen students' syntactic awareness training is essential for English language education.

- Facilitates effective communication: Syntactic awareness is critical for effective communication, whether it is written or spoken. A lack of understanding of sentence structure and grammar can make it challenging for students to express themselves clearly and accurately.
- Improves writing proficiency: By enabling students to use grammatically correct sentence structures, syntactic awareness plays a crucial role in facilitating effective written expression of ideas. Effective written is particularly crucial for academic achievement, making syntactic awareness a vital skill for students to possess.
- Enhances reading comprehension: Comprehending written texts and enhancing reading comprehension relies on understanding sentence structure and syntax. This knowledge enables students to recognize main ideas, supporting details, relationships between concepts and ideas, and the intended meaning and tone of the author in a written text.
- Promotes critical thinking: Analyzing and manipulating sentence structures promotes critical thinking by enabling students to evaluate arguments, identify inconsistencies, and make informed judgments. This skill is crucial for academic success, where critical thinking is essential for effective problem-solving, decision-making, and innovation in language learning.

Renandya, Hillocks, Andrews, and Fisher are well-known linguists who have contributed significantly to the field of language education. Based on their expertise, they have suggested several strategies that teachers can incorporate into their teaching activities to help students develop a strong understanding of syntactic structures.

- Explicit instruction: Explicit instruction involves providing direct and clear information on grammar and syntax rules to help students understand how language works.[140] For example, teachers can provide explicit instruction on subject-verb agreement by explaining the basic rule and providing examples of correct and incorrect usage. This strategy is effective because it provides students

with clear and concise information to improve their language skills and develop meta-cognitive skills.

- Model writing: Model writing is an effective teaching strategy where teachers provide students with well-written sentences and texts to help them understand how to use syntax and grammar effectively.[141] For example, teachers can highlight specific syntactic structures and patterns used by the author and encourage students to incorporate similar structures into their own writing. This strategy improves students' syntactic awareness and writing skills.
- Sentence imitation: Sentence imitation is a teaching strategy where students imitate sentence structures found in mentor texts or modeled by the teacher.[142] This helps them develop an intuitive understanding of syntax and recognize various sentence structures, improving their writing skills and style.
- Scaffolded practice: Scaffolded practice is a teaching strategy that provides structured support to help students improve their sentence structure skills.[143] It starts with simple structures and gradually introduces more complex ones, allowing them to build on their prior knowledge and gain confidence in their writing abilities. This approach is effective for developing students' syntactic awareness.
- Error correction: Error correction is a teaching strategy where teachers correct syntax and grammar errors in student writing, provide explanations, and offer practice opportunities. It helps students improve their writing skills and syntactic awareness by identifying errors and understanding rules.
- Collaborative learning: Collaborative learning is a teaching strategy where students analyze sentence structures and patterns, and give feedback on each other's writing. Working in groups promotes idea sharing and deepens students' understanding of syntactic structures. It improves writing skills and enhances syntactic awareness.
- Application to writing: Encouraging students to apply their knowledge of syntax to their own writing can help them develop a personal writing style, become more confident and effective writers, and improve their writing skills. By experimenting with different structures and patterns, students can create more effective and engaging writing and enhance their syntactic awareness.

In conclusion, the differences in syntactic structures between languages can make it challenging for Tibetan students to learn English. Variations in word order, sentence structure, and grammar rules can be different from what Tibetan students are used to in Tibetan or Chinese language. Targeted instruction and practice may be necessary to help Tibetan students overcome these challenges and become proficient in English language. Therefore, according to the conclusions of this study, English teachers can take the above instructions into account when teaching English for Tibetan students.

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Appendix I

Student Language Assessment Scale (SLAS)

Hello, fellow student. We are doing a survey on language assessment and the following questions need to be answered by you. Please read these questions carefully and do not miss them. Please answer truthfully and do not worry about privacy disclosure. The questionnaire will only be used for research.

Part I. Basic information about the participants

1. Name: Age: Gender:

2. Place of birth:

3. What is your ethnicity?

(1). Tibetan

(2). Han

(3). Others

4. What is your father's ethnicity?

(1). Tibetan

(2). Han

(3). Others

5. What is your mother's ethnicity?

(1). Tibetan

(2). Han

(3). Others

Part II. Tibetan Language Proficiency Assessment

6. How much can you understand when someone speaks to you in Tibetan?

(1) All can understand.

(2) Mostly understand.

(3) Half understand.

(4) Few can understand.

(5) Can't understand at all.

7. When you talk to your father, _____

(1) all in Tibetan.

(2) mostly in Tibetan.

(3) half in Tibetan.

(4) rarely in Tibetan.

(5) the Tibetan language is not used.

8. When you talk to your mother, _____

(1) all in Tibetan.

(2) mostly in Tibetan.

(3) half in Tibetan.

(4) rarely in Tibetan.

(5) the Tibetan language is not used.

9. When you talk to your friends, _____

(1) all in Tibetan.

(2) mostly in Tibetan.

(3) half in Tibetan.

(4) rarely in Tibetan.

(5) the Tibetan language is not used.

10. When you talk to your classmates, _____

(1) all in Tibetan.

(2) mostly in Tibetan.

(3) half in Tibetan.

(4) rarely in Tibetan.

(5) the Tibetan language is not used.

Part III. Chinese Language Proficiency Assessment

11. How much can you understand when someone speaks to you in Chinese?

(1) All can understand.

(2) Mostly understand.

(3) Half understand.

(4) Few can understand.

(5) Can't understand at all.

12. When you talk to your father, _____

(1) all in Chinese.

(2) mostly in Chinese.

(3) half in Chinese.

(4) rarely in Chinese.

(5) the Chinese language is not used.

13. When you talk to your mother, _____

(1) all in Chinese.

(2) mostly in Chinese.

(3) half in Chinese.

(4) rarely in Chinese.

(5) the Chinese language is not used.

14. When you talk to your friends, _____

(1) all in Chinese.

(2) mostly in Chinese.

(3) half in Chinese.

(4) rarely in Chinese.

(5) the Chinese language is not used.

15. When you talk to your classmates, _____

(1) all in Chinese.

(2) mostly in Chinese.

(3) half in Chinese.

(4) rarely in Chinese.

(5) the Chinese language is not used.

Appendix II

Standardized English Proficiency Test (SEPT)

一、找出画线部分读音与其他三个不同的单词。（10 分）

( ) 1. A. teacher B. certainly C. sister D. brother

( ) 2. A. earth B. near C. hear D. ear

( ) 3. A. bowl B. snow C. now D. yellow

( ) 4. A. page B. dog C .pig D. big

( ) 5. A. think B. third C. those D. thank

( ) 6. A. game B. table C. get D. rain

( ) 7. A. on B. office C. orange D. open

( ) 8. A. ruler B. mum C. shut D. colour

( ) 9. A. feet B. meat C. seven D. peach

( ) 10. A. right B. ghost C. light D. night

二、补一个同类词。（5 分）

1. morning, evening, _____

2. beer, coffee, _____

3. post, office, shop, _____

4. thin, fat, _____

5. cool, cold, _____

三、根据汉语要求选择正确的英语句子。（10 分）

( ) 1. Bob 相约 Tom 去公园，应该怎么说？

A. Can I go to the park? B. Shall we go to the park?

( ) 2. Lily，这是我的朋友。

A. Lily, this is my friend. B. Lily, this friend is my.

( ) 3. 当别人邀请你一起去郊游时，你说："太好了！"

A. Thank you! B. Great!

( ) 4. 明天上午我要去买东西。

A. I'll go shopping tomorrow morning.

B. I'll do shopping tomorrow morning.

( ) 5. 当你提醒 Fred 不要在街上玩足球时说：

A. Don't play football in the street, Fred!

B. Not to play football in the street, Fred!

四、选择填空。（15 分）

( ) 1.Li Hong _____ TV for two hours every evening.

A. watch B. watches C. watched

( ) 2. --- _____is he? --- He is ten.

A. What B. Who C. How old

( ) 3. Kate and Jane _____ my good friends.

A. is B. am C. are

( ) 4. --- Where _____ he from?

--- He ____ from China.

A. is; come B. is; comes C. does; is

( ) 5. --- Where is my pencil?

--- I can't ____ it

A. look at B. find C. look for

( ) 6. We're going to stay here tomorrow. What ____ you?

A. about B. besides C. with

( ) 7. ---That blue jacket is beautiful. --- _____.

A. fine B. very nice C. well

( ) 8. ---_____ are these? --- They are red pencils.

A. What B. Where C. What colour

( ) 9. My mother_____ three shelves.

A. have B. has C. is

( ) 10. The man over there is _____.

A. Miss White B. Mrs White C. Mr White

( ) 11. --- _____ kitchen is clean? --- Mary's.

A. Who's B. Whose C. Who

( ) 12. ---_____ grade are you in? --- Grade Five.

A. Whose　B. Which　C. Where

(　) 13. --- _____ on the river? --- There're some ducks.

A. What　B. Which　C. What's

(　) 14. That girl is my friend. _____ name is May.

A. His　B. Her　C. Its

(　) 15. Helen is behind me. I am _____ Helen.

A. behind　B. in front of　C. beside

五、用所给动词的适当形式填空。（10 分）

1. Peter's father often_____ (take) a bus to go to work.
2. Look! They_____ (play) happily in the playground.
3. Tom likes_____ (swim) in summer.
4. Who can_____ (speak) English well in your family?
5. Tim and Tom_____ (read) in the library. Let's_____ (join) them.
6. We will_____ (go) for a picnic tomorrow. We_____ (get) ready for it now.
7. Mary, _____ (not talk) with each other. _____ (be) quite, please.
8. _____ (be) there any water in the bottle?
9. Do you like_____(watch) TV?
10. Don't_____ (wash) your shirts now.

六、请找出下列句子的错误，并改成正确的句子。（10 分）

1. Her sister doing her homework now.

_____

2. Tom have a happy family.

_____

3. Sometimes my parents and me go for an outing on Sundays.

_____

4. I usually have lunch in home.

_____

5. We sing and dance at the party last night.

_____

七、阅读理解。（10 分）

（一）根据短文判断正误，对的写"A",错的写"B"。

Jane and Mary are good friends. Their families are in Shanghai now. Jane is from Britain and Mary is from America. They are in the same school. But they aren't classmates. Jane is in Class One. Miss May is her teacher. Mary is in Miss White's class. They study Chinese. They like it. They like Shanghai, too.

(　　) 1. Jane and Mary are good friends and classmates.

(　　) 2. Their families aren't in Shanghai now.

(　　) 3. Miss May is the teacher of Class One.

(　　) 4. Mary is in Class One.

(　　) 5. Jane and Mary study Chinese and they like it.

（二）选择能填入横线处的正确答案并把序号填入题前括号中。

Tom is a little boy, and he is only seven years old. One day he went to the cinema. It is the first time for him to do that. He bought a ticket and then went in. But after two or three minutes he came out, bought a second ticket and went in again. After a few minutes he came out again and bought a third ticket. Two or three minutes late he came out and asked for another ticket. Then the girl in the ticket office asked him, "Why do you buy so many tickets? How many friends do you meet?" Tom answered "No, I have no friends here. But a big boy always stops me and tears my ticket to pieces."

(　　) 1. Tom is ____ years old.

A. seven　　B. six　　C. nine　D. eleven

(　　) 2. It was ____ for Tom to go to the cinema alone.

A. the second time　　B. the third time

C. the first time　　D. the last time

(　　) 3. Tom bought ____ before the girl asked him.

A. one ticket　　B. two tickets　　C. three tickets　　D. four tickets

(　　) 4. Tom met____ that day.

A. three friends　B. his parents　C. many classmates　D. no friend of his

(　　) 5. The big boy was ____ in the cinema.

A. a doctor　B. a teacher　C. a worker　D. a policeman

Appendix III

Meta-linguistic Awareness Test-2 (MAT-2)

Phonological Awareness Test

Part 1. Phonetic and Phonological Identification Test

1. Bound/Sound

A. What makes them similar?

_____

B. What makes them different?

_____

C. What do these words mean?

_____

2. Casket/ Basket

A. What makes them similar?

_____

B. What makes them different?

_____

C. What do these words mean?

_____

3. Ship/ Sheep

A. What makes them similar?

_____

B. What makes them different?

_____

C. What do these words mean?

_____

Part II. Syllable Scansion Test

1. Dog

How many syllables are they in the word "dog"?

_____

2. Police

How many syllables are they in the word "Police"?

_____

3. Fertilizer

How many syllables are they in the word "Fertilizer"?

_____

Part III. Identification of Repeated Phonemes Test.

1. Usual

A. What sound is repeated?

_____

B. How many times?

_____

2. Pessimistic

A. What sound is repeated?

_____

B. How many times?

_____

3. Necessary

A. What sound is repeated?

_____

B. How many times?

_____

Word Awareness Test

Part I. Ambiguity Test.

1. The bank did a good job.

A. how many meanings do you see in the word "Plant"?

_____

B. What is the meaning of the word "bank" in this sentence?

_____

C. What are the other different meanings of the word "bank"?

_____

2. The Plant was thriving.

A. how many meanings do you see in the word "Plant"?

_____

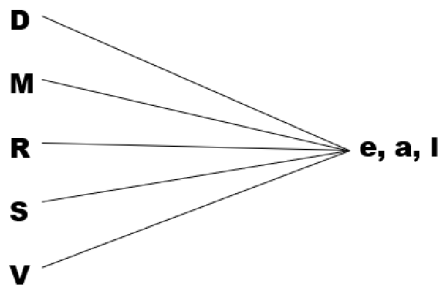
B. What is the meaning of the word "Plant" in this sentence?

_____

C. What are the other different meanings of the word "plant"?

_____

Part II. Word Formation Test



1a. Compose all the words you know by connecting the individual letters with the rest of the word.

e.g., deal_____

_____

_____

_____

_____

Part III. Part of Speech Test

1b. Are they verbs, adverbs, adjectives, nouns or pronouns?

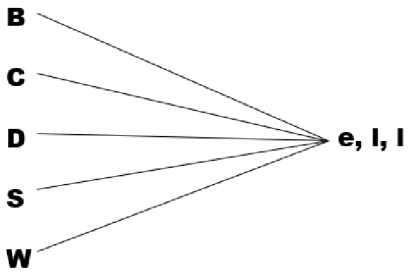
_____

_____

_____

_____

_____



2a. Compose all the words you know by connecting the individual letters with the rest of the word.

e.g., bell_____

_____

_____

_____

_____

2b. Are they verbs, adverbs, adjectives, nouns or pronouns?

_____

_____

_____

_____

Syntactic Awareness

Part I. Comprehension Test

e.g., The boy ate the fish.

Who or What was eaten?

The fish._____

What makes you sure about who was eaten?

The boy does the action and the fish is acted upon.

1. The queen kissed the frog.

A. Who was kissed?

_____

B. What makes you sure of that?

_____

2. The queen was kissed by the frog.

A. Who was kissed?

_____

B. What makes you sure of that?

_____

3. a. The queen kissed the frog.

b. The queen was kissed by the frog.

A. Do they mean the same thing?

_____

B. What makes you sure of that?

_____

4. a. After the girl had finished eating, she began to read a comic.

b. The girl began to read after she had finished eating.

A. Do they mean the same thing?

_____

B. What makes you sure of that?

_____

5. The house was destroyed by the earthquake.

A. What destroyed the house?

_____

B. What makes you sure of that?

_____

6. The earthquake didn't destroy the house.

A. What happened to the house?

_____

B. What makes you sure of that?

_____

7. a. The house was destroyed by the earthquake.

b. The earthquake didn't destroy the house.

A. Do they mean the same thing?

_____

B. What makes you sure of that?

_____

Part II: Synonymy Test

e.g., a. The jacket was cut by the tailor.

b. It's the tailor that cut the jacket.

A. Do they mean the same thing?

Yes._____

B. What makes you sure that they mean the same?

_____

1. a. The nurse was called by the doctor.

b. It's the nurse that the doctor called.

A. Do they mean the same thing?

_____

B. What makes you sure of that?

_____

2. a. There is an apple in the basket.

b. The basket contains an apple.

A. Do they mean the same thing?

_____

B. What makes you sure of that?

_____

3. a. There is more cake than ice cream.

b. There is less ice cream than cake.

A. Do they mean the same thing?

_____

B. What makes you sure of that?

_____

Part III: Acceptability Test

1. The girl was patting the dog.

A. Can you say like this?

_____

B. Why did you give this answer?

_____

2. The girl was patting.

A. Can you say like this?

_____

B. Why did you give this answer?

_____

3. The teacher was reading a story.

A. Can you say like this?

_____

B. Why did you give this answer?

_____

4. The teacher was reading a hen.

A. Can you say like this?

_____

B. Why did you give this answer?

_____

Part IV: Grammatical Function Test

1. Mary is combing her hair.

A. Who is doing the action?

_____

B. What makes you sure of that?

_____

2. James broke the glass.

A. What was broken?

_____

B. What makes you sure of that?

_____

3. Peter is a good boy.

A. What's being said about peter?

_____

B. What makes you sure of that?

_____

4. Dad is going to leave tomorrow.

What makes you understand when the departure will occur?

_____

5. Traffic is moving slowly.

What tells you how the traffic is moving?

_____