



A Study of Correlation Between Self-efficacy, Language Anxiety, Metacognitive Strategies and English Achievements of Achang Ethnic Minority Junior High School Students in the Trilingual Background

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Abstract. This study used the empirical quantitative method to investigate the correlation between self-efficacy, language anxiety, metacognitive strategies and English achievement of 317 Achang ethnic students from Nangsong Ethnic Minority Junior High School and Jiubao Achang Ethnic Minority Junior High School in the trilingual background in Lianghe County of Yunnan province, China. The data was measured with descriptive analysis, Pearson correlation and regression analysis with SPSS21.0. The conclusion was drawn as following:

1. Most of Achang middle school students speak Achang language, more than half of the students speak Mandarin, no one speak English fluently, and there are more than half of the students failed to pass the final English exam. The Achang ethnic students sometimes have self-efficacy and foreign language anxiety, and sometimes use metacognitive learning strategies in English learning;
2. There is a significant positive correlation between English achievement and self-efficacy and metacognitive strategies, but foreign language anxiety is significantly and negatively correlated with English achievements;
3. The predictor which influences the students' English achievement is self-efficacy.

Keywords: Achang ethnic students · Self-efficacy · Foreign language anxiety · Metacognitive strategies

1 Background of the Study

China is a unified country with 56 nationalities including Han nationality and 55 minority nationalities. Yunnan is a multicultural province, located in the southwest part of China, bordered by Vietnam, Laos and Burma, with 25 ethnic minorities which make up a very low proportion of Chinese population. It has been difficult to overcome the

barriers of geographical isolation and overall poor economic conditions, and so education in most parts of the ethnic minority areas in China is relatively weak. With special small population, Achang ethnic minority is one of 56 ethnic groups in China, belonging to cross-border minority, distributing in Yunnan province and Guizhou province [1], but it is mainly distributed in Dehong Autonomous Prefecture in Yunnan province, including Husa Achang township in Longchuan County, Nangsong Achang township and Jiubao Achang township in Lianghe County, and their language is Achang language belonging to Tibeto-Burman group of Sino Tibetan languages [2], but there is no written language. Achang language is closely related to Zaiwa language and Burmese, then Yi language, including three dialects: Longchuan dialect, Luxi dialect and Lianghe dialect [3]. Historically, as for multiple reasons, Achang ancestors migrated frequently and interlaced with other nationalities for a long time in a large region, therefore, their language has been permeated with others, absorbing other words from other languages for daily use, which has made Achang language complex [3]. According to Xie [4], the Achang language is well preserved in Longchuan County and Luxi County where language vitality is strong, while it is a different situation in Lianghe where some villages have turned to use Chinese. Present use of Achang language has assumed some serious declining features, and the phenomenon of language transfer is prominent [3], which means the Achang language is greatly affected by Mandarin and most of Achang ethnic minorities use Mandarin in most of social and daily life.

The phenomenon of bilingualism is a common scenario in many ethnic minority areas, which is the change of language use function after the accumulation of language contact to a certain degree. In China, students have to complete the compulsory education from 7 years old to 16, thus in ethnic minority areas, ethnic students may live in the situation of multilingualism, and they not only learn Mandarin Chinese but English along with the use of their mother tongue in daily communication, which has made teaching English in ethnic areas become complicated. This thesis has chosen Lianghe Achang ethnic minority students as research subjects to study their English learning in the trilingual background.

Lianghe County is located in the southwest end of the Hengduan Mountains in the west of Yunnan Province, belonging to Dehong Autonomous Prefecture. It is bordered with Tengchong County in the northeast, Longling County in the southeast, Luxi and Longchuan County in the north, and Yingjiang County in the west. Zhedao, the County seat, is about 690 km from Kunming the capital of Yunnan province and about 114 km from the prefecture capital, Mangshi [5]. The Achang ethnic minority in Lianghe County mainly lives in Jiubao Achang Township and Nangsong Achang Township; besides, they also live in administrative villages including Wanzhong, Menglai, and Manghui etc. According to the latest statistics (2010), the total population of Achang nationality in Linghe is 12708, about 7.9% of the whole County's population [3]. Two middle schools have been investigated in Lianghe County including Nangsong Achang Minority Junior High School and Jiubao Achang Minority Junior High School.

Therefore, a comprehensive study is necessary, and a focus on ethnic minority students is more meaningful in China whereas study on this area is a little deficient, and so a further research is needed.

As the research of language learning theory has gradually developed and advanced, which has inspired many researchers to place emphasis on the characteristics of

language learners. The term self-efficacy was firstly proposed by Bandura in 1977. Foreign language anxiety scale was developed by Horwitz, Horwitz, and Cope [6]. As an affective factor, anxiety is crucial for language learning. From 1980s, there are plenty of studies on foreign language anxiety both home and abroad. Metacognitive strategies are an indispensable part in language learning strategies, which play a critical role in language learning. To a great extent, whether achieving success in language learning depends on the use of metacognitive strategies [7]. As the study of SLA has expanded and developed significantly in the past 40–45 years [8], there have been numerous studies about the characteristics of the language learner both home and abroad.

But there is a lack of ethnic minority studies concerned, therefore, what do exactly the Achang minority students come to know about their third language–English? What is the relationship among self-efficacy, foreign language anxiety, metacognitive strategies and English achievements? Additionally, how to improve English achievements of Achang minority students is also a focus of this research.

2 Research Methodology

2.1 Sampling and Samples

This study employed the convenience sampling method. Students from Nangsong Achang ethnic minority Junior High School and Jiubao Achang ethnic minority Junior High School are the research subjects. Nangsong Achang ethnic minority Junior High School is one of the three townships of Achang nationality in China, which is located in the northeast of Lianghe County, about 10 km from the County seat. Jiubao Achang ethnic minority Junior High School also is one of the three townships of Achang nationality in China, which lies in the outskirts of the County seat. Employing the representative sample method to extract the sample, the author of this thesis investigated 172 students of Nangsong Achang ethnic minority Junior High School including 87 males and 85 females, including 55 students in grade seven, 49 students in grade eight, and 68 students in grade nine. And 145 students of Jiubao Achang ethnic minority Junior High School participated in the probe, including 79 males and 66 females, 52 students in grade seven, 41 students in grade eight, and 52 students in grade nine. All of them are Achang ethnic minorities. All students started to learn English from grade seven because Lianghe County is a remote place with a weak education background.

2.2 Instruments

The instrument used in this study is a questionnaire consisting of self-efficacy scale, foreign language classroom anxiety scale and metacognitive strategies scale. The questionnaire of this study has two parts. The first part is the basic information and complementary questions for Achang ethnic minority students, and in this part, students' scores were taken from their last term final examination of which the total score is 120. As investigated, Achang ethnic minority students study English from grade 7, therefore, this study has offered self-evaluated language proficiency from fluent to

knowing nothing. There were a total of 51 question items in the second part of the questionnaire. The subjects were asked to give response to the questionnaire based on a 5-point Likert scale, ranging from “strongly disagree” to “strongly agree”.

Table 1. The Alpha-Coefficient of the Questionnaire

	Self-efficacy	LA	Meta-cognitive strategies
Cronbach Alpha	0.739	0.822	0.91

The questionnaire demonstrates internal reliability (see Table 1) and validity (see Table 4.2). The Cronbach’s alpha value of self-efficacy scale is 0.739, indicating the moderate internal consistency. And both Language Classroom Anxiety and Metacognitive Strategies have high internal consistency of which Cronbach’s alpha values are 0.822 and 0.910 respectively.

2.3 Data of Treatment

The 317 effective questionnaires sheets were collected. SPSS 21.0 (Statistical Product and Service Solutions) was used to analyze the quantitative data. The procedures of data treatment were as the followings: (1) testing the Alpha-Coefficient of the three scales; (2) using Descriptive Analysis to measure variables’ and question items’ Mean Value and Std. Deviation; (3) adopting Pearson Correlation Coefficient to analyze the relationship between the factors and English achievements; (4) conducting Linear Stepwise Regression to predicate the factors affecting the English achievements.

3 Discussion and Analysis

3.1 Descriptive Analysis of Overall Situation of Self-efficacy, Language Anxiety and Metacognitive Strategies

Table 2. Descriptive statistics of the overall situation of three variables

	N	Minimum	Maximum	Mean	Std. Deviation
Self-efficacy	317	1	5	3.19	0.626
Language Anxiety	317	1	4	3.02	0.417
Metacognitive Strategies	317	1	5	3.28	0.768

As is shown in Table 2, the mean of self-efficacy is 3.19, which suggests that the participants are sometimes confident in English learning. And the Std. Deviation is 0.626 which means the students’ answers for the self-efficacy question are relatively centralized. Similar to the study of Tuo, Yang and He [9] on Xinjiang ethnic minority students, the result of self-efficacy in this study implies that most students have the moderate sense of self-efficacy when learning English. In the present study, the mean of

language classroom anxiety is 3.02 around the medium point, and the Std. Deviation is 0.417 indicating that many students feel anxiety in English study. However, the level of language classroom anxiety is lower than that of Tibetan students [10], but is similar to that of Han, Naxi and Yi students [11]. This occurred due to the fact that Achang language has presented a declining feature [3] for being strongly influenced by Mandarin Chinese, all the Achang ethnic students speak Mandarin Chinese, so that Achang ethnic minority students learn English with Mandarin as inter-language more easily than Tibetan students, and have lower foreign language classroom anxiety relatively. The mean value of metacognitive strategies is 3.28 which is above the medium point, and the Std. Deviation is 0.768, which means these students sometimes chose to use metacognitive strategies. Consistent with the results of learning strategies playing an important role in second/foreign language learning [12, 13], the result of this study shows that Achang ethnic minority students tend to use metacognitive strategies as a kind of learning strategies when learning English, but inconsistently.

Table 3. Descriptive Statistics of Self-efficacy Factors

	N	Minimum	Maximum	Mean	Std. Deviation
Self-confidence for English achievements	317	1	5	3.10	0.750
Self-confidence for learning tasks	317	1	5	3.29	0.647

3.1.1 The Descriptive Statistics of the Two Factors of Self-efficacy

Table 4. Descriptive Statistics of four factors of language anxiety

	N	Minimum	Maximum	Mean	Std. Deviation
Language learning anxiety	317	2	4	3.06	0.447
Classroom nervousness	317	1	4	2.89	0.533
Communication apprehension	317	1	4	3.04	0.455
Fear of questioning	317	1	5	3.11	0.649

As is shown in the Table 3, the mean of self-confidence for English achievements and self-confidence for learning tasks is 3.10 and 3.29 respectively. The Std. Deviation of self-confidence for English achievements is 0.750, and self-confidence for learning tasks is 0.647. Both have low Std. Deviation indicating that most students have similar answers as sometimes they have confidence in English learning. Compared with the study of Zhang and Yu [14], Achang ethnic minority students have lower self-efficacy in English study than college students. The reason may be that they have lower mastery experience, vicarious experience, social persuasion, and physiological states [15] than college students, which suggests middle school students have lower self-confidence for English achievements and self-confidence for learning tasks in English study.

3.1.2 The Descriptive Statistics of the Four Factors of Language Anxiety

Table 5. Descriptive statistics of three factors of metacognitive strategies

	N	Minimum	Maximum	Mean	Std. Deviation
Metacognitive learning plan	317	1	5	3.16	0.919
Metacognitive self-monitoring	317	1	5	3.39	0.817
Metacognitive regulation	317	1	5	3.3	0.783

It can be seen from the Table 4 that the average value of the four factors of the language anxiety is 3.06, 2.89, 3.04 and 3.11 accordingly. From this table, the mean value of language learning anxiety is 3.06, and the Std. Deviation is 0.447, indicating that most of students sometimes have language learning anxiety. Classroom nervousness scores the lowest level of the four factors with 2.89 slightly below the medium point 3, and the Std. Deviation is 0.533, suggesting that most of the students sometimes think they are nervous in English class. And this is corresponded with the answer of item 17 (see Table 5.5). The fear of questioning is ranked the highest level with 3.11, and the Std. Deviation is 0.649, which implies that most students are sometimes unlikely to answer questions in English class. This agrees with the answer of item 3 (see Table 4). The results are different from the study of Chinese college students [16] in which the communication apprehension is in the first place, whereas in this study fear of questioning gets the highest score among the four factors of foreign language anxiety. By contrast, when being questioned, middle school students will have higher anxiety as they have little knowledge of English at the beginning.

3.1.3 The Descriptive Statistics of the Four Factors of Metacognitive Strategies

As is shown in Table 5, the mean value of these three factors is 3.16, 3.39 and 3.3 respectively. The highest mean is metacognitive self-monitoring scoring 3.39 with the Std. Deviation 0.817, which implies that students tend to use metacognitive self-monitoring in English learning, with the corresponding answer item 10 (see Table 5.9). Then it is followed by factor of metacognitive regulation which scores 3.3 and its Std. Deviation is 0.783. The last is metacognitive learning plan scoring 3.16 with its Std. Deviation 0.919. Compared with the former two factors, metacognitive learning plan is less used in English study by Achang ethnic students, which is similar to the study of Xu [17] which reveals that metacognitive learning plan is the least used strategies by both ethnic minority and the mainstream Han ethnic students.

3.2 The Pearson Correlation Results of English Achievements and the Three Variables

Table 6. Pearson Correlation results between English achievements and three variables

		Self-efficacy	LA	Metacognitive strategies
English achievements	Pearson Correlation	.389**	-.256**	.341**
	Sig. (2-tailed)	.000	.000	.000
	N	201	201	201

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

It can be seen that there is a weakly positive correlation between English achievements and self-efficacy ($r = 0.389$, $p < 0.01$) indicating that the higher the level of self-efficacy, the higher English scores students get; a weakly negative correlation between English achievements and foreign language classroom ($r = -0.256$, $p < 0.01$), revealing that the higher the level of anxiety, the lower scores students achieve; a weakly positive correlation between English achievements and metacognitive strategies ($r = 0.341$, $p < 0.01$), purporting that students use more metacognitive strategies, and their English scores will be higher. The result of the relationship between English achievements and self-efficacy is similar to the study of Tuoya et al. [21] whose research subjects are Xingjiang ethnic minority students. As for foreign language anxiety, the result of this study is consistent with those of previous studies [6, 18, 19]. The result of the relationship between English achievements and metacognitive strategies of Achang ethnic minority students is different from that of the study by Zhou and Xie [20] which proves that the no relationship is found between metacognitive strategies and English achievements of ethnic minority students in Yunnan province. The reason may be that Achang ethnic students from the remote place are good at using metacognitive strategies to learn English well. Therefore, they can find a way to get higher education in cities (Table 6).

3.3 The Stepwise Regression Results of English Achievements and the Three Variables

Through the stepwise liner regression analysis, Table 7 provides the results of predicating the main variables affecting English achievements.

Table 7. Stepwise regression model summary of English achievement on the three variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.389 ^a	0.151	0.147	0.829

a. Predictors: (Constant), Self-efficacy

According to the Table 7, only one optimal independent variable entering the model is self-efficacy. Self-efficacy can explain 15.1% variance of English achievements and it still has 14.7% explanation after the adjusted R square. The reason why this phenomenon appears may be that self-efficacy, foreign language anxiety and metacognitive strategies are correlated with each other as dependent variables, therefore, foreign language anxiety and metacognitive strategies are lost in the regression analysis.

3.4 The Mediation Effect of English Achievements and the Three Variables

Table 8. The mediation effect of English achievements

	Standardized Equation	SE	t	F
First step	$Y = 0.366X_1$	0.105	4.502**	17.809**
Second step	$M = 0.622X_1$	0.065	11.462**	131.383**
Third step	$Y = 0.289X_1$	0.107	3.481**	19.911**
	0.162M	0.092	1.948*	

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (3-tailed).

In order to discuss the further relationship among self-efficacy, foreign language anxiety, metacognitive strategies and English achievements, this research has chosen mediation effects’ model. Through the regression analysis, the results can be seen from Table 8 and Fig. 1. The self-efficacy can predicate English achievements, and indirectly affect English achievements through metacognitive strategies, but foreign language anxiety cannot predicate English achievements as it cannot be enter the model (see Table 8). The metacognitive strategies operate as a mediate role between self-efficacy and English achievements. Through the further analysis, compared with the direct predication of self-efficacy, the explanation of English achievements through self-efficacy to metacognitive strategies is relatively weak ($0.162 \times 0.622 < 0.289$), which means the direct effects are more powerful to predicate English achievements than the indirect way. Actually, teachers need to consider both self-efficacy and the relationship between self-efficacy and metacognitive strategies to improve students’ English achievements even though the mediation effects are weak.

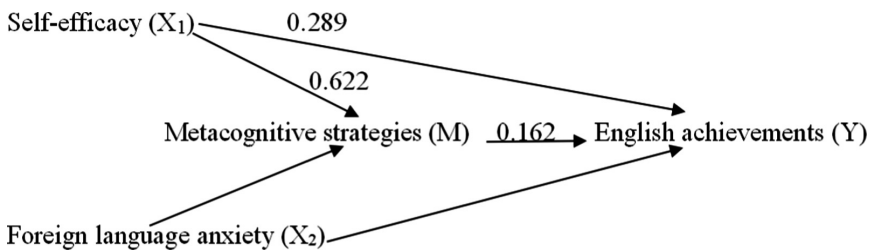


Fig. 1. The mediation effects

Figure 1 is the path way analysis of mediation effects. X1 stands for self-efficacy, X2 refers to foreign language anxiety, M represents metacognitive strategies, and Y is equal to English achievements.

4 Conclusion

4.1 Main Findings

The descriptive results of self-efficacy, foreign language anxiety and metacognitive strategies are around the midpoint, implying that Achang ethnic minority students sometimes have self-efficacy and foreign language anxiety, and use the metacognitive strategies in English study. In view of the first question, the overall situation of Achang minority junior high school students related to self-efficacy indicates that Achang minority students have a little confidence when learning English. And they have the moderate degree of anxiety in English study. They have used more metacognitive strategies than the other two variables.

As for the second question, the self-efficacy, metacognitive strategies and English achievement are positively but weakly related, while the correlation between foreign language anxiety and English achievement is negative. Through the correlation analysis, self-confidence for learning tasks, classroom nervousness and metacognitive regulation show the significant and weak correlation with English achievements. With the response to the third question, the stepwise regression results indicate the main predictor of English achievements is self-efficacy. The results also suggest that self-confidence for learning tasks; classroom nervousness and metacognitive regulation have the significant and weak correlation with English achievements.

4.2 Implications

From the analysis of the relationship among self-efficacy, foreign language anxiety, metacognitive strategies and English achievements in the trilingual background, the results indicate that the higher self-efficacy students have more frequently metacognitive strategies they use and lower anxiety they have in English learning, they will have greater achievements. Teachers need to provide students with the best possible conditions for learning. Because Achang ethnic students learn English in the trilingual background, their education should be in accordance with their learning characteristics.

In the first place, as Achang ethnic students sometimes have self-efficacy which is significantly positively related to their English achievements, teachers can help Achang ethnic students experience the success in English learning so as to improve students' confidence. In addition, English teachers should assist students in carrying out appropriate learning tasks, because both too difficult and too easy learning tasks are unlikely to review the students' authentic English level. Otherwise, students will lose their confidence in English learning. Moreover, the special language background and geographical locations make Achang ethnic students' English learning more difficult and complicated.

Secondly, teachers should guide students to alleviate their language anxiety, especially the classroom nervousness. As investigated in this study, classroom nervousness is significantly and negatively related with English achievements of Achang ethnic students. Therefore, the set-up of a harmonious classroom environment is vital to students. On the one hand, teachers can encourage students to speak out their difficulties and anxiety, and then help students to overcome them. On the other hand, this study shows that some Achang ethnic students think they will feel frightened when they don't understand what the teacher say in English. Therefore, teachers can organize classroom activities concerning the comparison of the Achang culture with Western culture, which will be good for students to understand English. So Achang ethnic students will feel less anxiety when they understand in English study.

Lastly, the Achang students sometimes use metacognitive strategies, meaning that they occasionally select the key points of their studies, make language plan, regulate language process, and evaluate the effect of learning. As a result, it is necessary for the students to enhance the use of metacognitive strategies. As a kind of mediator, metacognitive strategies play a non-ignorable role. Thus, instructors should teach their students how to use metacognitive strategies, and especially guiding them to make a reasonable language learning plan, regulate and monitor their learning process.

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