

The Impact of Native Language on Mandarin Acquisition: A Study of Zhuang and Miao Students

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Abstract

This study was conducted with Zhuang and Miao students and Mandarin teachers in grades four to six in four township elementary schools in Dehou Township, Wenshan City, Yunnan Province. The purposes of this study were: 1) to study the influences of the native language that affect Zhuang and Miao students when they learn Mandarin, 2) to study teachers' opinions about their students' native language affects their learning when teaching Mandarin to Zhuang and Miao students. Based on Krejcie and Morgan's table, 186 students for questionnaires and 14 teachers were selected for interviews. The study is a mixed method of quantitative and qualitative research, which was statistically analyzed using percentages, means (\bar{x}), standard deviation (S.D.), and narrative analysis by coding the interview information. The research instruments were questionnaires and semi-structured interviews. The results revealed that 1) the influences of the native language that affect Zhuang and Miao students when they learn Mandarin consisted of four aspects: (1) social context, (2) learner characteristics, (3) learning conditions, and (4) learning process: Social Context was high level (\bar{x}) = 2.70 and S.D = 0.36; Learner Characteristics was moderate level (\bar{x}) = 2.43 and S.D = 0.35; Learning Conditions was moderate level (\bar{x}) = 2.46 and S.D = 0.2936; Learning Process was high level (\bar{x}) = 2.51 and S.D = 0.30. All four aspects had a high level (\bar{x}) = 2.52 and S.D = 0.33; on Zhuang and Miao students' Mandarin learning, and 2) teachers' opinions about their students' native language affect their learning when teaching Mandarin to Zhuang and Miao students. It showed that Zhuang and Miao's students had difficulty pronouncing Mandarin when they learned it because of the influence of their language; the difference between Mandarin and the expression habits of the ethnic language also affects the learning of Mandarin by Zhuang and Miao students. This study suggests that the study should emphasize the creation of a Mandarin language environment for Zhuang and Miao students, enhance students' interest in learning Mandarin, improve the conditions for learning Mandarin, and innovate teaching methods.

Keywords: native language, zhuang and miao students, mandarin learning

1. Introduction

1.1 Introduce

In the early years of the founding of New China, ethnic minority education emphasized the learning of ethnic languages and the "integration of both the Chinese and the people" in terms of content, and ensured that ethnic minority students enjoyed preferential treatment and care in terms of policy (Wan & Hai, 2019). For example, ethnic primary and secondary schools were established in ethnic areas, ethnic colleges, and universities in higher education were restored and built, preferential policies were given to ethnic minority students, and different types of bilingual teaching modes in primary and secondary schools in ethnic areas were perfected (Wan & Hai, 2019). After 2000, the Chinese government issued a series of policies and regulations to promote the development of ethnic education and began to reform or adjust the structure and content of the education system for ethnic minorities (Wan & Hai, 2019). The National Medium- and Long-Term Educational Reform and Development Plan Outline (2010-2020), issued in 2010, proposes. "Vigorously promote bilingual teaching. The Chinese language curriculum shall be fully introduced, and Mandarin and Chinese characters shall be fully promoted. The rights of minority nationalities to receive education in their languages and scripts are respected and safeguarded. Comprehensively strengthen pre-school bilingual

education" (Wan & Hai, 2019). The Decision of the State Council on Accelerating the Development of Ethnic Minority Education, promulgated in 2015, also states, "All ethnic minority areas shall, by national laws and in the light of the local situation, unswervingly promote education in the state's common language and script, ensure that ethnic minority students master and use the state's common language and script and that ethnic minority college graduates can proficiently master and use the State's common language and script" (Wan & Hai, 2019). The above policy shows that China attaches importance to the education of Mandarin in ethnic areas. Mandarin is a standardized modern Chinese language, the common language of the modern Han Chinese people, and the national common language of China, and its scope of use includes the areas inhabited by the Han Chinese people as well as the areas inhabited by the national autonomous regions and ethnic minorities (Li & Hou, 2006). China is a multi-ethnic and multi-lingual country, and people in different language areas need to use Mandarin for social communication and linguistic communication. Because minority students' first language is not Mandarin, they need to learn Mandarin to lay the foundation for their subsequent education.

1.2 Rationale

In the theory of mispronunciation analysis, language errors may be caused by the influence of the mother tongue (Chen, 2007). The mother tongue of ethnic minority students may cause students' cognitive errors in Chinese (Mandarin), based on this, this paper investigates Zhuang and Miao students in selected areas to find out whether the reason why they have more difficulty in learning Chinese (Mandarin) is related to their language. Cognitive linguistics states that language is based on people's experience of the world, and cognition has an organizing effect on human experience (Zhao, 2000). When minority students learn Chinese (Mandarin), do they draw on their experience of learning their language, and does this cause problems for their learning of Chinese (Mandarin). Whether teachers can draw on minority students' cognitive experience of their language to improve their Chinese (Mandarin) learning ability. In socio-cultural theory, children and all developing individuals develop their minds by interacting with people who have longer intellectual abilities than they do (mainly using verbal communication), so verbal communication, the use of language, is of great importance in the psychological development of an individual (Liu, 2011). This shows the importance of the environment for ethnic minority students to learn Mandarin, and a good language environment helps them learn Mandarin well. Because of this, the researcher, as a teacher in the primary school in Dehou Township, hopes to lead the research on improving the learning and teaching of Zhuang and Miao students, who are ethnic minority cultures, in the teaching of Mandarin language in rural primary schools through the study of these issues. Therefore, the researcher will conduct a survey and research on Zhuang and Miao students in grades 4-6 in four primary schools in Dehou Township. Through interviews and surveys with Mandarin language teachers and questionnaires with students, the researcher will find out the specific situation of Zhuang and Miao students' Mandarin learning, find out whether students are affected by the ethnic language in learning the Mandarin language, which results in difficulties in learning, and find out whether teachers' teaching of Mandarin to ethnic minority students is affected by the students' languages, causing difficulties in teaching, and to analyse and summarise these situations and put forward reasonable suggestions.

1.3 Literature Review

1.3.1 Overview of Mandarin Learning

In 1949, a form of Mandarin in the People's Republic of China, also known as Mandarin ("common language"), based on the Beijing dialect, was legitimized as the country's official language (Ministry of Education, 2005; Kane, 2006). The official language, Mandarin, is the language that Chinese students learn in school and is considered to be the most widely spoken language in the world - it is currently spoken by an estimated 650 million people, although more than 1 billion people may be able to understand written Chinese (Crystal, 2003). Almost all learners of Chinese are now learning Mandarin (Kane, 2006; Nayer, 1997). Mandarin is the medium of instruction at all stages in China and the government has attempted to promote this through the school system, although it has proved difficult, particularly in elementary schools in more remote areas (Starr, 2009). In China, each ethnic group has its language, and although the languages of ethnic minorities are officially recognized as having the same status as Mandarin in some areas, they are also under pressure to adopt Mandarin for teaching purposes to communicate with other ethnic groups and regions, and the essentially standardized language policy is seen as an important part of preserving the integrity of China's state (Starr, 2009).

For members of minority groups, learning Mandarin, the lingua franca, enables them to better integrate into the group or to share in the resources of the majority (Clément & Kruidenier, 1983). In minority areas, minority groups use their language more often, especially in daily communication. As a result, ethnic minority students know little about the importance of Mandarin, which leads to a lack of awareness of learning Mandarin in their minds, affecting the

popularization of Mandarin, and a poor level of Mandarin may prevent them from finding a job after graduation, which may be detrimental to the stable development of the society (Li, Liao & Li, 2010). Members of ethnic minorities need to learn their languages as a way to protect their cultural traditions but to develop their economies and communicate with other ethnic groups and regions, ethnic minorities must also learn Mandarin, and ethnic minorities in remote mountainous areas especially need to learn Mandarin because they aspire to develop their economies, so it is of great significance to implement bilingual education in ethnic minority areas (Gu, 2014).

1.3.2 The Motivation for Learning Mandarin Chinese

In their study of motivation for learning a second language, Gardner and his colleagues (Gardner & Lambert, 1972; Gardner, 1985) proposed two motivational orientations that indicate the main reasons why students learn a language. The first orientation is integrative, i.e., "the student's desire to "learn more about other cultural communities as he becomes interested in it in an open-ended way, and ultimately to be accepted as a member of another group" (Gardner & Lambert, 1972, p. 3). Integration orientation includes emotional identification with the target cultural group, positive attitudes toward the language community, and interest in and desire for social interaction with the language community, all of which reflect a positive view of the L2 and its culture (Gardner, 2001; Csizér & Dörnyei, 2005). The second orientation is instrumental, that is, students want to derive particular benefits from learning a language, such as career opportunities, and the tools include pragmatic reasons and utilitarian values, as well as learners' perceptions of the benefits of the language, such as finding a better job, traveling, making friends, and understanding foreign media (Gardner, 2001; Csizér & Dörnyei, 2005).

"Heritage learners" or "heritage language learners" (Campbell & Peyton, 1998) are students who speak a language other than English as their first or native language, either having been born in another country or speaking a language other than English at home. They are sometimes referred to as "minority learners" (Walker, 1991) or "traditional students" (Sung & Padilla, 1998). According to Campbell and Peyton (1998), heritage language students have varied historical and cultural backgrounds. Their language proficiency varies from knowing only a few words or learners may learn about their heritage, and Chinese learners may be attracted by China's rapidly growing economy and the potential value of learning Chinese. Given this, minority students' instrumental motivation may be an important motivation for them to learn Mandarin.

1.3.3 Barriers to Learning Mandarin

Pragmatic competence consists of two distinct but interrelated subcomponents: pragmatic linguistic competence and sociolinguistic competence, and pragmatic competence, which is recognized as an important component of communicative competence (Laughlin et al., 2015; Usó-Juan & Martínez-Flor, 2006), is a huge challenge to second language (L2) learners is a great challenge for even those who are proficient, as they often lack the knowledge and ability to use pragmatic language in everyday communication (Bardovi-Harlig, 2001; Halenko & Jones, 2011; Kasper, 1997).

In China, the learning of Mandarin by ethnic minority students is influenced by their language. An (2010) takes Buyei and Chinese as a comparison and mainly analyzes the differences in the ways of pronouncing the two (differences in fricatives, nasals, and consonants), and this difference makes Buyei students have difficulties with certain pronunciations in Mandarin, and occurrence of inaccurate pronunciation can bring obstacles to language learning and communication. The words themselves need to be learned, and the lack of connection between words and sounds leads to learning difficulties (Kane 2006; Zhang, 2012) came to a similar conclusion by analyzing the vowels and rhyming tones of Tibetan. In addition to phonological differences, there are also differences in vocabulary and the conventions of grammatical structures and word order, which make ethnic minority students experience communication barriers and problems in thinking transitions when communicating in Chinese (Yang, 2008). When people learn new knowledge, old knowledge is bound to be transferred. Migration that facilitates the learning of new knowledge is called "positive migration", while migration that hinders the learning of new knowledge is called "negative migration" (Jia, 2011). In the process of learning Mandarin, there are many components of "negative transfer" from the mother tongue, and the negative transfer from the national language is also manifested in the phenomenon of petrification of the intermediary language, i.e., over-reliance on the knowledge of the mother tongue as an auxiliary to the expression of meaning makes ethnic minority students' understanding deviate from that of the second language when they are using their mother tongue (Jia, 2011). deviation (Jia, 2011). The thinking process of minority students using a second language is much more complicated, the language used for expression is a second language, while the language of thinking may be the mother tongue, in this process, the second language is always subjected to two different influences, both positive and negative, of the mother tongue, so the elimination of dependence on and interference with the native language is important for accelerating the learning of the second language (Wang, 1995).

Based on environmental reasons, Wang et al. (2013) pointed out that due to the closed environment and high concentration of Uyghurs in the Gaotai Minjiu community in the ancient city of Kashgar, Xinjiang, residents use only Uyghur in their daily lives, and believe that their national language is very important to them, while they consider Mandarin to be relatively important to their offspring; however, primary and secondary school students are not interested in or even resistant to the learning of Chinese, and there is a contradiction between their subjective willingness to learn Mandarin and their actual behaviors, due to the influence of their family environments and their living habits. Li (2005), however, pointed out that through the survey, although the concentration of ethnic minorities in the Southern Xinjiang region has led to a lower level of Mandarin popularization, ethnic minorities have a stronger willingness to learn Mandarin because learning it well can help them master advanced production techniques through media and books and thus increase their economic income and change the economic backwardness caused by geographic factors. It can be seen that ethnic minorities in different regions have different attitudes towards learning Chinese.

Students of different nationalities may be affected by different factors when learning Chinese. Mei (2011) observed the process of Chinese kana learning among Thai learners and found that first language transfer had a great impact on Mandarin acquisition. An and Zhang (2007) used various data collection methods such as questionnaires, interviews, and classroom observations and found that students from countries that use Chinese characters recognize pinyin faster than students from countries that do not use Chinese characters. Chen (2011) studied the process of tone acquisition of Western learners at different levels and found that learners' tone performance varied with their Chinese proficiency. Chen (2011) studied the acquisition process of tones in Western learners at different levels and found that learners' performance of tones varied with their Chinese language level. Zhang (2008) investigated the effects of the number of strokes, lexical frequency, and grapheme frequency on single-character recognition of Chinese characters, and the results showed that it was more difficult for learners to memorize Chinese characters with a higher number of strokes, which confirms that the stroke is the main unit of Chinese character recognition. Fan (2013) pointed out that CSL/CFL learners tended to learn neologisms that were more pragmatic, current, and efficient, and to acquire neologisms through everyday Chinese communication, TV programs, movies, and the Internet to acquire new words.

Students of different nationalities have different strategies for learning Chinese. Liu (2012) found that Japanese university students used memory strategies the most and affective and functional strategies (e.g., watching Chinese movies and communicating with Chinese friends) the least when learning Chinese and that students' motivation was positively correlated with the use of learning strategies. Wu and Chen (2006) found that students with better listening skills used cognitive strategies, metacognitive strategies (metacognitive strategies are strategies that manage one's learning through a series of behaviors such as planning, monitoring, summarizing, evaluating, and allocating attention), and affective strategies (affective factors can be a part of language learning) when learning Chinese. Wu and Chen (2006) found that students with better listening skills used better cognitive strategies, metacognitive strategies (metacognitive strategies are strategies for managing one's learning through a series of behaviors such as planning, monitoring, summarizing, evaluating, and allocating attention), and affective strategies (affective factors can be a motivation or resistance to language learning) when listening to Chinese, and suggested that the use of teaching Chinese as a second or foreign language (CSL/CFL) is more effective than that of listening to Chinese as a second or foreign language (CSL/CFL). Teaching Chinese as a second or foreign language (CSL/CFL) teachers should encourage active learning and provide more self-assessment tasks in listening instruction. Zhou and Xie (2007) explored the word separation strategies utilized by intermediate-level students through reading tasks and stimulus recall, as Chinese word separation is a complex task for most CSL/CFL learners, and concluded that the use of familiar words, grammatical judgments, rhythmic judgments, substitutions, and native language comprehension are the common strategies used for Chinese vocabulary extraction. Qian (2010) found that Korean students comprehended Chinese reading mainly through main idea speculation, contextual information, and text markers, but avoided using their mother tongue and interacting and communicating in their mother tongue. In contrast, Wu (2008) found that Italian students in the target language environment mostly used alternative ways of expression, i.e., speaking in other words or using gestures to help them express themselves, and then using English if they could not improve their spoken Chinese. Several other factors can affect second language acquisition, such as a shortage of external resources that increases the difficulty of program immersion programs (Lindholm-Leary, 2011). Schachter and Gass (2013) state that bilingual immersion programs face challenges in terms of equitable access, funding, staffing, socio-political tensions, collaboration, resource policy, and accountability challenges. The most immediate problem is the lack of teachers and instructional materials in Chinese as a foreign language; program styles need to be adapted to fit the local culture (Zhao, 2009).

Teachers are also factors that influence second language acquisition. Since language teachers play a key role in implementing relevant language programs and facilitating the learning of CSL/CFL learners, their professional development should be a priority focus of research (Lai et al., 2016). With the rapid increase in the number of Chinese language learners, there is an urgent need for more and more Chinese language teachers (Wang et al., 2013). Indeed, teacher shortage is one of the most significant challenges that policymakers have to face when promoting CIL, for example, Jiang and Hao (2010) studied and explained the practical pedagogical knowledge of two experienced and two novice Chinese language teachers, teachers' beliefs, students' knowledge, and past experiences were more valued by experienced teachers, although novice and experienced teachers had similar perceptions of pedagogical knowledge. It can be seen that the learning of a second language may be influenced by the native language, environment, learning strategies, teaching resources, policies, teachers, etc.

1.3.4 Impact of the Cultural Environment

The influence of the cultural environment has also been recognized in recent theories about the role of motivation in second-stage language learning (Clément & Hamers, 1979; Gardner, 1978). Due to socio-cultural influences, heritage learners may wish to learn their heritage language (HL) rather than other foreign languages. Studies of Chinese heritage learners (Chao, 1997; He, 2008) have demonstrated that learners learning Chinese can search for their national identity and recover the roots of their neglected cultural heritage. Even within the group of native English-speaking learners, there are differences in learners' cultural experiences, psychosocial backgrounds, and levels of education in their home countries, which contribute to differences in their language skills (He & Xiao, 2008; Peyton et al., 2001). Even the impact of digital and communication technologies, which over time are not immune to economic, political, and social impacts, can change how the determinants of linguistic competence in second language teaching intervene (Bárcena, 2020; Caliskan et al., 2017; Hartshorne et al., 2018; Thorne et al., 2015). Although there is nowadays a broad consensus on the involvement of these factors when learning a second language, the results caused by these factors are different, and it is the teacher's perception of the quality of the student's academic performance, the capacity for social and institutional relations, and the knowledge of the family environment that may positively or negatively influence the results obtained (Beltrán-Arias, 2015; Rao, 2016).

The influence of ethnic minority students' psychology and culture in the process of learning Mandarin should not be ignored, and it is necessary to grasp the differences between the two and grasp the rules in teaching to make them establish a correct view of language and eliminate the inferiority complex of language (Liang, 2009). With the development of the economy, although the process of urban-rural integration is accelerating, the popularization of Mandarin among rural groups is still far less than that among urban groups (Dai & Putonghua Penetration Survey Project Team (2012). The role of the language of the students' parents in influencing the language used by the students to communicate at home, the reason why students do not use Mandarin at home at a high rate is that their parents do not speak Mandarin (An, 2010). Children tend to use their first language to communicate in private settings or among their peers (Chen 2013). Learners' first language is often cited as a source of negative influence on their efforts to "master" Chinese (Feng & Hu, 2005; Yuan, 2009). The majority of children in foreign language (FL) immersion programs lack the family and community background to speak the FL language outside of school (DeJong & Bearse, 2014). Students do not possess cognitive-like syntactic abilities and lack unique conversational features (Genesee & Lindholm-Leary, 2013). This shows that second language learning can be influenced by the home language environment and the regional context in which the language learner lives.

Arigita-García et al. (2021) studied the Second Language Learning Examination Framework. The first aspect is the social context (Stern, 1983), i.e. the space in which students interact regularly, consisting of cultural, social, political, geographical, historical, religious, linguistic, and economic aspects that are part of the learner's identity (Beltrán-Arias, 2015), the combination of which will largely determine learners' perceptions of the target language as well as learners' behavior in learning the target language (Cronin, 2017; Good & Lavigne, 2017). In this paper, we will focus on the selected Miao and Zhuang students' use of the language at home and outside the classroom. The second and third aspects (directly related and determined by the social environment) will be the characteristics of the student and the learning conditions (Arigita-García et al., 2021). Among the characteristics of the student will be included the factors related to the personality of the learner, i.e. the sum of the characteristics that distinguish one person from another (Arigita-García et al., 2021). Regarding the conditions of learning outcomes, these will be determined by the pedagogical context through two possible dichotomies (Arigita-García et al., 2021). On the one hand, "acquisition and formal learning", whether or not we take into account that nowadays we tend to categorize learning contexts into formal and informal learning (Arigita-García et al., 2021). On the other hand, the dichotomy related to educational models is "teaching-centered versus learning-centered models" (Dewey, 1986; Park, 2016; Stern, 1983; Unsworth & Mills, 2020). The fourth aspect will be the process of learning, a process that, moderated by the uniqueness of the

learner and the conditions of learning, will include the strategies, techniques, and mental operations developed by the student from the very beginning of the learning process to the attainment of linguistic competence in the target language (Arigita-García et al., 2021). For example, in the process of acquiring the mother tongue, the learner goes through successive stages of learning as he or she internalizes the new linguistic system, eventually confronting authentic linguistic competence through the correct use of the language (Oxford, 2016).

1.4 Research Question (s)

1. What are the influences of the native language that affect Zhuang and Miao students when they learn Mandarin?
2. How do teachers' opinions about their students' native language affect their learning when teaching Mandarin to Zhuang and Miao students?

1.5 Objectives

1. To study the influences of the native language that affect Zhuang and Miao students when they learn Mandarin.
2. To study teachers' opinions about their students' native language affects their learning when teaching Mandarin to Zhuang and Miao students.

1.6 Research Hypothesis/Hypotheses

The native language affects Zhuang and Miao students when they learn Mandarin

1.7 The Variables

Independent Variable: Influence of Zhuang and Miao students

Dependent Variable: Mandarin Learning

2. Method

2.1 Population and Sample Group

2.1.1 The Population

The four elementary schools selected for this study were located in Dehou Town, Wenshan City, which is a township elementary school under Wenshan City, and most of the students in the four elementary schools are ethnic minority students from nearby villages, mainly Miao and Zhuang students. There are a total of 17 Mandarin language teachers in grades four to six of the four schools and a total of 482 students in grades four to six.

2.1.2 The Sample Group:

The data sample for this study was selected according to Krejcie and Morgan (1970). In empirical research, the need for a representative statistical sample was increasing. Hence there was a need for an efficient method to determine the sample size. To address this problem, Krejcie & Morgan (1970) proposed a table for determining sample size for a given population for easy reference. According to the sample size determination table from 482 population to 186 sample size, the following two data sets were used for this study as follows:

- 1) 186 students from grades four to six in four schools participated in answering the questionnaires

-School A, there are 8 rooms for grades four to six. The researcher used a simple random sampling method by drawing the number of rooms. So, it got room no.4 which has 47 students to be the participants.

- School B, there are 11 rooms for grades four to six. The researcher used a simple random sampling method by drawing the number of rooms. So, it got room no. 9 which has 47 students to be the participants.

- School C, there are 10 rooms for grades four to six. The researcher used a simple random sampling method by drawing the number of rooms. So, it got room no. 8 which has 47 students to be the participants.

- and School D, there are 9 rooms for grades four to six. The researcher used a simple random sampling method by drawing the number of rooms. So, it got room no. 3 which has 47 students to be the participants.

- 2) 14 of these teachers were selected for interviews in this study, all of whom were Mandarin language teachers from grades four to six in the four schools by purposive sampling.

- School A, 3 teachers taught Mandarin language and graduate B.A

- School B, 4 teachers taught Mandarin language and graduate B.A

- School C, 4 teachers taught Mandarin language and graduate B.A

- School D, 3 teachers taught Mandarin language and graduate B.A

2.2 Research Instruments

1) Questionnaire for students

A questionnaire was used for the collection of data from the student section. The questions were designed based on the research objectives of the article as well as the relevant literature. Before using the questionnaire the advice of relevant experts was taken and the questionnaire was tested to ensure its validity.

The Likert (1932) 3 scale will be used in this study because the participants were 9-12 years old. There are 20 questions in 4 dimensions: 5 questions per dimension as follows:

1. Social context 5 items
2. Learner characteristics 5 items
3. Learning conditions 5 items
4. Learning process 5 items

1.1) Data collection

The researcher designed the questionnaire based on the framework of the study, where all the questions were in declarative sentence form and the sampled students were allowed to choose their answers based on their ideas.

A rating of 3 means always

A rating of 2 means sometimes

A rating of 1 means never

1.2) Data analysis

Quantitative data were analyzed through descriptive statistics, frequency, percentage, means, and standard deviation, and the mean value of the suitability score of expert opinions was calculated and compared with the following criteria:

A mean Score of 1.00-1.50 means "low."

A mean score of 1.51- 2.50 means "moderate".

A mean Score of 2.51- 3.00 means "high."

2) Semi- structure interviews for 14 teachers

The development process of structured interview form

The development process of semi-structured interview form about the influence of learning Mandarin among Zhuang and Miao students.

(1) Studied the concept and development process of interview form of the influence of Zhuang and Miao students on Mandarin language teaching in rural elementary schools.

(2) Drafted interview form.

(3) Verified interview form by advisers.

(4) Modified the interview form according to suggestion.

(5) Verified the validity of the interview form by three experts. Three come from China. The test consistency index of congruency is 0.50. - 1.00.

(6) Modified the interview form according to suggestion and selected 10 questions for teacher to arrange them into interview form to implement the instruments.

2.1) Data collection

The researcher conducted face-to-face interviews with the respondents based on the design questions during class breaks or respondents' rest time. Mobile phone recordings and pen and paper were used to record the responses of the respondents.

2.2) Data analysis

Qualitative data were analyzed through the narrative analysis method by MAXQDA to analyze frequently occurring words or content that appears more frequently. MAXQDA is a specialized software for qualitative, quantitative, and mixed methods data analysis.

3. Results

1) This section uses Tables and descriptions to present the results of the analysis of Objective 1, to study the influences of the native language that affect Zhuang and Miao students when they learn Mandarin. The results of the survey are shown in Table 1.

Table 1. Basic Information about the Participants in the Questionnaire Demographic Data of Valid Subjects (n=186)

Data	Frequency	Percentage
1. Grade		
1.1 Grade 6	62	33.3
1.2 Grade 5	62	33.3
1.3 Grade 4	62	33.3
Total	186	100
2. Ethnicity		
2.1 Miao	71	38.2
2.2 Zhuang	115	61.8
Total	186	100
3. Gender		
3.1 Male	92	49.5
3.2 Female	94	50.5
Total	186	100

Table 1 shows the basic information about the participants of the questionnaire. the same number of participants in grades 4-6 participated in the questionnaire (33.3%), more Zhuang students participated in the questionnaire (61.8%), and the number of female students who participated in the questionnaire was higher (50.5%).

1.1 Social context

Table 2. Descriptive Statistics of Social Context(n=186)

Social Context	Mean ($\bar{\chi}$)	Standard Deviation (S.D.)	Arrange in Order
1. You usually use Mandarin language to communicate with your parents or family at home.	2.69	0.60	4
2. Outside of school you often communicate with your friends in Mandarin.	2.74	0.64	1
3. You use Mandarin to communicate with friends of your own ethnicity	2.67	0.65	5
4. Your family speaks good Mandarin.	2.73	0.62	2
5. In daily life, you often use Mandarin	2.70	0.58	3
Overall average social context	2.70	0.36	

Table 2 summarizes the social context of Mandarin learning among Zhuang and Miao students.

The overall mean ($\bar{\chi}$) is 2.70 and the standard deviation (S.D.) is 0.36, indicating that the influence of social context on students' Mandarin learning is high.

The two points with the highest mean scores are:

"Outside of school you often communicate with your friends in Mandarin." has a mean ($\bar{\chi}$) of 2.74 and a standard

deviation (S.D.) of 0.64.

"Your family speaks good Mandarin." has a mean ($\bar{\chi}$) of 2.73 and a standard deviation (S.D.) of 0.62.

The two points with the lowest mean scores are:

"You use Mandarin to communicate with friends of your ethnicity" has a mean ($\bar{\chi}$) of 2.67 and a standard deviation (S.D.) of 0.65.

"You usually use the Mandarin language to communicate with your parents or family at home." has a mean ($\bar{\chi}$) of 2.69 and a standard deviation (S.D.) of 0.60.

1.2 Learner Characteristics

Table 3. Descriptive Statistics of Learner Characteristics(n=186)

Learner characteristics	Mean ($\bar{\chi}$)	Standard Deviation (S.D.)	Arrange in Order
1. When you first started learning Mandarin, you thought it would be easy	2.34	0.71	4
2. You like learning Mandarin.	2.44	0.61	3
3. You think it's useful to learn Mandarin.	2.62	0.54	1
4. Your Mandarin is very good.	2.24	0.55	5
5. You can communicate well with others in Mandarin.	2.52	0.55	2
Total mean values of learner characteristics	2.43	0.35	

Table 3 summarizes the learner characteristics of Zhuang and Miao students' Mandarin learning.

The overall mean ($\bar{\chi}$) is 2.43 and the standard deviation (S.D.) is 0.35, indicating that the influence of social background on students' Mandarin learning is moderate. The mean score is 1.51- 2.50 means "moderate".

The two points with the highest mean scores are:

"You think it's useful to learn Mandarin." has a mean ($\bar{\chi}$) of 2.62 and a standard deviation (S.D.) of 0.54.

"You can communicate well with others in Mandarin." has a mean ($\bar{\chi}$) of 2.52 and a standard deviation (S.D.) of 0.55.

The two points with the lowest mean scores are:

"Your Mandarin is very good." with a mean ($\bar{\chi}$) of 2.24 and a standard deviation (S.D.) of 0.55.

"When you first started learning Mandarin, you thought it would be easy." has a mean ($\bar{\chi}$) of 2.23 and a standard deviation (S.D.) of 0.71.

1.3 Learning Conditions

Table 4. Descriptive Statistics of Learning Conditions(n=186)

Learning conditions	Mean ($\bar{\chi}$)	Standard Deviation (S.D.)	Arrange in Order
1. In class, you can answer questions clearly in Mandarin	2.68	0.51	3
2. You use Mandarin to communicate during class time	2.86	0.38	1
3. You understand well when teachers use Mandarin in the classroom	2.70	0.47	2
4. At home, your parents will teach you to speak Mandarin.	1.74	0.66	5
5. You can learn more Mandarin in your daily life	2.33	0.61	4
Total mean values of the learning conditions	2.46	0.29	

Table 4 summarizes the learning conditions of Mandarin learning for Zhuang and Miao students.

The overall mean ($\bar{\chi}$) is 2.46 and the standard deviation (S.D.) is 0.29, indicating that the influence of social background on students' Mandarin learning is moderate. The mean score is 1.51- 2.50 means "moderate".

The two points with the highest mean scores are:

"You use Mandarin to communicate during class time." with a mean ($\bar{\chi}$) of 2.86 and a standard deviation (S.D.) of 0.38.

"You understand well when teachers use Mandarin in the classroom." has a mean ($\bar{\chi}$) of 2.70 and a standard deviation (S.D.) of 0.47.

The two points with the lowest mean scores are:

"At home, your parents will teach you to speak Mandarin." has a mean ($\bar{\chi}$) of 1.74 and a standard deviation (S.D.) of 0.66.

"You can learn more Mandarin in your daily life." has a mean ($\bar{\chi}$) of 2.33 and a standard deviation (S.D.) of 0.61.

1.4 Learning Process

Table 5. Descriptive Statistics of the Learning Process(n=186)

Learning process	Mean ($\bar{\chi}$)	Standard Deviation (S.D)	Arrange in Order
1.You can understand the teacher's Mandarin.	2.87	0.34	1
2.You can solve the difficulties in learning Mandarin by yourself	2.35	0.63	4
3.As a Zhuang and Miao student, you find no difficulty in learning Mandarin	2.42	0.66	3
4.After class, you use Mandarin to communicate with your teacher	2.82	0.41	2
5.After class, you use Mandarin to communicate with classmates of your own ethnicity	2.10	0.60	5
Total mean value of the learning process	2.51	0.30	

Table 5 summarizes the learning process of the Zhuang and Miao students' Mandarin learning.

The overall mean ($\bar{\chi}$) is 2.51 and the standard deviation (S.D.) is 0.30, indicating that the influence of social background on students' Mandarin learning is high. A mean Score of 2.51- 3.00 means "high."

The two points with the highest mean scores are:

"You can understand the teacher's Mandarin." has a mean ($\bar{\chi}$) of 2.87 and a standard deviation (S.D.) of 0.34.

"After class, you use Mandarin to communicate with your teacher." has a mean ($\bar{\chi}$) of 2.82 and a standard deviation (S.D.) of 0.41.

The two points with the lowest mean scores are:

"After class, you use Mandarin to communicate with classmates of your ethnicity. "The mean ($\bar{\chi}$) is 2.10 and the standard deviation (S.D.) is 0.60. "You can solve the difficulties in learning Mandarin by yourself. "The mean ($\bar{\chi}$) is 2.35 and the standard deviation (S.D.) is 0.63.

1.5 Mean and standard deviation of social context, learner characteristics, learning conditions, and learning process

Table 6. Descriptive Statistics of Social Context, Learner Characteristics, Learning Conditions, and Learning Process

	Mean ($\bar{\chi}$)	Standard Deviation (S.D.)
1.Social Context	2.70	0.36
2.Learner Characteristics	2.43	0.35
3. Learning Conditions	2.46	0.29
4. Learning Process	2.51	0.30
Total	2.52	0.33

Table 6 shows that all four dimensions have a high impact on Zhuang and Miao students' learning of Mandarin, the total mean ($\bar{\chi}$) of the four dimensions is 2.52 and the standard deviation (S.D.) is 0.33, A mean score was high. The four dimensions were expressed as social context ($\bar{\chi}=2.70$, S.D.=0.36); learner characteristics ($\bar{\chi}=2.43$, S.D.=0.35); learning conditions ($\bar{\chi}=2.46$, S.D.=0.29); and learning process ($\bar{\chi}=2.51$, S.D.=0.30).

From the above Table, it can be seen that the effects of the four dimensions on the learning of Mandarin by Zhuang and Miao students are significant. ($\bar{\chi}=2.52$) (S.D.=0.33) indicates that the four are consistent.

2) Analysis of Teacher Interviews

By analyzing the interview data, the results of the analysis of Objective 2, "What are teachers' opinions about their students' native language affect their learning when teaching Mandarin to Zhuang and Miao students?" By analyzing and integrating the semi-structured interviews, four major themes can be formed.

2.1 Language of instruction and effectiveness

After analyzing the theme, which contains the following as well as codes: teacher's ethnicity, language of instruction, and effectiveness of instruction, the theme allows for the analysis of the language used for instruction and its effectiveness in student learning.

Of the 14 teachers interviewed, 9 were Han Chinese, 2 were Zhuang, 1 was Miao, 1 was Yi, and 1 was Hani.

For the 14 teachers interviewed, the language used in class was Mandarin.

The 14 teachers' comments about the effectiveness of their teaching can be summarized as follows:

"I think the teaching effect is okay, most of the students can understand what I teach, but a small part may be more difficult."

"I think the teaching effect is okay, simple points can be understood, and for the statements that are difficult for students to understand when we encounter them in the teaching, we also use the national language to explain the meaning to the students."

"I think the teaching effect is better, the students can understand what I speak, and for the knowledge points students can mostly understand clearly."

From the interviews, it is clear that most of the teachers who teach Mandarin are from other ethnic groups and cannot use Miao and Zhuang to communicate with their students, so Mandarin is used in the classroom. The effect of using Mandarin to teach was generally recognized by the interviewees that the students were able to understand and have good results, which shows that the students were able to understand the Mandarin spoken by the teacher and the content taught in the classroom.

2.2 Student expression and communication

After analyzing the theme, which included the following codes: language used by students in communication, students' ability to express themselves, and evaluation of students' expression, the theme allowed for an analysis of students' ability to express themselves in Mandarin in a variety of classroom settings.

The language used by students when communicating can be categorized into the language used for communication in the classroom and the language used for communication with teachers outside of the classroom. All 14 respondents said that students use Mandarin for communication in the classroom, while for communication outside of the classroom 13 teachers said that they use Mandarin and 1 teacher said that students use both Mandarin and dialects.

Students' ability to express themselves can be categorized into their ability to express themselves in class and their

ability to express themselves out of class.

The responses of the 14 respondents regarding students' ability to express themselves in class can be summarized as follows:

"Students communicate in class in both ethnic languages and Mandarin; they use Mandarin to communicate with the teacher and sometimes use ethnic languages to communicate with their classmates; students' ability to communicate classroom content in Mandarin needs to be improved, and some of them have some difficulty in expressing themselves."

"In the classroom, most of the students can use Mandarin relatively well to express themselves, but there are more ethnic minority students, and the pronunciation of some words is not very accurate when they express themselves."

"Students can express themselves using Mandarin, and their Mandarin is more clear and fluent."

The 14 respondents' comments about the students' students' ability to express themselves can be summarized as follows:

"A small number of students have standardized Mandarin, and most students have indistinguishable flat and warbled tongues and accented Mandarin."

"I think most students can express themselves fluently, and students can express themselves accurately in Mandarin with moderate expression."

"I feel that most students can express themselves clearly, but their Mandarin will have some accent, and very few struggling students cannot express themselves clearly."

"Students express themselves better in Mandarin and can express their ideas clearly."

From the interviews, we can see that the students mainly communicate in Mandarin at school, and some of them use their ethnic languages when communicating with students of the same ethnicity. Most of the students are clear and fluent in Mandarin and can express themselves clearly. A small number of students have accents in Mandarin and have difficulty expressing themselves.

2.3 Challenges faced by students and teaching strategies

After analyzing that the theme contains the following as well as codes: difficulties in expressing themselves in Mandarin, and effective teaching methods, the theme allows for the analysis of common challenges faced by students and effective strategies used by teachers to address these challenges.

The 14 respondents' difficulties with students' Mandarin expressions can be summarized as follows:

"Most of the students do not distinguish between flat, warbling, front and back nasal sounds when speaking Mandarin, some of them have accents, and some of them do not pronounce some words accurately, which leads to the pronunciation of Mandarin not being standard enough will, and the biting of the words is not clear."

"The students' Mandarin words are more scarce, there is no way to express their views more vividly, in the expression of the words are those few words, will not be more ways of expression."

"When students express themselves, they subconsciously add the pronunciation of some ethnic languages into Mandarin and have a somewhat heavy accent, and they may also have difficulties in converting their ethnic languages into Mandarin, which is, after all, completely different from Mandarin."

"For example, some of the more advanced things that rural children have never seen before, they don't know how to express them in Mandarin."

"Students don't use Mandarin too much in their daily lives, resulting in some students' Mandarin expressions not sounding fluent enough."

The responses given by the 14 respondents regarding effective teaching methods can be summarized as follows:

"I think some pictures can be utilized, especially for words that are difficult to understand, and they can be combined with illustrations so that students can understand them easily; or these difficult phrases can be placed in students' life situations so that students can understand them easily."

"Students seldom use Mandarin when they go home, so they should be allowed to practice more Mandarin at school, encourage students to express themselves more, and create an environment for them to speak Mandarin."

"I think it is possible to help each other with ethnic students, especially those who are better in Mandarin, to use the ethnic language to explain for those who cannot understand, and of course, if the teacher speaks their language, then

they can explain to them themselves."

"I think it is important to combine theory and practice and use activities and games with fun to help students understand, which can increase their interest in learning and also deepen their impression of more difficult knowledge."

"According to the differences in students' basic Mandarin, implement a tiered teaching strategy, while giving individualized instruction and using a combination of visual aids and multimedia in teaching."

"First of all, we should be strict with ourselves to make our Mandarin more standardized, and then use more simple and easy-to-understand phrases when teaching."

From the interviews, it can be seen that there are two types of difficulties in students' Mandarin expression: first, they are influenced by their language and have pronunciation difficulties; second, they have accumulated fewer Mandarin words and phrases, and their expressions are more scarce, so they can't express themselves well in Mandarin for new things. Good teaching methods for ethnic minority students can be summarized into three categories: first, the use of teaching aids, games, etc., to concretize abstract food; second, the creation of a Mandarin-speaking environment that encourages students to use Mandarin; third, the combination of students' life situations to reduce the difficulty of comprehension; and, fourth, the demand for their use of plain words to teach knowledge.

2.4 Perceptions of Learning Difficulties

This theme was analyzed to include the following as well as the codes: causes of difficulties, and effective teaching methods, which allowed for the analysis of teachers' perceptions of the causes of students' difficulties in learning Mandarin and how to cope with these challenges.

The reasons given by the 14 interviewees for students' difficulties in learning Mandarin can be summarized as follows:

On the one hand, it is the students' families, as the respondents put it: "The reason may have a lot to do with family attitudes, ethnic minorities may not have the same ideas about learning and do not value learning. There is a lack of accompaniment and inspiration for students' learning, and parents are backward in their thinking and do not pay attention to their children's learning."

"Most of the students lack family education and do not have the conditions to consolidate their learning when they go home. Parents have limited understanding of the knowledge of Mandarin and cannot tutor students well in learning. Most students follow their grandparents and have no one to tutor their homework when they go home, have bad behavior and do not develop a love of reading."

"I think the reason could be the family concept, maybe the parents don't have that kind of concept of making students study seriously, which leads to students not knowing why they study."

On the one hand, it is the students themselves, the interviewees said so:

"I think that maybe the students' ideological awareness is not in place, they do not know the importance of learning; students do not have learning goals and do not know why they learn; a small number of them are affected by the language, it is difficult for them to understand the difficult knowledge points, and they lack confidence in learning."

"Students are influenced by fast and online games, etc., and are reluctant to learn; weak foundation and loss of interest in learning."

On the one hand, it is affected by the students' language environment, as respondents put it this way:

"I think maybe the students have different language environments and are not comfortable with Mandarin, especially the pinyin which is used as the basis of Mandarin is a bit difficult to distinguish, resulting in learning that cannot be well understood."

"The first language that students are exposed to from birth is mostly their minority language. They have their unique language and students face challenges in understanding the Mandarin language, including differences in pronunciation and expression habits. Students usually speak less Mandarin and may have difficulty understanding some of the more difficult statements."

There are other reasons, as respondents put it:

"Ethnic minorities live in mostly remote areas, the implementation of many central government policies is slow, and children know less about the importance of learning."

"The places where students live are backward in science and technology, information resources are relatively scarce, etc., and there is a lack of educational resources, insufficient teachers, and backward teaching facilities."

The 14 respondents' views on effective teaching methods for students to learn Mandarin can be summarized as follows:

"I think we can utilize a combination of pictures and texts, and link them with life examples, such as using a lot of examples from class, school, family and social life to make it easier for students to understand."

"I think first of all, we should be strict with ourselves to make our Putonghua more standardized, and then use more simple and easy-to-understand phrases plus some visual aids when teaching to reduce the difficulty of students' understanding."

"I think learning Mandarin is still a matter of encouraging students to express themselves more and practicing Mandarin more, both in and out of school."

"I think local dialects can be used appropriately to explain to students, and some difficult to understand can be explained by students to each other in the national language. Activities and games with fun can also be used to help students understand and deepen their impression of what they are being taught."

"I think we can implement a tiered teaching strategy according to the differences in students' basic Mandarin while giving individualized instruction and using visual aids combined with multimedia in teaching."

4. Conclusion

The purpose of this study is as follows: 1. what are the influences of the native language that affect Zhuang and Miao students when they learn Mandarin? 2. what are teachers' opinions about their students' native language affect their learning when teaching Mandarin to Zhuang and Miao students? The selected samples are from four rural primary schools in Dehou Township. The sample was selected from 186 Zhuang and Miao students in grades 4-6 and 14 Mandarin teachers from four rural elementary schools in Dehou Township. The study was divided into two parts: a questionnaire survey of the students and an interview with the teachers. The student questionnaire was divided into four sections, social context, learner characteristics, learning conditions, and learning process. An analysis of the social context in which Zhuang and Miao students learn Mandarin shows that students use Mandarin less frequently in their social life outside of school, especially when communicating with parents, family members, and friends of the same ethnicity. The Mandarin learner characteristics analysis of Zhuang and Miao students showed that the students were more receptive to Mandarin and were willing to learn and speak it.

An analysis of the learning conditions of Zhuang and Miao students shows that students use Mandarin more frequently at school than outside of school. School is the main place where students learn and use Mandarin, and students use it less frequently at home and in their daily lives. An analysis of the Mandarin learning process of Zhuang and Miao students showed that the students used Mandarin more often and were able to understand and comprehend it in the school learning process. In and out of the classroom, students use Mandarin more often to communicate. It can be seen that the main place where Zhuang and Miao students learn Mandarin is the school, and the lesser use of Mandarin outside the school campus is the reason for their difficulties in learning Mandarin. The switching between their language and Mandarin also affects the learning of Mandarin by Zhuang and Miao students.

An analysis of teacher interviews shows that students mainly communicate in Mandarin at school and that most of them are clear and fluent in Mandarin, while a small number of students have an accent, have difficulty speaking with their tongues and have difficulty expressing themselves, and that these pronunciation difficulties may be due to the influence of their language. These pronunciation difficulties may be due to the influence of their language. The different language environments of the students, who use Mandarin in school and their language outside of school, cause Zhuang and Miao students to be uncomfortable with Mandarin, especially the pinyin, which is the basis of Mandarin, and is difficult to distinguish, resulting in the inability to understand it well in their studies.

The first language that Zhuang and Miao's students are exposed to from birth is mostly their minority language. They have their unique languages, and upon entering the campus, students face the challenge of understanding a different language (Mandarin), including differences in pronunciation and expression habits. Zhuang and Miao students usually use less Mandarin in their lives and may have difficulty understanding some of the more difficult phrases. It can be seen that Zhuang and Miao's students have difficulties pronouncing Mandarin when they learn it due to the influence of their ethnic languages. The difference between Mandarin and ethnic language expression habits also affects the learning of Mandarin by Zhuang and Miao students. Similar to the findings obtained from the student questionnaires, the language shift between students using Mandarin in school and using their language outside of school can also cause difficulties in learning Mandarin for Zhuang and Miao students.

The purpose of this paper is to examine the influence of Zhuang and Miao students' mother tongues on their acquisition

of Mandarin, valuable insights were gained by analyzing data from teacher interviews and student questionnaires, which led to the following conclusions:

The influence of Zhuang and Miao students' native languages on the acquisition of Mandarin is mainly in 2 aspects:

1. the influence on pronunciation, influenced by their native languages, it is more difficult for students to acquire the pronunciation in Mandarin that is different from their native languages.
2. Zhuang and Miao students use their languages more often to communicate outside of school, and the different expression habits of minority languages and Mandarin affect the acquisition of Mandarin.

5. Discussion

1) The impact of social context on the acquisition of Mandarin by Zhuang and Miao students

According to the analysis of the teacher interviews, students use Mandarin language less frequently outside school than inside school. In the questionnaire for the students' social context section, "You usually use Mandarin language to communicate with your parents or family at home." had a mean ($\bar{\chi}$) of 1.79, a standard deviation (S.D.) is 0.60 and a mean score is 1.51- 2.50 means "moderate". It can be concluded that the language of the students' parents has an influential role in the language used by the students to communicate at home, and the reason why the students do not use a high percentage of Mandarin at home is that their parents do not speak Mandarin (An, 2010).

Children tend to use their first language to communicate in private settings or among peers (Chen, 2013). For the questionnaire of the students' social context section, "You use Mandarin to communicate with friends of your ethnicity", the mean ($\bar{\chi}$) was 1.77, the standard deviation (S.D.) was 0.65, and the mean score was 1.51- 2.50 means "moderate". The conclusions drawn are consistent with (Chen, 2013). This is a huge challenge to second language (L2) learners is a great challenge for even those who are proficient, as they often lack the knowledge and ability to use pragmatic language in everyday communication (Bardovi-Harlig, 2001; Halenko & Jones, 2011; Kasper, 1997). In the student questionnaire, the social context means ($\bar{\chi}$) was 1.98, the standard deviation (S.D.) was 0.36, and the mean score was 1.51- 2.50 means "moderate". In daily life, Zhuang and Miao students use Mandarin less frequently, which affects the learning of Mandarin. Therefore, students should be required to speak more Mandarin in their daily lives to achieve the purpose of familiarity, learning to use, and learning to use (Mo, 2015)

2) The effect of learner characteristics on the acquisition of Mandarin by Zhuang and Miao students

In their study of motivation for learning a second language, Gardner and his colleagues (Gardner & Lambert, 1972; Gardner, 1985) proposed two motivational orientations that indicate the main reasons why students learn a language. The first orientation is integrative, i.e., "the student's desire to "learn more about other cultural communities as he becomes interested in it in an open-ended way, and ultimately to be accepted as a member of another group" (Gardner & Lambert, 1972). In the student questionnaire, the mean ($\bar{\chi}$) of "You like learning Mandarin." is 2.44, and the standard deviation (S.D.) is 0.61, which shows that the Zhuang and Miao students have a high interest in learning Mandarin, and have a motivation of communicating with other ethnic groups or people.

The second orientation is instrumental, that is, students want to derive particular benefits from learning a language, such as career opportunities, and the tools include pragmatic reasons and utilitarian values, as well as learners' perceptions of the benefits of the language, such as finding a better job, traveling, making friends, and understanding foreign media (Gardner, 2001; Csizér & Dörnyei, 2005). In the student questionnaire, the mean ($\bar{\chi}$) of "You think it's useful to learn Mandarin." was 2.62 with a standard deviation (S.D.) of 0.54, A mean Score of 2.51- 3.00 means "high". It can be seen that Zhuang and Miao students are more instrumentally motivated to learn Mandarin.

3) The impact of learning conditions on the acquisition of Mandarin by Zhuang and Miao students

Learning conditions can be divided into conditions at school and learning conditions outside of school. Through the analysis of student questionnaires and teacher interviews, students' conditions for learning Mandarin at school are better than conditions for learning Mandarin outside of school. Students use Mandarin more in school, teachers use Mandarin to teach, and students answer questions and communicate with classmates in Mandarin during class. Outside school, from the students' questionnaire "At home, your parents will teach you to speak Mandarin.", the mean ($\bar{\chi}$) is 1.74, the standard deviation (S.D.) is 0.66, and the mean is the lowest in the part of learning conditions. Learning conditions are worse than in school.

Another factor in the socio-cultural dimension and learner level is "cultural interest", which HL learners are likely to acquire through exposure to the target language and culture through movies, TV programs, and popular music (Wen,

2011). The student questionnaire, "You can learn more Mandarin in your daily life." has a mean ($\bar{\chi}$) of 2.33, a standard deviation (S.D.) of 0.61, and a mean score of 1.51- 2.50 means "moderate". In daily life, online media may enhance the interest of Zhuang and Miao students in learning Mandarin, and these channels, too, have become a way for students to learn Mandarin outside of school.

The allocation of teachers in the school, and the teachers' years of teaching experience are also part of the conditions for the students' Mandarin students. Jiang and Hao (2010) studied and interpreted the practical pedagogical knowledge of two experienced and two novice Chinese language teachers. Teachers' beliefs, students' knowledge, and past experiences were more valued by the experienced teachers, although the novice and experienced teachers had similar perceptions of pedagogical knowledge. Most of the teachers interviewed were experienced teachers who also brought favorable conditions for Zhuang and Miao students to learn Mandarin.

4) The impact of the learning process on the acquisition of Mandarin by Zhuang and Miao students

Analysis of teacher interviews revealed that Zhuang and Miao's students have problems with Mandarin pronunciation, such as the inability to pronounce flat, arched, front and back nasal sounds. In addition to differences in pronunciation, there are also differences in vocabulary, grammatical structure, and word order conventions, which cause communication barriers and problems in thinking transitions when minority students communicate in Chinese (Yang, 2008). In terms of expression, some Zhuang and Miao students only use simple Mandarin words to express themselves.

In the process of learning Mandarin, there are a lot of components of "negative transfer" of the mother tongue, and the negative transfer of the national language is also manifested in the phenomenon of petrification of intermediary language, i.e., over-reliance on knowledge of the mother tongue as an auxiliary to the expression of meanings makes ethnic minority students appear to have deviations in understanding when using their mother tongue to understand the second language (Jia, 2011). This is in line with the conclusion from the interviews with teachers that the first language students come into contact with from birth is their ethnic language. When expressing themselves, students subconsciously add some of the pronunciation of their ethnic language to Mandarin and have a somewhat heavy accent. It is possible that students also have difficulties in converting their ethnic language to Mandarin because, after all, the pronunciation of the ethnic language is completely different from that of Mandarin. The thinking process of minority students using a second language is much more complicated, the language used for expression is a second language, while the language of thinking may be the mother tongue, in this process, the second language is always subject to two different influences, positive and negative, of the mother tongue, so eliminating the dependence on and interference with the native language is important for accelerating the learning of the second language (Wang, 1995). Therefore, school teaching is conducted in Mandarin, and teachers also use appropriate teaching methods, teaching aids, etc., to help Zhuang and Miao students learn Mandarin.

6. Recommendation

The results of this study have the following implications for the teaching of Mandarin in similar districts at the Dehau Township level:

1. Emphasize the creation of a Mandarin-speaking environment for Zhuang and Miao students. Schools are the main place for Zhuang and Miao students to learn Mandarin; they should give full play to the advantages of the school's language environment, create a good Mandarin-speaking environment within the school, and promote the use of Mandarin by students to communicate with their teachers and classmates in and out of the classroom. Outside of school, students are encouraged to use Mandarin more often to communicate with friends and family.
2. Innovative methods of teaching Mandarin. Utilize multimedia, teaching aids, pictures, and other visual aids to reduce the difficulty of learning, and when teaching in the classroom, activities and games can be used appropriately to enrich the content of classroom teaching and allow students to actively participate in the classroom. Create scenarios for students to practice Mandarin in specific situations. Scenarios should be in line with students' age and living environment so that students can express themselves easily and are willing to speak.
3. Enhance the interest of Zhuang and Miao students in learning Mandarin. Mandarin is the common language of China and plays an important role in the future development of Zhuang and Miao students. Students should be made to understand the importance of learning Mandarin and take the initiative to learn it. Teachers' evaluation of students' Mandarin should be based on encouragement and praise to eliminate the inferiority complex of Zhuang and Miao ethnic students speaking Mandarin.
4. Make good use of multimedia networks and other resources to provide conditions for Zhuang and Miao students to

learn Mandarin. With economic development, cell phones and computers have been popularized. Outside of school, students can be encouraged to use the Internet to watch age-appropriate TV and videos in Mandarin, etc., and they watch and listen while imitating and speaking.

This study provides valuable insights into the learning of Mandarin by Miao and Zhuang students. The findings emphasize the importance of social context, learner characteristics, learning conditions, and the learning process on the learning of Mandarin. For Zhuang and Miao students to learn Mandarin well, not only the efforts of students themselves but also the schools but also parents should pay attention to creating a good Mandarin learning environment for them.

7. Future Research

Through this study, it was found that Zhuang and Miao's students have a high level of acceptance of Mandarin, and most of the students' family members also speak Mandarin. With the popularization of Mandarin, will the increase in the number of Mandarin speakers in the villages affect the inheritance and development of the language and culture of the Zhuang and Miao ethnic groups? How should we continue to pass on and develop the culture of our ethnic groups while popularizing Mandarin? I think this is an issue worth studying.

In conclusion, this study aims to analyze and understand the influence of Zhuang and Miao students' mother tongues on their learning of Mandarin, to make reasonable suggestions for Zhuang and Miao students to learn Mandarin well. From the results of the study, it can be seen that influenced by their languages, Zhuang and Miao students need the participation of their families, schools, and society to create a good language environment for them to learn Mandarin well.

References

- An, C. (2010). *Survey on Language Use of Primary and Secondary School Students in Ethnic Mixed Areas*[Master's thesis, Central University for Nationalities]. Retrieved from <https://1.15.177.143/KCMS/detail/detail.aspx?dbname=CMFD2011&filename=2010260812.nh>
- An, R., & Zhang, S. (2007). Difference in Chinese Syllable Acquisition among International Students. *Chinese Language Learning*, 4, 64-71.
- Arigita-García, A., Sánchez-Cabrero, R., Barrientos-Fernández, A., Manoso-Pacheco, L., & Pericacho-Gómez, F. J. (2021). Pre-eminence of determining factors in second language learning: An educator's perspective from Spain. *Heliyon*, 7(2). <https://doi.org/10.1016/j.heliyon.2021.e06282>
- Bárcena, E. (2020). Hacia un nuevo paradigma de aprendizaje de segundas lenguas móvil, abierto y social. *Propósitos y Representaciones*, 8(1), e460. <https://doi.org/10.20511/pyr2020.v8n1.460>
- Bardovi-Harlig, K. (2001). *Evaluating the empirical evidence: Grounds for instruction in pragmatics*. In Rose K. R., Kasper G., (Eds.), *Pragmatics in Language Teaching. Cambridge Applied Linguistics*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139524797.005>
- Beltrán-Arias, L. (2015). Influencia cultural en la motivación para el aprendizaje del inglés como lengua extranjera. *Revista Interamericana de Investigación, Educación y Pedagogía, RIIEP*, 8(2). <https://doi.org/10.15332/s1657-107X.2015.0002.07>
- Caliskan, A., Bryson, J. J., & Narayanan, A. (2017). Semantics derived automatically from language corpora contain human-like biases. *Science*, 356(6334), 183-186. <https://doi.org/10.1126/science.aal4230>
- Campbell, R., & Peyton, J. K. (1998). Heritage language students: A valuable language resource. *Eric Review*, 6(1), 38-39.
- Chao, D. (1997). Chinese for Chinese-Americans: A case study. *Journal of the Chinese Language teachers Association*, 32, 1-13.
- Chen, M. (2011). The Experimental Study of the Mandarin Tone Category Development of CSL Learners with Nontone Language Background. *Teaching Chinese to Speakers of Other Languages Studies*, 4, 9-15.
- Chen, Y. L. (2013). Children's Hakka language use in Hakka language immersion program. *Journal of Child Care*, 10, 1-18.
- Clément, R., & Hamers, J. F. (1979). Les bases socio-psychologiques du comportement langagier. In *Psychologie*

Sociale, eds. G. =gin and P. Joshi. P.U.L.

- Cronin, C. (2017). Openness and praxis: exploring the use of open educational practices in higher education. *Int. Rev. Res. Open Dist. Learn.*, 18(5), 15-34. <https://doi.org/10.19173/irrodl.v18i5.3096>
- Csizer K., & Dörnyei, Z. (2005). The internal structure of language learning motivation and its relationship with language choice and learning effort. *The Modern Language Journal*, 89, 19-36. <https://doi.org/10.1111/j.0026-7902.2005.00263.x>
- Dai, H. L., & Putonghua Penetration Survey Project Team. (2012). Survey analysis of Putonghua popularization in Guangxi. *Language and Literature Application*, (01), 36-43. <https://doi.org/10.16499/j.cnki.1003-5397.2012.01.007>
- DeJong, E. J., & Barse, C. I. (2014). Dual language programs as a strand within a secondary school: Dilemmas of school organization and the TWI mission. *International Journal of Bilingual Education and Bilingualism*, 17(1), 15-31. <https://doi.org/10.1080/13670050.2012.725709>
- Dewey, J. (1986). Experience and education. *Educ. Forum*, 50(3), 241-252. <https://doi.org/10.1080/00131728609335764>
- Fan, H. (2013). The Survey and Analysis on Foreign Chinese Learners' Understanding Level of Chinese New Words. *Teaching Chinese to Speakers of Other Languages Studies*, 1, 29-36.
- Feng, L., & Hu, X. (2005). An Experimental Study of the Pronunciation Pattern of Chinese Two-syllabic Words with Rising Tone for Korean Chinese-learning Beginners. *Chinese Language Learning*, 4, 63-69.
- Gardner, R. C., & Lambert, W. E. (1972). Motivational variables in second-language acquisition. *Canadian Journal of Psychology/Revue canadienne de psychologie*, 13(4), 266. <https://doi.org/10.1037/h0083787>
- Gardner, R. C. (1985). *Social psychology and second language learning*. London: Edward Arnold.
- Gardner, R. C. (2001). Integrative motivation and second language acquisition. *Motivation and second language acquisition*, 23(1), 1-19.
- Gardner, R. C., & Lambert, W. E. (1972). *Attitudes and Motivation in Second Language Learning*. Rowley, Mass.: Newbury House.
- Gardner, R. C. (1978). *Social psychological aspects of second language acquisition*. Department of Psychology. Genesee, F., & Lindholm-Leary, K. (2013). Two case studies of content-based language education. *Journal of Immersion and Content-based Language Education*, 1(1), 3-33. <https://doi.org/10.1075/jicb.1.1.02gen>
- Good, T. L., & Lavigne, A. L. (2017). *Looking in classrooms*. Routledge. <https://doi.org/10.4324/9781315627519>
- Gu, M. (2014). On general issues of bilingual education for minority ethnic groups. *Frontiers of Education in China*, 9, 603-611. <https://doi.org/10.1007/BF03397042>
- Halenko, N., & Jones, C. (2011). Teaching pragmatic awareness of spoken requests to Chinese EAP learners in the UK: Is explicit instruction effective? *System*, 39(2), 240e250. <https://doi.org/10.1016/j.system.2011.05.003>
- Hartshorne, J. K., Tenenbaum, J. B., & Pinker, S. (2018). A critical period for second language acquisition: evidence from 2/3 million English speakers. *Cognition*, 177, 263-277. <https://doi.org/10.1016/j.cognition.2018.04.007>
- He, A. (2008). Chinese as a heritage language: An introduction. In A. He & X. Yun (Eds.), *Chinese as a Heritage Language* (pp. 1-12). Manoa, HI: The University of Hawaii Press.
- He, A., & Xiao, Y. (2008). *Chinese as a Heritage Language*. Manoa, HI: The University of Hawaii Press.
- Jiang, X., & Hao, L. (2010). A Case Study of the Practical Knowledge of TCFL Teachers. *Chinese Teaching in the World*, 3, 394-405.
- Jia, X. L. (2011). An overview of mediational petrification phenomenon in minority students' learning of Mandarin. *Heilongjiang Higher Education Research*, (10), 177-179.
- Kane, D. (2006). *The Chinese language*. Singapore: Tuttle.
- Kasper, G. (1997). *Can pragmatic competence be taught?* *NetWork*, 6, 105e119.
- Krashen, S. (2018). The Conduit Hypothesis: How reading leads to academic language competence. *Language Magazine*, 4, 127-141.
- Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and*

- Psychological Measurement*, 30(3), 607-610. <https://doi.org/10.1177/001316447003000308>
- Lai, C., Li, Z., & Gong, Y. (2016). Teacher Agency and Professional Learning in Cross-cultural Teaching Contexts: Accounts of Chinese Teachers from International Schools in Hong Kong. *Teaching and Teacher Education*, 54, 12-21. <https://doi.org/10.1016/j.tate.2015.11.007>
- Laughlin, V. T., Wain, J., & Schmidgall, J. (2015). Defining and operationalizing the construct of pragmatic competence: Review and recommendations. *ETS Research Report Series*, 2015(1), 1-43. <https://doi.org/10.1002/ets2.12053>
- Li, L. H. (2005). Survey and analysis of the current situation of Chinese language learning among ethnic minorities in Southern Xinjiang. *Journal of Xinjiang University (Philosophy and Social Science Edition)*, (04), 147-150. <https://doi.org/10.13568/j.cnki.issn1000-2820.2005.04.029>
- Liang, C. L. (2009). Psychological analysis of Mandarin learning barriers among ethnic minority students in higher education in ethnic areas. *Contemporary Education Forum (2nd half)*, (06), 78-79.
- Li, J. B., & Hou, Y. (2006). The importance of promoting Mandarin. *Journal of Disaster Prevention Technology College*, (02), 118-120.
- Lindholm-Leary, K. (2011). Student outcomes in Chinese two-way immersion programs: Language proficiency, academic achievement, and student attitudes. *Immersion education: Practices, policies, possibilities*, 81-103. <https://doi.org/10.21832/9781847694041-008>
- Liu, F. (2012). The Analysis on Japanese Students' Chinese Language Learning Strategies. *Chinese Language Learning*, 4, 97-103.
- Liu, X. H. (2011). Foreign language classroom and language learning from the perspective of socio-cultural theory. *Curriculum-Materials-Pedagogy*, (07), 46-51. <https://doi.org/10.19877/j.cnki.kcjcf.2011.07.010>
- Mei, L. (2011). Perceptual Assimilation and Discrimination of Chinese Affricates by Thai Learners. *Chinese Teaching in the World*, 2, 276-288.
- Ministry of Education. (2005). *A brief introduction to Chinese as a foreign language curriculum development*. Retrieved July 28, 2009, from <http://www.moe.edu.cn/edoas/website18/38/info14338.htm>
- Mo, Y. Z., & Gan, F. M. (2015). Difficulties and coping strategies of Zhuang students' Mandarin learning. *Journal of Guangxi Normal University (Philosophy and Social Science Edition)*, (02), 84-87. <https://doi.org/10.16601/j.cnki.issn1002-5227.2015.02.011>
- Nayer, B. (1997). ESL/EFL dichotomy today: language politics or pragmatics? *TESOL Quarterly*, 31(1), 9-18. <https://doi.org/10.2307/3587973>
- Oxford, R. L. (2016). *Teaching and researching language learning strategies: Self-regulation in context*. Taylor & Francis. <https://doi.org/10.4324/9781315719146>
- Park, M. (2016). The role of formal L2 learning experience in L3 acquisition among early bilinguals. *Int. J. Multiling*, 13(3), 274-291. <https://doi.org/10.1080/14790718.2015.1088544>
- Peyton, J. K., Ranard, D. A., & McGinnis, S. (2001). *Heritage Languages in America: Preserving a National Resource. Language in Education: Theory and Practice*. Delta Systems Company Inc., 1400 Miller Parkway, McHenry, IL 60050-7030.
- Qian, Y. (2010). A Comparative Study of Chinese Reading Strategies among Chinese and Korean Students. *Teaching Chinese to Speakers of Other Languages Studies*, 3, 42-29.
- Rao, Z. (2016). Language learning strategies and English proficiency: interpretations from information-processing theory. *Lang. Learn. J.*, 44(1), 90-106. <https://doi.org/10.1080/09571736.2012.733886>
- Schachter, J., & Gass, S. M. (2013). *Second language classroom research: Issues and opportunities*. New York: Routledge. <https://doi.org/10.4324/9781315044958>
- Starr, D. (2009). Chinese language education in Europe: the Confucius Institutes. *European Journal of Education*, 44(1), 65-82. <https://doi.org/10.1111/j.1465-3435.2008.01371.x>
- Stern, H. (1983). *Fundamental Concepts of Language Teaching*. Oxford University Press, Oxford.
- Sung, H., & Padilla, A. M. (1998). Student motivation, parental attitudes, and involvement in the learning of Asian languages in elementary and secondary schools. *The Modern Language Journal*, 82(2), 205-16.

<https://doi.org/10.1111/j.1540-4781.1998.tb01193.x>

- Thorne, S. L., Sauro, S., & Smith, B. (2015). Technologies, identities, and expressive activity. *Annu. Rev. Appl. Ling.* 35, 215-233. <https://doi.org/10.1017/S0267190514000257>
- Unsworth, L., & Mills, K. (2020). English language teaching of attitude and emotion in digital multimodal composition. *J. Sec Lang. Writ.*, 47. <https://doi.org/10.1016/j.jslw.2020.100712>
- Usó-Juan, E., & Martínez-Flor, A. (2006). Approaches to language learning and teaching: Towards acquiring communicative competence through the four skills. In E. Usó-Juan, & A. Martínez-Flor (Eds.), *Current trends in the development and teaching of the four language skills* (pp. 3e25). New York: Mouton deGruyter. <https://doi.org/10.1515/9783110197778.1.3>
- Walker, G. (1991). Gaining place: The less commonly taught languages in American Schools. *Foreign Language Annals*, 24(2), 131-50. <https://doi.org/10.1111/j.1944-9720.1991.tb00456.x>
- Wan, M. G., & Hai, L. (2019). Review, Reflection and Prospect of the Development of Ethnic Minority Education in the 70 Years of the Founding of New China - An Interview with Prof. *Ethnic Education Research*, (04), 5-10. <https://doi.org/10.15946/j.cnki.1001-7178.2019.04.001>
- Wang, G. S. (1995). Negative effects of Qiandongnan dialect in school teaching--a deep thought on the promotion of Putonghua in ethnic areas. *Journal of Central University for Nationalities* (02), 66-70. <https://doi.org/10.15970/j.cnki.1005-8575.1995.02.013>
- Wen, X. (2011). Chinese language learning motivation: A comparative study of heritage and non-heritage learners. *Heritage Language Journal*, 8(3), 333-358. <https://doi.org/10.46538/hlj.8.3.3>
- Wu, Y., & Chen, Y. (2006). Comparative Research on Learning Strategies for Listening Between the Effective and Ineffective Learners. *Chinese Language Learning*, 2, 58-64.
- Yang, L. N. (2008). *Study on Chinese language socialization of high school students in the northern dialect area of Dong* [Master's thesis]. Guizhou Normal University, China.
- Yuan, L. (2009). An Error Analysis of Cohesive Devices in Chinese Discourses by English-speaking Learners of Chinese. *Journal of College of Chinese Language and Culture of Jinan University*, 4, 27-34.
- Zhang, J. (2008). On the Stroke Effect, Word Frequency Effect, and Morpheme Frequency Effect in the Recognition of Chinese One-character Words by Foreign Students. *Journal of College of Chinese Language and Culture of Jinan University*, 1, 22-29.
- Zhang, M. (2012). The Acquisition of Tibetan Mandarin Chinese: The Case of Nosy Village. *Jiantang Town, Shangri-La County. Literature (Theory)*, (02), 102-103.
- Zhao, H. Q. (2009). *The role Confucius Institutes play in creating an understanding of China*. Paper presented at China Association for Intercultural Communication & Association for Chinese Communication Studies International Conference, Beijing.
- Zhao, Y. F. (2000). A review of cognitive linguistics research (I). *Journal of the PLA College of Foreign Languages*, (05), 22-30.

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