

Data Analysis of Student Attitude Survey Based on Internet Analysis Technology

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Abstract

Language attitude is people's understanding and evaluation of languages, which has important effect on language learning. Based upon investigation into 605 tibetan college students from 5 colleges in Tibet areas, and combined with network data, this paper mainly analyses their attitude towards Tibetan, Chinese and English from four dimensions: recognizing, instrumental, integrative and transferring attitude. This paper also discusses the relationship between students' language attitude and their gender and grade.

Keywords: Trilingualism, Language Attitude, Tibetan College Students, Big Data, Tibet Areas

1. Introduction

Language attitude is the common concern of sociolinguistics and psycholinguistics. Mentalism and behaviorism view of language believes that "language attitude is a very complex social and psychological phenomenon. It is not only an organic combination composed of cognitive emotions, behavioral tendencies and other factors, but also a whole that is difficult to separate completely. Different factors often have me in you and you in me, and there is an inextricable connection between each other [1]". "The actual needs, feelings, and interests of the language person are also important factors that affect the language attitude [2]". The sociolinguistics view of language attitude holds that "language attitude refers to the value and behavioral tendency of an individual towards a certain language or dialect [3]". At the same time, it is pointed out that language attitude is a manifestation of social attitude, and social development, cultural background, age, gender, closeness of social groups, language insecurity, etc. will affect the change of language attitude [4].

There are many research results on language attitudes. Yang Yu investigated and studied the language attitudes of Yunnan ethnic minority college students under the trilingual background of Min, Chinese, and English, and found that they hold positive attitudes towards Min, Chinese, and English. In comparison, Chinese has the highest degree of identity, followed by native languages, and English has the lowest degree of identity [5]. Xue Fen investigated the language attitudes of domestic English learners towards English as a lingua franca (ELF) and found that English users have a positive attitude towards ELF [6]. Wu Xie's research on the language attitude of Yi nationality college students shows that: Yi nationality college students maintain consistent attitudes towards the three languages: usefulness, language sentiment evaluation and development expectations of the three languages of Yi, Mandarin and English. Among the three language attitudes, Mandarin has the highest proportion, followed by Yi language, and English has the lowest evaluation [7]. Among the existing research results, there is very little research on the Tibetan-Chinese-English trilingual attitudes of Tibetan college students in Tibet. For Tibetan college students in Tibet, Tibetan (mother tongue) is the basic language for community communication and daily life; Chinese, as the national language, is very necessary to master Chinese; as a part of the school curriculum system, English is also used as a global lingua franca. The learning and mastery of English is also a requirement for future development.

Investigation and research on Tibetan college students' attitudes towards Tibetan-Chinese-English trilingualism can provide insight into their language learning tendencies.

This study defines trilingual attitudes as the learners' recognition of their own language resources and their education and use. It specifically covers the following four aspects of language psychology: identification trilingual motivation, instrumental trilingual motivation, convergent trilingual motivation and transfer trilingual motivation. Taking 605 Tibetan college students from 5 colleges and universities in the Tibet Autonomous Region as a sample, this study investigated the attitudes of Tibetan college students towards Tibetan, Chinese and English in the context of school education. And on this basis, analyze the relationship between the sample students' social characteristics such as gender and school level differences and their trilingual attitudes.

2. Research Methods

2.1. Research Object

According to the research design, this study adopted a stratified sampling method. The freshman and third grades were sampled from 5 colleges and universities in Tibet to investigate the Tibetan-Chinese-English trilingual attitudes of Tibetan college students. A total of 605 valid sample student data were collected, including 292 boys, accounting for 48.26% of the total number of samples, and 313 girls, accounting for 51.74% of the total samples; In terms of grade distribution, there are 338 freshmen, accounting for 55.87% of the total sample, and 267 juniors, accounting for 44.13% of the total sample. The sample students are between 15-24 years old, with an average age of $M=19.61$ ($SD=1.356$) years old, as shown in Figure 1.

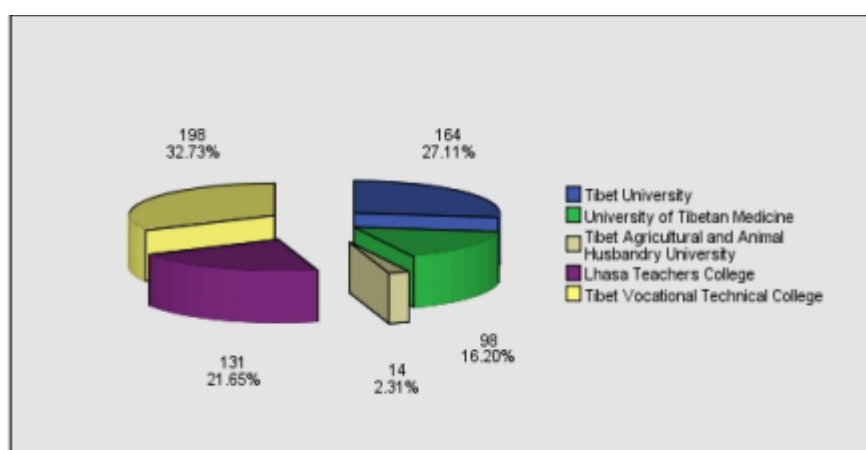


Figure. 1. Distribution of sample students' schools

2.2. Research Instrument

The research instrument used in this study is the "Questionnaire for Students of Trilingual Attitudes in Tibet" compiled by Liu's research team [8]. On the basis of the original questionnaire, a small number of original items were modified according to the research objects. After continuous correction and improvement of the test items, the "Tibetan College Students' Tibetan-Chinese-English Trilingual Attitude Questionnaire" was finally formed. The first part of the "Questionnaire on Tibetan-Chinese-English Trilingual Attitudes of Tibetan College Students in Tibet" assesses personal information of sample students, including school, grade, gender, age, ethnicity, fluent language, and first language used at birth; the second part is the Likert five-level scale, including 22 questions. A questionnaire survey was conducted on the trilingual attitudes of the sample students from four dimensions: recognizing trilingual attitude, instrumental trilingual attitude, integrative trilingual attitude and transferring trilingual attitude. In this process, modern network tools have played a big role. Each item in the five-level scale is given five options 1, 2, 3, 4, and 5. They represent "completely inconsistent", "not quite consistent", "not very clear", "basically consistent" and "completely consistent". The higher the student's score is, the higher the student's recognition of the item. The

reliability test result of the questionnaire showed that the Cronbach's α coefficient of the questionnaire was 0.836, indicating that the internal consistency was very good, and the reliability of the questionnaire was high. In the factor analysis of the questionnaire, the KMO value is 0.882, indicating that the questionnaire is more effective.

In this study, the results of the Tibetan-Chinese-English Trilingual Attitudes Survey Questionnaire of Tibetan College Students were entered into the SPSS 20.0 database, and then descriptive statistics and independent sample T tests were performed.

3. Data Analysis

3.1. Trilingual Attitudes of Sample Students

3.1.1. Recognizing trilingual attitude

The recognizing trilingual attitude discussed in this study mainly refers to students' general tendency to recognize the necessity of using Tibetan-Chinese-English three languages and the implementation of Tibetan-Chinese-English trilingual education. For recognizing trilingual attitude, four-dimensional questions were designed for Tibetan college students in Tibet in the context of globalization: maintaining Tibetan monolingualism, maintaining Chinese monolingualism, maintaining English monolingualism, and maintaining Tibetan-Chinese-English trilingualism.

Table 1. Descriptive statistics of the recognizing trilingual attitudes of sample students

Dimension	Question number	N	Minimum	Maximum	Mean	Std. Deviation
Tibetan monolingual maintenance	B6	605	1	5	2.34	1.143
	B11	605	1	5	1.87	1.234
Chinese monolingual maintenance	B5	605	1	5	3.57	1.165
English monolingual maintenance	B20	605	1	5	2.58	1.156
Tibetan-Chinese-English trilingual maintenance	B1	605	1	5	4.17	1.050
	B9	605	1	5	3.74	1.129
	B10	605	1	5	2.00	1.178
	Valid N (listwise)	605				

As shown in Table 1, for item B6 "We have a lot of Tibetans here, I think it is enough to learn Tibetan". The average answer of the sample students is 2.34, which is lower than the average of 3. It shows that Tibetan college students in Tibet generally maintain a negative attitude towards Tibetan monolinguals. Most Tibetan college students in Tibet are no longer satisfied with learning a single language in terms of language learning needs. The question item B11 "Tibetan is not very important in modern society, it is important to learn Chinese and English well". The average survey on the necessity of Tibetan learning is 1.87. It shows that Tibetan college students have a high degree of recognition of their mother tongue (Tibetan), and do not think that they will give up their mother tongue learning with the advancement of social modernization. Language is part of culture, and culture is also part of language [9]. The learning of the native language (Tibetan) of Tibetan college students is not only the need for language use, but also the need for inheriting the national traditional culture.

In terms of the sample students' identification with Chinese monolinguals, the average answer of the students to item B5 "I am willing to speak Chinese with people around me" is 3.57, indicating that the students have a positive attitude towards the use of Chinese.

A survey of sample students' English monolingual maintenance shows that the average value of the sample students' answers to item B20 "People here speak Tibetan and Chinese. It doesn't matter whether you learn English or not" is 2.58. It is lower than the mean value of 3 in the Likert five-level scale. Explain that students do not recognize this description, have realized the importance and necessity of English learning, and hold a high degree of recognition for English learning. English learning is not only a requirement of the school curriculum system, but also determined by the status of English as a lingua franca in the world.

The survey of recognizing trilingual attitude items shows that the sample students have a higher attitude towards the necessity of Tibetan-Chinese-English (item B1: we should be taught to speak Tibetan, Chinese and English at school), with an average of 4.17. It is significantly higher than the students' attitudes towards Tibetan monolingual maintenance, Chinese monolingual maintenance and English monolingual maintenance. When answering item B9 "School posters should be written in Tibetan-Chinese-English at the same time", the average value of the students' Likert scale answers was 3.74. It shows that students have a positive attitude towards Tibetan-Chinese-English trilingual education. They agree with the parallel use of Tibetan-Chinese-English on campus, but the level is low. The average value of the sample students' answers to item B10 "Learning Tibetan, Chinese and English is a waste of time. I think learning one is enough" is 2.00. It reflects from the side that the sample students maintain a high degree of identification with Tibetan-Chinese-English.

3.1.2. Instrumental trilingual attitude

The instrumental trilingual attitude is proposed for the integrative function of trilingual motivation, which refers to the students' cognition and attitude towards the instrumental functions of the three languages of Tibetan, Chinese and English in the process of trilingual learning. There are two questions about students' instrumental trilingual attitudes in the questionnaire: "You can live a rich life if you can speak Tibetan, Chinese, and English" and "You can find a good job if you learn Chinese and English well".

The results of data analysis show that the sample students' answers to item B3 "You can live a rich life if you can speak Tibetan, Chinese, and English" and B16 "You can find a good job if you learn Chinese and English well" mean 3.51 and 3.45 respectively. It shows that the students have shown a positive attitude towards these two statements and a clear identification attitude towards the instrumental functions of Tibetan, Chinese and English.

3.1.3. Integrative trilingual attitude

The integrative trilingual attitude refers to the motivation of language learners to learn language in order to maintain close contact with the people around them and integrate into the society of people who use a certain language. Regarding the students' integrative trilingual attitudes, two questions were designed in the questionnaire: "Learning Tibetan is very important for me to communicate with people around me" and "People who know both Tibetan and Chinese and English are smart".

The results of the survey show that the average answers of sample students to item B14 "Learning Tibetan is important for me to communicate with people around me" and B22 "People who know both Tibetan and Chinese and English are smart" are 3.99 and 3.45 respectively. All showed a supportive attitude. The sample students believed that learning Tibetan is very important for them to communicate with the people around them, and wanted to integrate into the local community through language learning. Internet big data shows that people with bilingual and even multilingual skills are better than those with only monolingual skills in all aspects. It can be seen that all Tibetan college students in Tibet have shown a positive attitude towards integrative function of trilingual learning, as shown in Table 2.

Table. 2. Descriptive statistics of instrumental, integrative, and transferring trilingual attitudes

Dimension	Question number	N	Minimum	Maximum	Mean	Std. Deviation
Instrumental trilingual attitude	B3	605	1	5	3.51	1.145
	B16	605	1	5	3.45	1.019
Integrative trilingual attitude	B4	605	1	5	3.99	1.032
	B22	605	1	5	3.45	1.024
Transferring trilingual attitude	B8	605	1	5	2.39	1.116
	B12	605	1	5	2.61	1.173
	B17	605	1	5	3.82	1.054
	B18	605	1	5	2.81	1.116
	B21	605	1	5	4.18	972
	Valid N (listwise)	605				

3.1.4. Transferring trilingual attitude

The main investigation of the transferring trilingual attitude is for the sample students' cognition of Tibetan-Chinese-English trilingual education from the perspective of language learning, as well as the cognition and attitude of sample students on the phenomenon of language transfer that occurs in the process of Tibetan-Chinese-English trilingual education. There are five questions in the questionnaire that reflect students' transferring trilingual attitudes: Learning Tibetan, Chinese, and English makes people's minds confused/It's difficult to learn science courses such as mathematics, physics and chemistry in Tibetan/To get good grades in school, you must learn Chinese, Tibetan and English well/Learning Tibetan, Chinese and English at the same time is not difficult at all/I think learning three languages is of great benefit to my study.

After investigation, it was found that the average values of the sample students' answers to item B8 "Learning Tibetan, Chinese and English makes people confused" and B12 "It's difficult to learn science courses such as mathematics, physics and chemistry in Tibetan" are 2.39 and 2.61 respectively. It reflects that the learning of the three languages of Tibetan, Chinese and English will not cause confusion among Tibetan college students in Tibetan areas; for item B17, "To get good grades in school, you must learn Chinese, Tibetan and English well." B18 "Learning Tibetan, Chinese and English at the same time is not difficult at all" and B21 "I think learning three languages is of great benefit to my study". The sample students all showed a supportive attitude, with the mean values being 3.82, 2.81 and 4.18 respectively. This shows that the learning of the three languages of Tibetan, Chinese and English will cause a certain degree of academic pressure on Tibetan college students in Tibetan areas ($M=2.81$). However, the students still support the learning of three languages and feel that the learning of three languages is necessary. From the perspective of language learning, Tibetan college students in Tibet have shown a supportive trilingual attitude and hope to learn and master the three languages of Tibetan, Chinese and English.

3.2. The Social Characteristics and Trilingual Attitudes of the Sample Students

3.2.1. Gender and trilingual attitude of sample students

Gender is an important social variable in sociolinguistics. This study analyzes gender as a social variable that affects trilingual attitudes. As shown in Table 3, independent sample t-test analysis showed that in terms of gender differences in recognizing trilingual attitudes, the F value of the "Levene test for equal variances" reached a significant difference ($F(603)=12.871, p=.000<0.05$), Indicating that the variances of the two sets of samples are of

different quality. Using the data in the “variance unequal” column, $t(558.139)=3.023$, $p=.003<0.05$, reaching a significant level. It indicates that there are significant differences in the “recognizing trilingual attitudes” of male and female students. The identity trilingual attitude of boys (Mean=2.9755) is higher than that of girls (Mean=2.8183).

Table. 3. Analysis of gender differences in trilingual attitudes among sample students

	Gender	N	Mean	Std.Devia tion	F	Sig.	t	df	Sig. (2-tailed)
Recognizing trilingual attitude	male	292	2.9755	.70193	12.871	.000	3.023	558.139	.003
	female	313	2.8183	.56382					
Instrumental trilingual attitude	male	292	3.5257	.89107	.080	.777	1.365	603	.173
	female	313	3.4297	.83772					
Integrative trilingual attitude	male	292	3.7603	.83155	.002	.961	1.145	603	.253
	female	313	3.6821	.84565					
Transferring trilingual attitude	male	292	3.2014	.69953	7.873	.005	1.415	560.745	.158
	female	313	3.1278	.56729					

In terms of gender differences in instrumental trilingual attitudes, the F value of the “Levene test for equal variances” did not reach a significant difference ($F(603)=.080$, $p=.777>0.05$), indicating that the variances of the two groups of samples are homogeneous. Using the data in the “equal variance” column, $t(603)=1.365$, $p=.173>0.05$, which did not reach the significant level, indicating that the students’ instrumental trilingual attitude will not be significantly different due to their gender.

In terms of gender differences in integrative trilingual attitudes, the F value of the “Levene test for equal variances” did not reach a significant difference ($F(603)=.002$, $p=.961>0.05$), indicating that the variances of the two groups of samples are homogeneous. Using the data in the “equal variance” column, $t(603)=1.145$, $p=.253>0.05$, which did not reach a significant level, indicating that students’ integrative trilingual attitudes will not be significantly different due to their gender.

In terms of gender differences in transferring trilingual attitudes, the F value of the “Levene test for equal variances” reached a significant difference ($F(603)=7.873$, $p=.005<0.05$), indicating that the variance of the two groups of samples is not homogenized. Using the data in the “variance unequal” column, $t(560.745)=1.415$, $p=.158>0.05$, which did not reach a significant level, indicating that male and female students’ transferring trilingual attitudes will not be significantly different due to their gender.

3.2.2. Sample students’ grades and trilingual attitudes

Independent sample t-test analysis showed that in terms of grade differences in recognizing trilingual attitudes, the F value of the “Levene test for equal variances” did not reach a significant difference ($F(603)=.281$, $p=.597>0.05$), indicating that the variance of the two sets of samples is homogeneous. Using the data in the “equal variance” column, $t(603)=-.0984$, $p=.326>0.05$, which did not reach the significant level, indicating that there is no significant difference in the recognizing trilingual attitude of sample students with different grades.

In terms of grade differences in instrumental trilingual attitudes, the F value of the “Levene test for equal variances” did not reach a significant difference ($F(603)=.703$, $p=.402>0.05$), indicating that the variances of the two groups of samples are homogeneous. Using the data in the “equal variance” column, $t(603)=.862$, $p=.389>0.05$. Although there

is a difference between the average value of freshman students ($M=3.5030$) and the average value of junior students ($M=3.4419$), the difference is not statistically significant. It shows that the students' instrumental trilingual attitudes did not show significant differences due to different grades.

In terms of grade differences in integrative trilingual attitudes, the F value of "Levene test for equal variances" did not reach a significant difference ($F(603)=.245$, $p=.621>0.05$), indicating that the variances of the two groups of samples are homogeneous. Using the data in the "equal variance" column, $t(603)=-.420$, $p=.675>0.05$, which did not reach the significant level, indicating that the students' integrative trilingual attitude was not affected by sample students' grade.

As far as the grade difference of the transferring trilingual attitude is concerned, the F value of the "Levene test for equal variances" did not reach a significant difference ($F(603)=.000$, $p=.989>0.05$), indicating that the two sets of sample variances are homogeneous. Using the data in the "equal variance" column, $t(603)=1.187$, $p=.236>0.05$, which did not reach the significant level, indicating that there is no significant difference in the transferring trilingual attitude of the sample students of different grades (see table 4).

Table. 4. Analysis of grade differences in trilingual attitudes among sample students

	Gender	N	Mean	Std.Devia tion	F	Sig.	t	df	Sig. (2-tailed)
Recognizing trilingual attitude	Freshman	338	2.8715	.63118	.281	.597	-.984	603	.326
	Junior	267	2.9230	.64784					
Instrumental trilingual attitude	Freshman	338	3.5030	.87920	.703	.402	862	603	.389
	Junior	267	3.4419	.84593					
Integrative trilingual attitude	Freshman	338	3.7071	.84829	.245	.621	-.420	603	.675
	Junior	267	3.7360	.82861					
Transferring trilingual attitude	Freshman	338	3.1905	.63650	.000	.989	1.187	603	.236
	Junior	267	3.1288	.63284					

4. Conclusion

The sample students showed positive trilingual attitudes toward trilingual learning of Tibetan, Chinese and English in four dimensions: recognizing trilingual attitude, instrumental trilingual attitude, integrative trilingual attitude and transferring trilingual attitude. Have high recognition of the importance and necessity of Tibetan-Chinese-English trilingual learning, and support Tibetan-Chinese-English trilingual learning. The sample students tend to use Tibetan-Chinese bilingualism (47.6%) in communication with their classmates, and Chinese (50.9%) or Tibetan-Chinese bilingualism (33.2%) in communication with teachers. A positive language attitude will enhance learners' use of the language [10].

The relationship between sample students' gender and trilingual attitudes The gender differences in trilingual attitudes of the sample students are mainly concentrated on the recognizing trilingual attitudes. Among them, the recognizing trilingual attitude of boys ($Mean=2.9755$) is higher than that of girls ($Mean=2.8183$), indicating that there are significant differences between male and female students in recognizing trilingual attitudes; The sample students did not show significant differences in their instrumental trilingual attitudes, integrative trilingual attitudes, and transferring trilingual attitudes due to their gender differences. Online databases show that people in other parts of the world have similar language attitudes. It can be seen that, among the sampled students, boys have a higher degree of

identification with the three languages of Tibetan, Chinese, and English, and boys agree on the importance of Tibetan-Chinese-English trilingual education more than girls.

The relationship between the sample students' grades and their trilingual attitudes The sample students of different grades showed no significant differences in the recognizing trilingual attitude, instrumental trilingual attitude, integrative trilingual attitude and transferring trilingual attitude. This shows that the Tibetan-Chinese-English trilingual attitude of Tibetan college students is not affected by the grade they are attending. Tibetan college students in Tibet tend to learn the three languages of Tibetan, Chinese and English. They all think that the learning of the three languages of Tibetan, Chinese and English is very helpful to their development. The students have shown a strong desire to learn the three languages of Tibetan, Chinese and English. As far as the future development of the students is concerned, the study of Chinese and English is very necessary, and Tibetan is their mother tongue and a necessary language in daily life. For Tibetan college students in Tibet, they have fully realized the importance and necessity of learning Tibetan-Chinese-English and supported the learning of Tibetan-Chinese-English.

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