

## Research on Thinking Styles and Communication Strategies

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**Keywords:** Thinking style, Communication strategy, Spoken language score, Foreign language teaching

**Abstract:** A detailed case study of college students' thinking styles and communication strategies was conducted, which was assessed by means of Thinking Styles Inventory made by Sternberg and Communication Strategies Inventory made by the writer. The findings were as follows, there were some individual differences in gender, majors, and achievements. Some significant relationships were found among three variables. And there were some significant characteristics of college students' thinking styles and communication strategies. Some suggestions were made to improve students speaking ability from the perspectives of school administration, teachers and students.

### 1. Put Forward Problem

The research on thinking style has developed accompanied with the recognition style. Back to 1937, Allot put forward the word of recognition style, which is a habitual and unique way how people observe problems, think, handle and memorize, also the organization, information and experience management preferred by individuals. Robert J. Sternberg, a psychology professor from Yale University, put forward the Theory of Mental Self-government in 1987, who firstly put forward the concept of thinking style. Thinking style refers to the way of thinking preferred by people. According to the theory, different individuals have their own "thinking style" of self-organization and management, which can be displayed in all aspects of learning, life and working. From five dimensions of function, form, level, scope and tendency, the thinking style can be divided into 13 styles. Self-management style of one person is the combination of several thinking styles. Sternberg put forward the opinion that individual thinking style can be socialized, which has great enlightenment for school and family education. Researches both at home and abroad have made all kinds of researches by analyzing the thinking style theoretical structure and exploring the relationship between thinking style and academic performance. Although the analyzing results are different from each other, there is significant correlation between thinking style and academic performance. Many researches show that, students' thinking styles can be influenced by many factors, including teachers' teaching experience, leading experience, school subjects and socioeconomic status of families, etc.

In Interlanguage (1972), Selinker firstly put forward the concept of communication strategy, which refers to the strategy how to use language and plays an important role in the formation of interlanguage, and lies in "teaching students to flexibly and efficiently apply the language they have acquired". From the perspective of interlanguage and wrong analysis, foreign researchers have illustrated the definition, classification, function and other relevant factors. Some researchers have also explored the influence of acquisition of communication strategies on the communication process and ability. Domestic researchers have also introduced and made researches on the communication strategy theory. Besides, from the relationship between strategy ability and proficiency of target language, they have compared the communication strategies applied by learners both at home and abroad, and also made some researches on the situation how Chinese learners apply the communication strategies.

According to the statistics of listening, speaking, reading and writing proportion in verbal communication made by American well-known language educator Rivers W.M., listening, speaking, reading and writing respectively occupy 45%, 30%, 16% and 9%. In oral communication, we use

communicative strategies to win more chances, keep communication smooth and increase the communication quality. However, the oral language is still a weak link in the entire college English classroom teaching. In order to understand the relationship among the college students' thinking style, communication strategy and academic performances, especially the current situations and countermeasures for the thinking style and communication strategy, we have carried out this research, and tried to answer the following questions:

Basic characteristics of college students' thinking style and language communication strategies. Whether there are differences in thinking style and language communication strategy for college students with different genders and majors? Whether the correlation of thinking style and communication strategies can predict the oral English achievement?

## 2. Research Method

### 2.1 Research Subject

By taking some college students from Jiangxi as the testees, 192 questionnaires were distributed and 178 valid questionnaires were collected. The efficiency is as high as 92.7%. Of whom, there are 80 students majored in liberal arts, 98 majored in engineering, 124 males and 54 females respectively.

### 2.2 Research Tool

The research mainly adopts the way of questionnaire and oral English test. The questionnaire is divided into two parts. As the tool to measure thinking style, The Thinking Styles Inventory compiled by Sternberg et al has been most widely used in the psychological area. From the five dimensions of function, form, level, scope and learning, the scale is composed of 13 branch scales, 104 questions in all. Every component is judged by 8 questions, which represents one thinking style. On the Likert seven-point scale, the testee evaluates the degree of compliance with every statement, from 1 extreme non-conformance to 7 extreme conformances. By taking the Oxford learning strategy research and communicative emotion strategy research of O'Malley & Chamot as the theoretical foundation, the communication strategy questionnaire refers to the language acquisition strategy questionnaire of professor Wen Qiufang. It has also made partial amendments to the College Students' Oral English Communicative Strategy Questionnaire compiled by Ding Mengyang from Nanjing Normal University, so as to form the communicative strategy questionnaire applied to this research. The questionnaire can be divided into two parts, respectively are communicative strategy attitude and application, 19 questions in all. There are five ratings, from 1 totally unsuitable (totally disagreeable) to 5 totally suitable (totally agreeable), including reduction, mother tongue and achievement strategy. Of which, the achievement strategy is divided into four parts, respectively are foreign language relaying strategy, non-verbal strategy and cooperative strategy.

## 3. Research Achievement

### 3.1 Characteristics of Oral Language Achievement

Oral language tests are carried out on students and the result is shown in Table 1. By analyzing the differences of oral language achievements from the aspect of gender, there is no significant difference. However, there are significant differences of oral language achievements of testees majored in liberal arts and science, as shown in Table 2.

Table 1. Descriptive Analysis on Oral Language Achievement

Population	Minimum	Maximum	Average	Standard Deviation
178	4.00	9.00	7.0169	1.1

Table 2 Variation Analysis on Oral Language Achievements of Students Majored in Liberal Arts and

Science

	Major	N	Mean	SD	Std. Error Mean	F	Sig
Oral Language Achievement	Liberal Arts	80	7.0250	1.19042	.13309	5.740 *	0.018
	Science	98	7.1837	1.42400	.14385		

\* P < 0.05

### 3.2 Characteristics of College Students' Thinking Style

By making descriptive analysis on the thinking style of testees, results show that, students getting quite high scores are usually global, partial, extroverted and aggressive thinkers. Those getting quite low scores are usually non-governmental, introverted, hierarchical and conservative thinkers.

Among all aspects of psychological self-management, college students are mostly inclined to the judicial type in the aspect of function. From the aspect of form, they are mostly inclined to monarchic and equal competitive types, who have least tendency to the non-governmental type. From the aspect of level, they are inclined to the global type. From the aspect of tendency, they are inclined to the aggressive type.

In order to further understand the individual differences of college students' thinking styles, the researchers have made analysis and comparison on the thinking styles of boys and girls, students majored in liberal arts and science. The independent sample T test has been carried out on the thinking styles of boys and girls, results show no significant difference. As the result of independent sample T test carried on students majored in liberal arts and science, it can be seen in Table 3.

Table 3. Difference Analysis on Thinking Styles of Students Majored in Liberal Arts and Science

Thinking Style	Liberal Arts M ± SD	Science M ± SD	F	P
Legislative Type	4.44 0.98	4.61 0.71	4.17 *	0.043
Law-enforcement Type	4.56 0.88	4.54 0.73	3.85 *	0.048
Non-governmental Type	4.16 0.94	4.22 0.64	10.08 *	* 0.002
Conservative Type	4.45 0.96	4.53 0.74	3.81 *	0.049

\* P<0.05 \* \* P<0.01

After making descriptive statistics of the testees' oral English achievements, it concludes the average of 7 points. By classifying those students getting scores greater than or equal to 7 points into the high-score group, and those getting scores below 7 points into the low-score group, 62 testees are included in the high-score group and 116 are in the low-score group. After carrying out the independent sample T test on the testees' scores of thinking style in high-score and low-score groups, it shows that, there are significant differences in the hierarchical thinking style type (F=6.130, P=0.014, P<0.05, high-score group M=4.37, SD=0.84, low-score group M=4.37, SD=0.64). After making variation analysis on the oral English achievements of boys and girls, it turns out no significant difference.

### 3.3 Correlation Analysis on College Students' Thinking style, Communicative Strategy and Oral English Achievement

After studying the relationship between thinking style and intelligence, some researchers both at home and abroad think that there is no relation between the thinking style and intelligence. Thinking style is one kind of variable independent of the intelligence. Thus someone's intelligence level cannot be concluded by his own characteristics of thinking style. By applying the Pearson Product-Moment Correlation, the researcher fatherly explores the relationship among the college student's thinking style, communicative strategy and oral English achievement. Results show that, oral English achievement is extremely and significantly related, significantly related to the thinking style's

judicial type (0.518, P=0.000), extroverted type (0.441, P=0.000) and partial type (0.151, P=0.044). The result is quite similar to researches on thinking style carried out by other researchers. Oral English achievement, gender and major are partially related to the communicative strategies. Achievement strategy concept is quite related to the application of achievement strategy (0.372, P=0.000). College students' thinking style is partially related to the communicative strategy (Picture 5). By making regression analysis on thinking style, communicative strategy and oral English achievement, it turns out that, the thinking style cannot predict the oral English achievement. To reduce the strategy attitude can predict the oral English achievement ( $t=-2.175$ ,  $P<0.05$ ).

Table 4 Related Analysis on Thinking Style and Communicative Strategy

	Achievement Strategy Attitude	Reduction Strategy Attitude
Hierarchical Type	0.157 * P=0.037	
Equal-competition Type	0.233 * * P=0.002	
Global Type	0.179 * P=0.017	
Introverted Type	0.151 * P=0.044	0.163 * P=0.030

By making related analysis on all items, it shows that, the oral English achievement has significant positive correlation with gender; the oral English achievement has significant negative correlation with reduction strategy concept; gender has significant positive correlation with the application of reduction strategy and mother tongue; the major has significant negative correlation with the application of mother tongue strategy; achievement strategy concept, reduction strategy concept and mother tongue strategy are positively correlated to each other; the achievement strategy concept has significant positive correlation with three communicative strategies; the application of mother tongue strategy has significant positive correlation with the achievement strategy and reduction strategy application.

#### 4. Analysis and Discussion

In the research, scores of college students' thinking style are above the average level. Students mostly prefer to the global, partial, extroverted and aggressive thinking styles, who barely apply the non-governmental, introverted and conservative types. This result has something in common with the research results in the past. However, there are some differences.

Oxford (1990) defines the strategy types with average greater than 2.5 and less than 3.4 as the strategy type having medium frequency. In this research, the mother tongue strategy attitude is more than 3.4 points. The averages of achievement strategy and reduction strategy attitude both achieve the degree of medium frequency, which proves that college students well recognize these three communicative strategies. However, due to the limitations of exam-oriented education and English teaching in large-scale classroom, their foundations of oral English are somehow insufficient, which can only be recognized during communication by relying on the mother tongue, so as to achieve the goal of communication. As the application of strategy, the average score of testees' achievement strategy is as high as 3.88, which means that they can positively cope with communicative difficulties and achieve the goal of communication by foreign language paraphrasing, delay, non-verbal and cooperation, such as periphrasis, creation of new words, similar expression or public request for help and indirect resort to help, etc.

In general, college students' attitude of communicative strategy has significant positive correlation with the application, which has partially proved the research assumption as well. The achievement strategy attitude of college students has significant positive correlation with the application. Because of the social progress and scientific development, the college students have possessed a lot of channels to learn English nowadays. Meanwhile, they have got many chances to communicate in English. Their achievement strategy attitude has been closely related to the application of communicative strategy, which have influence on each other. However, the reduction strategy has significant negative correlation with the mother tongue. Results show that, college students want to complete the communication by English, due to the limitations of oral English level,

they cannot communicate with each other smoothly. Thus they just use the mother tongue or avoid to communicate in English sometimes.

## 5. Conclusions

Under the background of school education, first of all, the administrative departments need to transfer the management orientation of emphasizing on scores but neglecting the ability, so as to let more teachers give full play to their teaching, offer more chances and space for students to increase their abilities. Secondly, teachers can help students to have correct understanding about their own characteristics of thinking styles, let them know their advantages and disadvantages of their own styles, master the learning progress and improve their learning abilities. Meanwhile, teachers should give full play to their guidance. During the teaching progress, they should apply suitable teaching methods to students with different thinking and learning styles. By teaching students in accordance of their aptitude, teachers can get the best effects. Currently, the large-scale English teaching in many colleges cannot adapt to the students with several thinking styles, which has stifled the college students' enthusiasm for learning English. Teachers can apply the teaching, group discussion, project learning and demonstration to satisfy the demands of students with different thinking styles. When the teaching style of teacher conforms to the recognition method of student, it is the success of teaching and learning.

## Acknowledgements

The research has been sponsored by “The Project of Visiting Scholar Special Funds for Development Program of Young and Middle-aged Teachers in Regular Undergraduate Colleges of Jiangxi”. (Grant NO.2016-109).

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