

# An Examination and Analysis of Theoretical Models of Learning Disturbance and Coping Strategies of Vietnamese Chinese Language Centers

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With the development of Vietnamese society and increasing demand, coupled with the growing investments from Chinese and Taiwanese enterprises in areas such as the economy and education, Chinese language learning has emerged as a significant trend in Vietnam. However, under the specific context of Vietnamese students studying Chinese locally, there remains a relative scarcity of research addressing this issue. Previous studies have predominantly focused on learning difficulties and coping strategies, highlighting a strong correlation between the two. Accordingly, this study posits that the learning challenges encountered in Chinese language acquisition among Vietnamese learners can serve as predictors for the coping strategies they adopt. This study employs a questionnaire survey methodology, utilizing stratified proportional random sampling, and obtained 834 valid responses from three branches of the Chinese Language Center in Ho Chi Minh City, Vietnam. Additionally, IBM AMOS 21.0 was employed to assess the fit of the theoretical model constructed in this study, which explores the relationship between learning difficulties and coping strategies among students at Chinese Language Centers in Vietnam. The analysis examines whether the observed data support the proposed path model between variables and whether the learning challenges faced by students (encompassing both external and internal factors) directly influence the coping strategies adopted (including both active-positive and passive-negative approaches). The findings of this study aim to provide valuable insights for Chinese language educators and teaching institutions in Vietnam, contributing to the enhancement of instructional quality.

**Keywords:** Vietnamese Chinese Center, Chinese, Chinese learning disturbance, Chinese coping strategies

## Introduction

### Background of the Study

In recent years, with the high level of exchanges and development in economy, education, culture, and tourism between Vietnam and the rest of the world (especially China Mainland and Taiwan), as well as Vietnam's policy of gradually opening up to Chinese businessmen for investment, the number of Vietnamese students choosing to study in China Mainland or Taiwan has been increasing. According to the statistics of Taiwan's Ministry of Education, in the 112th academic year (2023), the top three countries of origin of foreign students were Vietnam, Indonesia, and Malaysia, of which the number of Vietnamese students reached 27,491, accounting

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for about 20% of the total number of foreign students. Therefore, learning Chinese has recently become a hot trend in Vietnamese society. In addition to the large increase in the number of students in Chinese Language Centers and Chinese Language departments in universities, some universities have also established Chinese language departments to meet the demand of students. In some universities, the graduation threshold for Chinese language departments is Level 5 (up to Level 6) of the Hanyu Shui Ping Kao Shi (HSK Test).

### **The Purpose of the Study**

As a Chinese language graduate from Vietnam and a teacher in a Chinese Language Centers, the researcher has come into contact with a number of Vietnamese students who are learning Chinese and found that many Vietnamese students experience a high level of frustration in the classroom. The reason for this phenomenon is that Chinese is one of the most difficult languages in the world to learn, with four levels of competence: listening, speaking, reading, and writing; the Vietnamese fonts are very different from the Chinese fonts; and the multiple meanings, sounds, and consonants of the Chinese characters make it easy for Vietnamese students to get confused. Apart from practicing in the classroom, there are no other environments where Chinese can be commonly used for practicing, which makes Vietnamese learners lack confidence in speaking to others. These problems cause Vietnamese students to experience many difficulties in learning Chinese and to give up.

Students in Vietnamese Chinese Language Centers have different purposes of learning Chinese, and it is difficult to meet the needs of all students with a general language program. It is believed that each Chinese language teaching institution, teachers, and related administrative units have various constraints and are not able to make the best use of their policies and environment. Therefore, the researcher would like to understand the real needs of Vietnamese students in the process of learning Chinese language. Through the questionnaire survey, the researcher would find out the reasons why Vietnamese students, especially those in the Chinese Language Centers, encountered difficulties in the process of learning Chinese language, and then find out the real needs of Vietnamese students and provide them with timely assistance to reduce the difficulties in the process of learning, and to help the Vietnamese students to be more willing to choose to learn Chinese language, which is a way of improving the learning process. The researcher hopes to provide strategies for improvement and to serve as a reference for the planning of Chinese language teaching and learning.

Given the specific contextual variables of Vietnamese students learning Chinese locally in Vietnam, relevant studies on this topic remain relatively scarce. Previous literature primarily focuses on the relationship between learning disturbance and coping strategies, which highlights the close connection between these two factors. Therefore, this study proposes that the learning difficulties of Vietnamese students in Chinese language learning have predictive power for their coping strategies. Additionally, the researcher uses IBM AMOS 21.0 to test the path model and fit of the theoretical model constructed in this study, which examines the relationship between learning difficulties and coping strategies among students in Chinese Language Centers in Vietnam. The study also analyzes the direct effects of Chinese language learning disturbance on coping strategies among Vietnamese students.

## **Literature Review**

### **Learning Disturbance**

**About the sources of learning disturbance.** Lin and Chang (2000) categorized the sources of learning difficulties into three aspects: (1) school aspects, such as curriculum, teaching materials, school equipment,

teaching methods, teacher's personality and attitudes, etc.; (2) individual aspects: such as learner's emotional distress, lack of basic learning skills, lack of learning goals, self-understanding, further education or employment, interest in learning, etc.; (3) family and social aspects: such as family environment, parents' lack of attention to the value of education, parents' expectations, etc.

**Types of anxiety in learning foreign languages.** Tran's (2012) study theory that there are three types of anxiety in learning a foreign language: (a) Communication apprehension: Communication apprehension occurs when a person is afraid to communicate with others or is unable to understand the message conveyed by others, or is afraid to express themselves verbally in a crowd or a group; (b) Test anxiety: This refers to the fear of failure or the fear of not doing as well as one's own or one's family's expectations when faced with the pressure of a test; (c) Fear or negative evaluation: it refers to the fear the learner has because of the fear of family members, teachers, classmates, and other people around their own bad grades, poor academic performance, and assessment or criticism.

These three types of anxiety in foreign language learners are related to both academic and social performance. Since learning a foreign language involves four levels of cognitive abilities: listening, speaking, reading, and writing, learners may feel pressure and frustration when learning a foreign language because they do not achieve their predefined learning goals or are not satisfied with the results of their learning, as well as communication, testing, and fear of negative evaluations.

#### **Basic Chinese language characteristics.**

##### **(1) Pronunciation**

In a study conducted by Liu (2015), the similarity between the four tones of Chinese and the tones of Vietnamese was analyzed and counted. According to the findings, North and South Vietnamese learners' Chinese pronunciation deviations are mainly in the first and fourth tones, and often occur in mixing and substituting each other's tones. Specifically, the North Vietnamese learners mainly overlapped the first and fourth tones of Chinese to the flat tones of Vietnamese (20.5% thought the fourth tone was like a flat tone, while most of them thought the first tone was the most similar to a flat tone), while the South Vietnamese learners overlapped the first and fourth tones to the sharp tones of Vietnamese (43% of them thought the first tone was like a flat tone, while 77% of them thought the fourth tone was like a sharp tone). This overlap between Chinese and Vietnamese means that Vietnamese learners do not know enough about the tones of Chinese to pronounce them.

Table 1

*Vietnamese Learners' Perceptions of Chinese Tones and Their Vietnamese Counterparts*

|                           | First tone                    | Second tone       | Third tone        | Fourth tone                                    |
|---------------------------|-------------------------------|-------------------|-------------------|------------------------------------------------|
| North Vietnamese Learners | Unmarked accent               | Acute accent      | Hook above accent | Unmarked accent, grave accent, Underdot accent |
| South Vietnamese Learners | Unmarked accent, acute accent | Hook above accent | Grave accent      | Unmarked accent, acute accent                  |

Note. Taken from Liu (2015, p. 51).

##### **(2) Grammar: 「把」 and 「被」 sentences**

In general, the language learning process involves linking the meanings represented by the pronunciation of words to the syntax and the composition of the word forms, and understanding the structure of the meaning of

the language through the formal structure in order to grasp the corresponding relationships. For Vietnamese learners, the occurrence of the word “put” is one of the most difficult things to understand in Chinese grammar. The reason is that Vietnamese does not have similar grammatical structure, and the use of 「把」 requires mastery of the vocabulary of verbs and directional words, which do not appear in the translation of 「把」 into Vietnamese. Therefore, when Vietnamese learners encounter 「把」 sentences, they may memorize the formulas but are not able to use them flexibly (Trieu & Lin, 2023).

The formula for the word 「把」 is:

Formula: Subject + 「把」 + Object + Possessive Verb + Other Components

Example: She put the apple in the refrigerator.

她 + 「把」 + 蘋果 + 放 + 在冰箱裡。

Ibid, the meaning of this example in Vietnamese grammar would become:

Formula: Subject + Verb + Predicate + Other Components

Example: 她 + 放 + 蘋果 + 在冰箱裡。

Converting from a normal sentence to a 「被」 sentence or to a 「把」 sentence is also difficult for Vietnamese learners.

Example 1: The cat ate the fish. (General sentence)

貓吃了魚。(General sentence)

Example 2: 魚被貓吃了。(「被」 sentence)

Example 3: 貓把魚吃了。(「把」 sentence)

### (3) Writing

Vietnamese characters are formed by adding tones to the Latin alphabet (example: a, á à â ã ạ). Chinese characters are formed by strokes, and by adding or subtracting a stroke, Han Chinese characters become different words and meanings (for example: 大—太, 天—夫). Therefore, when Vietnamese learners study Chinese, they usually spend most of their time memorizing how to write Chinese characters, not to mention the many vocabulary words, sentence formation, and writing (Trieu & Lin, 2023).

### (4) Vocabulary

Chinese words with multiple meanings (e.g., 「好」) can be interpreted and translated differently in different contexts; Chinese words with multiple pronunciations (e.g., 「長」/zhǎng/-/ 尨' and 「長」/cháng/-/ 尨') can have different meanings in semantics; Harmonized characters (e.g. 「在」, and 「再」) have the same pronunciation but have different usages and meanings; and words with similar meanings (e.g. 「想」、「要」、「想要」、「需要」, etc.) can have “muốn, cần” when translated into Vietnamese, both of which can cause confusion to Vietnamese learners, and they need to know clearly what the meanings are and how to pronounce them under what circumstances (Trieu & Lin, 2023).

As mentioned above, due to the difficulty of the Chinese language, Vietnamese learners tend to give up when learning Chinese. Therefore, when Chinese becomes a non-native language or a second foreign language, it is necessary to have a suitable language learning environment and to practice the four skills of listening, speaking, reading, and writing in order to apply the language. If language knowledge is not built up according to the stages of language learning and there is a lack of opportunities to practice in the language environment, it will lead to aimless learning and learners will easily give up learning due to frustration.

**External factors causing disturbances in Chinese language learning.****(1) Chinese language teachers**

Teachers are the medium of learning for the students, so they need to have a good understanding of the teaching methods and curriculum, and know how to interact with the students, which will affect the effectiveness of the learners' learning. As Konold, Miller, and Konold (2004) suggest, in terms of teacher-student interactions, effective teachers provide high-quality feedback to help students understand the right and wrong answers. For Chinese language teachers, this study looks at how teaching attitudes and teaching methods affect the effectiveness of foreign language learning. Being able to speak Chinese does not necessarily mean that one is able to teach in Chinese, but one needs to be able to translate the knowledge of the language into a way that is easily understood by the students. Therefore, the researcher categorized the attitude of Chinese Language teachers as good teacher-student interactions, teachers' responsibilities, and rich teaching experience, while the teaching methods, teaching materials or equipment, and Chinese language proficiency were categorized as the teaching styles of Chinese language teachers, which were considered as the factors of Chinese language teachers.

**(2) Classroom language environment**

The language environment in the classroom refers to the interaction between students and the learning environment, which affects learning attitudes or learning behaviors. In a general foreign language learning classroom, due to the limited teaching time and the limited concentration of the learners, it is difficult to provide a real language situation, which is limited. Teachers who have a clear plan for teaching activities can not only speed up language input, but also focus on the learners' language mastery (Gao, 2011).

**(3) Extracurricular language environment**

In Vietnam, there is no extracurricular environment for practicing the Chinese language, so many Vietnamese students do not develop the habit of communicating with others in the Chinese language; they are afraid of speaking to others, do not have the confidence to apply what they have learned, and even choose to give up learning. Faced with the limitations of the extracurricular language environment, Vietnamese Chinese language teachers need to be more aware of the different needs and concerns of learners and use more rich and flexible teaching materials to create a learning mode that is more suitable for Vietnamese learners in order to improve the lack of extracurricular environment for practicing Chinese language in Vietnam.

In summary, this section discusses the external factors that cause difficulties in learning Chinese. In addition to classroom teaching (such as the teaching methods used by the instructors, the content of the teaching materials, classroom facilities, peer interaction, and the language environment in the classroom), the extracurricular language environment also affects the effectiveness of learners' Chinese learning. These factors determine whether Vietnamese learners can flexibly use Chinese and communicate confidently with others. Moreover, considering the fundamental characteristics of the Chinese language as a foreign language can cause learning difficulties, which may lead to Vietnamese learners giving up on learning Chinese. Therefore, the researcher includes both basic Chinese language proficiency and the fundamental characteristics of Chinese as external factors contributing to difficulties in learning Chinese. As a result, the external factors identified in this study that cause difficulties in learning Chinese include four aspects: basic Chinese language proficiency (listening, speaking, reading, writing, pronunciation, etc.); fundamental characteristics of Chinese (Chinese characters, grammar, word order, etc.); classroom teaching (teaching methods, teaching materials, classroom facilities, and classroom language environment); and the extracurricular language environment.

### **Internal factors causing disturbances in Chinese language learning.**

#### **(1) Learning strategies**

Learning strategy refers to the learning styles that learners use in order to understand and increase learning effectiveness and other aspects of learning (Lee et al., 2001). Primary strategy: The effects that are stored or directly facilitated by the learner after acquiring the target message, e.g., learning styles, attention, review, recitation, searching for logical relationships of knowledge, categorization, and organization. Support strategy: It improves the state of mind of an individual, which indirectly promotes learning, e.g., eliminating anxiety and stress, adjusting emotions, etc.

Although supportive strategies exert an indirect influence, they should not be overlooked. Excessive stress and anxiety not only impact learning and memory but may also lead to physical and mental health issues, which in turn directly affect learning outcomes. To achieve proficiency in a second language, learners must invest time, effort, and attention, as well as adopt learning strategies that are tailored to their individual needs.

#### **(2) Learning motivation**

According to Chang (2006), the motivation of Chinese language learners can be categorized into two types of motivation. Internal motivation: The willingness to learn generated by the students themselves. Learners with stronger “internal motivation” will persist no matter how many learning difficulties, challenges, and mistakes they encounter. External motivation: This refers to the willingness to learn as a result of the influence of others such as family members and close friends. Learners with strong “external motivation” will often choose to escape from difficulties or setbacks, not dare to take risks, and retreat from difficulties.

In Vietnam society, learning Chinese has become a trend in terms of the demand for foreign languages. There are many purposes for learning Chinese, some of which are due to the interest in understanding Chinese culture and writing, some of which are due to the need to work or study abroad, and some of which are due to the desire to learn one more language. For Vietnamese learners of Chinese, it is important to be clear about their own motivation and purpose for learning Chinese. Those who have a strong “internal motivation” are more willing to learn and are more likely to take the initiative to find solutions when they encounter difficulties and to maintain their learning possibilities.

#### **(3) Learning attitudes**

According to Jin (2002), learning attitudes refer to the attitudes that individuals hold when they are involved in learning things, such as learning methods, motivation, and preparation for examinations. Li (2001) believes that learning attitudes include self-efficacy, utility value, anxiety, interest in learning, etc. Liu (2001) believes that learning attitudes consist of cognition, affective learning attitudes, and intentional learning attitudes (behaviors). Cognition refers to an individual’s beliefs about learning; affection is the reflection of preferences about learning; and intention is the intended or actual action towards a learning goal.

More than half of the students in the Vietnam Chinese Language Centers are adults with strong motivation to learn. However, the influence of learners’ different life situations, educational backgrounds, identities, and many external factors may also affect the learners’ attitudes or cognitive discrepancies toward learning (Huang, 2002).

### **Coping Strategies**

Lazarus and Folkman (1984) categorized the response strategies into three types: (a) Emotion-focused forms of coping: When an individual evaluates that the situation cannot be changed, he or she changes his or her

thoughts or opinions about the situation by adjusting his or her emotional response to the problem and repressing his or her defenses in order to forget the existence of the problem; (b) Problem-focused forms of coping: When an individual assesses that the situation can be changed, he or she uses strategies such as confrontation, overcoming, deflection, or escape, and eliminates external environmental pressures or increases the resources of the self, or changes the internal aspects of his or her own internal mental processes; (c) Mixed problem and emotion-focused coping: seeking social support or resources from relatives, friends, and peers.

However, in Eastern literature, these are categorized into two dimensions: positive and negative coping strategies (You, 2010; Lin, 2009; Chou, 2005). Therefore, summarizing the above literature and based on the theme and purpose of this study, the researcher categorizes the coping strategies that Vietnamese learners engage in to reduce or eliminate the stress, anxiety, and threats they face in learning Chinese into two dimensions: positive and negative coping strategies, and these two dimensions can be further subdivided into psychological and behavioral coping.

#### (1) Positive Coping Strategies

a. In Psychology: Thinking, adjusting one's cognition and emotions, lowering one's self-demands, etc., to reduce stressful emotions or pain.

b. In Behavior: Developing plans and taking actions to overcome difficulties and solve problems, proactively seeking counseling or assistance from family, friends, and teachers, reassessing, changing strategies, and self-improvement.

#### (2) Negative Coping Strategies

a. In Psychology: Refusing to believe that the problem exists, complaining about others, and choosing to give up learning.

b. In Behavior: Venting, choosing to delay and avoid, abusing tobacco, alcohol, and drugs to cover up their pain.

## Research Methodology

### Research Theory Model

Based on the literature review, a theoretical framework was proposed to investigate the predictive power of learning disturbance on coping strategies using learning disturbances as the antecedent variable and coping strategies as the consequent variable. The external factors of learning disturbances are categorized into four levels: basic Chinese language skill, basic Chinese language characteristics, classroom teaching, and extracurricular language environment, while the internal factors of learning distress are categorized into three levels: learning strategies, learning motivation, and learning attitudes. In addition, the positive and negative coping strategies were divided into two levels: psychological coping and behavioral coping.

### Structural Equation Model (SEM)

In this study, Structural Equation Modeling (SEM) was used to analyze the effects of extrinsic and intrinsic factors on psychological and behavioral responses to learning disturbances. Since AMOS software has the ability to integrate with SPSS 21.0 statistical software and its system can be more clearly presented, this study chose to use the AMOS system to verify the direct effect of the theoretical model of learning disturbance on the coping strategies of the learners in the Vietnamese Chinese Language Centers.

According to Chen et al. (2011) and Chiou (2017), the evaluation index of theoretical model can be assessed from the preliminary fit criteria to evaluate whether the theoretical model has detail error, recognition problem, or input error. Overall model fit is used to assess the fit of the entire theoretical model and the observed data, which is equivalent to the external quality. The fit of the internal structure of the model is used to assess the reliability of the observed and potential variables, the significance of the estimated parameters, etc. It is equivalent to the internal quality. The evaluation criteria selected in this study are as follows.

A. Preliminary fit criteria for patterns

1. Cannot have a negative error variance.
2. The error variance shall be of a significant level.
3. The absolute value of the correlation between the estimated parameters should not be too close to 1.
4. The factor load should not be too low or too high, preferably between 0.5 and 0.95.
5. There must be no significant standard errors.

B. Overall model fit indicators

1. Absolute fit indicator

- (1) The chi-square value ( $\chi^2$ ) is not significant.
- (2) The goodness of fit index (GFI) is greater than 0.90.
- (3) The adjusted goodness of fit index (AGFI) is greater than 0.90.
- (4) Asymptotic root mean square error of approximation (RMSEA) is less than 0.08.
- (5) Standardized root mean residual (SRMR) is less than 0.05.

2. Relative fit indicators

- (1) A normal fit index (NFI) greater than 0.90.
- (2) The TLI fitness index (Tucker-Lewis index, also known as NNFI) is greater than 0.90.
- (3) The comparative fit index (CFI) is greater than 0.90.
- (4) The incremental fit index (IFI) is greater than 0.90.

3. Precision fit indicators

- (1) A parsimony normed fit index (PNFI) greater than 0.05.
- (2) Parsimony goodness of fit index (PGFI) greater than 0.05.

C. Fit of the internal structure of the model

1. All estimated parameters are at significant levels.
2. Individual item reliability is above 0.45.
3. The composite reliability of the latent variables is above 0.60.
4. The average variance extracted for the latent variables is above 0.50.

### Sample of Official Questionnaire

The researcher used proportionate stratified random sampling to define the sample size based on the number of students in three branches of the Chinese Centers in Ho Chi Minh City, Vietnam. A total of 880 official questionnaires were sent out, 868 were returned, with a recovery rate of 98.64%. 34 invalid questionnaires were deleted, resulting in 834 valid questionnaires, with a usability rate of 96.08%. Table 2 shows the summary analysis of the basic information of the valid samples of the official questionnaires, which were analyzed in four parts, namely, gender, age, Chinese language class, and status.

Table 2

*Summary Table of Basic Information of the Valid Sample of the Formal Questionnaire Survey (N = 834)*

| Variable        | Category                      | Number of people | Percentage (%) |
|-----------------|-------------------------------|------------------|----------------|
| Gender          | (1) Male                      | 232              | 27.8           |
|                 | (2) Female                    | 602              | 72.2           |
|                 | Total                         | 834              | 100            |
| Age             | (1) Under 17 years of age     | 62               | 7.4            |
|                 | (2) 18-22 years old           | 296              | 35.5           |
|                 | (2) 23-27 years old           | 232              | 27.8           |
|                 | (4) 27 years of age or older  | 244              | 29.3           |
|                 | Total                         | 834              | 100            |
| Chinese classes | (1) Grade 1 (1-3 months)      | 218              | 26.1           |
|                 | (2) Grade 2 (4-6 months)      | 247              | 29.6           |
|                 | (3) Grade 3 (7-9 months)      | 118              | 14.1           |
|                 | (4) Grade 4 (10-12 months)    | 94               | 11.3           |
|                 | (5) Grade 5 (11-15 months)    | 55               | 6.6            |
|                 | (6) Grade 6 (over 16 months)  | 102              | 12.2           |
|                 | Total                         | 834              | 100            |
| Identities      | (1) Students (undergraduates) | 335              | 40.2           |
|                 | (2) Commuters                 | 499              | 59.8           |
|                 | Total                         | 834              | 100            |

### Research Findings

#### Structural Equation Model Diagram of Chinese Language Learning Disturbances and Coping Strategies for Students in Vietnam Chinese Language Centers

The structural equation model of this study is presented and is described as follows: External = external factors, Skill = basic Chinese language skill, Chinese = basic Chinese language characteristics, Classroom = classroom teaching, Outside = extracurricular language environment, Internal = internal factors, Tactics = learning strategies, Motivation = learning motivation, Attitude = learning attitude, Positive = positive, Negative = negative, Psy Pos = positive psychological, Beh Pos = positive behavior, Psy Neg = negative psychological, Beh Neg = negative behavior.

#### Learning Disturbances and Coping Strategies of Students in Vietnamese Chinese Language Centers Evaluation of the Basic Fit of the Structural Equation Model (SEM)

According to Chen et al. (2011) and Chiou (2017), the evaluation indexes of the theoretical schema can be assessed from the preliminary fit criteria to see whether the theoretical schema has any detail error, recognition problem, or input error. This study investigates the normative assignment of the structural model of learning disturbance and coping strategies for students. Firstly, a simultaneous examination of the model's preliminary fit criteria was carried out, in which the absolute value of bias was less than three and the absolute value of kurtosis was less than eight in the preliminary fit criteria, and then, if the Multivariate value was less than  $p(p+2)$  (with  $p$  being the number of observed variables), the model was considered to be the normative assignment. As shown

in the table below, although “classroom teaching” and “learning attitude” did not reach the criterion of kurtosis (with values of 10.92 and 9.22, respectively), “negative psychological” did not reach the criterion of bias and kurtosis (with values of 3.33 and 16.73, respectively), and “negative behavioral” did not reach the criterion of bias and kurtosis (with values of 3.82 and 13.18, respectively). However, the Multivariate value of 95.31 is less than  $11(11+2)$  for 143, which means that the Chinese language learning disturbances and coping strategies of students in the Vietnam Chinese Language Centers are still considered to be in line with the normative distribution.

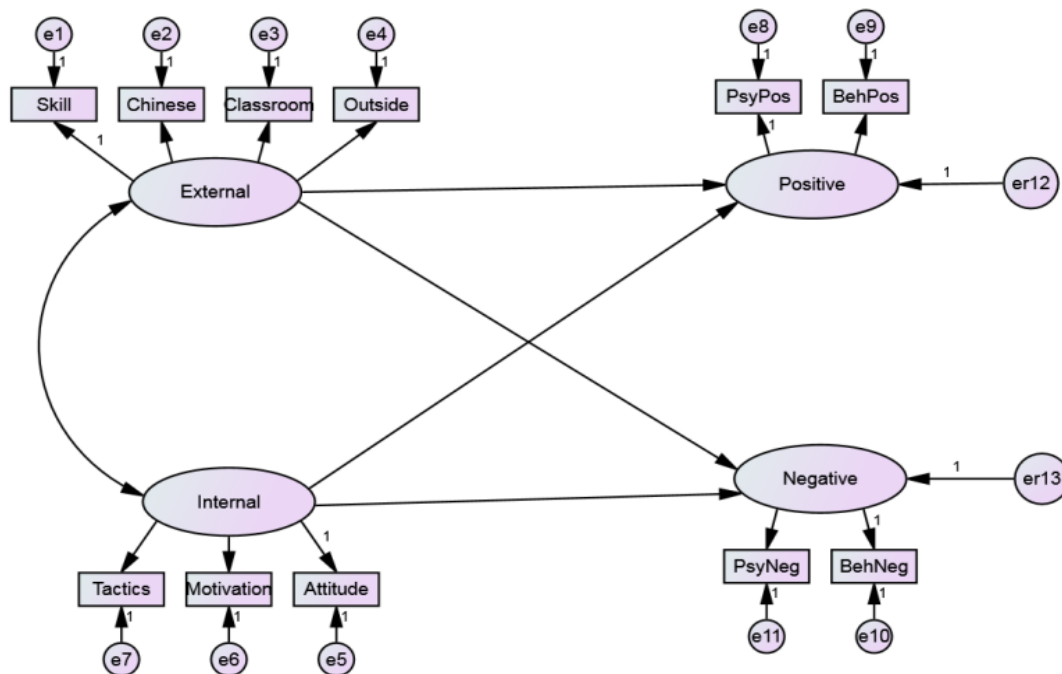


Figure 1. Structural equation model of learning disturbances and coping strategies of students in Vietnamese Chinese Language Centers.

Table 3

Summary Table of Normal Distribution of the Structural Equation Model of Student Learning Disturbances and Coping Strategies in Vietnamese Chinese Language Centers ( $N = 834$ )

| Construct        | Dimension                            | Skewness | Kurtosis |
|------------------|--------------------------------------|----------|----------|
| External factor  | Basic Chinese Language Skills        | 0.47     | -0.21    |
|                  | Basic Chinese Characteristics        | 0.21     | -0.32    |
|                  | Classroom Teaching                   | 2.88     | 10.92    |
|                  | Extracurricular Language Environment | 0.41     | -0.72    |
| Internal factors | Learning Strategies                  | 1.85     | 4.25     |
|                  | Learning Motivation                  | 0.35     | -0.50    |
|                  | Learning Attitude                    | 2.52     | 9.22     |
| Positive         | Psychological                        | 0.28     | -0.13    |
|                  | Behavioral Respons                   | 0.48     | 0.04     |
| Negative         | Psychological                        | 3.33     | 16.73    |
|                  | Behavioral                           | 3.82     | 13.18    |
| Multivariate     | 95.31                                |          |          |
| $p(p+2)$         | 143                                  |          |          |

Based on the empirical research on learning disturbances and coping strategies of Vietnam Chinese Language Centers, this study constructed a model of learning disturbance and coping strategies of Vietnamese Chinese Language students, which was initially composed of four latent factors, namely external factors, internal factors, positive and negative, with 11 indicators and 13 measurement errors, as shown in the estimation of standardized parameters in Figure 2 (before modification).

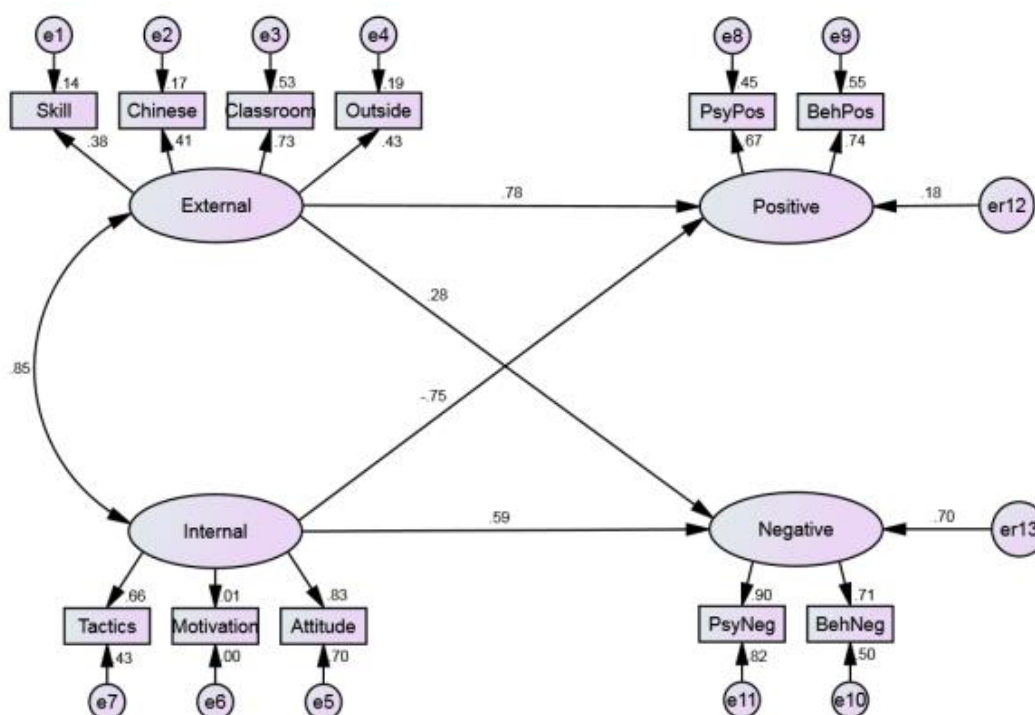


Figure 2. Estimation of standardized parameters of the structural equation model of learning disturbances and coping strategies in Vietnamese Chinese Language Centers (before modification).

According to the suggestion of Chen et al. (2011) and Chiou (2017), the error variances in the basic fitness indicators of the model must all be at a significant level, and the analysis results revealed that the factor loadings of “Internal Factors → Learning Motivation” were 0.01, with a  $p$ -value of 0.75, which was not at a significant level, and then, the factor loadings of “External Factors → Basic Chinese Language Skills” were 0.32, which was not at a level of 0.50, and presented the lowest estimation parameter of these two. It is suggested that these two parameters should be deleted.

At the same time, in order to optimize the model, according to Chen and Wang (2010), the model should be modified with reference to the model modification index (MI) based on relevant theoretical foundations and empirical studies. After the deletion of the observations of learning motivation and basic knowledge of Chinese language, the number of potential variables in the model of students’ learning distress and coping strategies in Vietnam Chinese Language Centers remained at four, but the number of indicators for each of the potential factors was revised to nine, and 11 measurement errors were included.

The revised results are shown in Figure 4 (after correction). With the exception of “basic Chinese language characteristics” and “extracurricular language environment” which were estimated to be 0.36 and 0.41 in that

order, the rest of the standardized parameter estimates ranged from 0.56 to 0.90, and conformed to the criterion from 0.50 to 0.95, and the standard error (SE) values ranged from 0.05 to 0.43, with  $p$ -values less than 0.001, which were of a significant level, with no negative variations of the error, as suggested by Chen et al. (2011) and

Chiou (2017), who suggest that the structural equation model of learning disturbance and coping strategies for students in Vietnam Chinese Language Centers constructed in this study meets the basic fitness assessment.

Table 4

*Summary Table of Basic Fitness Criteria for the Structural Equation Model of Learning Disturbances and Coping Strategies (N = 834) Modified*

| Parameters                                                    | Non-standardized parameter estimates | Estimated values of standardized parameters | Standard error (SE) | Decision value (CR) | $p$ -value |
|---------------------------------------------------------------|--------------------------------------|---------------------------------------------|---------------------|---------------------|------------|
| External factors → Basic Chinese Characteristics              | 1.00                                 | 0.36                                        | --                  | --                  |            |
| External factors → Classroom teaching                         | 1.25                                 | 0.74                                        | 0.14                | 9.16                | ***        |
| External factors → Language environment outside the classroom | 1.53                                 | 0.41                                        | 0.20                | 7.51                | ***        |
| Internal factors → Learning Strategies                        | 1.00                                 | 0.66                                        | --                  | --                  |            |
| Internal factors → Attitude towards learning                  | 0.99                                 | 0.83                                        | 0.06                | 18.19               | ***        |
| Positive → Psychological                                      | 1.00                                 | 0.56                                        | --                  | --                  |            |
| Positive → Behavioral response                                | 1.52                                 | 0.89                                        | 0.43                | 3.54                | ***        |
| Negativity → Psychological response                           | 1.00                                 | 0.90                                        | --                  | --                  |            |
| Negative → Behavioral response                                | 0.74                                 | 0.71                                        | 0.05                | 19.81               | ***        |

\*\*\*  $p < 0.001$ .

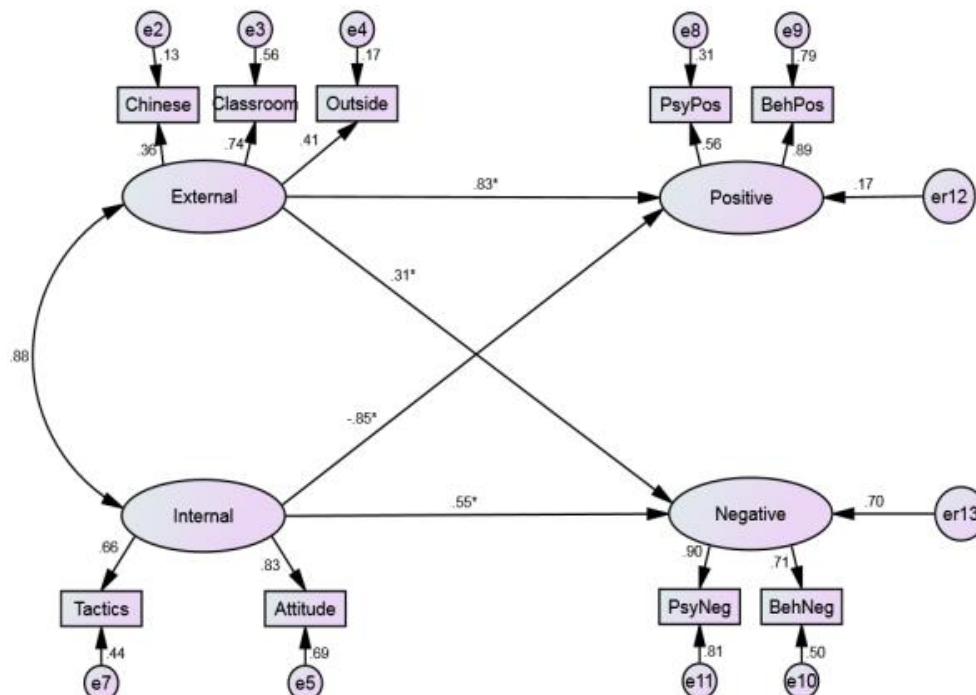


Figure 3. Estimation of standardized parameters of the structural equation model of learning disturbance and coping strategies for Vietnam Chinese Language students (after modification).

### Evaluation of the Overall Suitability of the Structural Equation Model of Student Learning Disturbances and Coping Strategies

According to Chen et al. (2011) and Chiou (2017), the overall model fit is used to assess the fit of the entire theoretical model and observations, which is equivalent to the external quality. For the evaluation of overall model fit, absolute fit, value-added fit, and simple fit tests are suggested. The results of this study showed that the chi-square value of  $\chi^2$  was 130.52 and the  $p$ -value was less than 0.001 for absolute fitness.

According to Chen et al. (2011), the chi-square value of  $\chi^2$  is often affected by the sample size, i.e., when the number of samples is more than 400, almost all patterns may be rejected. Therefore, the official sample size of this study was 834, and in addition to the chi-square value test, it was necessary to refer to other fitness indicators simultaneously. As shown in Table 5, in general, the model of learning disturbance and coping strategies for Vietnam Chinese Language students constructed in this study meets the overall fitness assessment.

Table 5

*Summary Table of Overall Fit of the Structural Equation Model of Student Learning Disturbances and Coping Strategies (N = 834) Modified*

| Evaluation items                                              | Analyzed results             | Evaluation results |
|---------------------------------------------------------------|------------------------------|--------------------|
| <b>Absolute Fit</b>                                           |                              |                    |
| Whether the chi-square value ( $\chi^2$ ) is not significant? | $\chi^2 = 130.52, p = 0.000$ | no                 |
| Whether the GFI Index is greater than 0.90?                   | GFI = 0.97                   | yes                |
| Whether the AGFI Index is greater than 0.90?                  | AGFI = 0.93                  | yes                |
| Is the RMSEA Index less than 0.08?                            | RMSEA = 0.07                 | yes                |
| Is the SRMR index less than 0.05?                             | SRMR = 0.04                  | yes                |
| <b>Value added suitability</b>                                |                              |                    |
| Is the NFI Index greater than 0.90?                           | NFI = 0.94                   | yes                |
| Whether the TLI Index is greater than 0.90?                   | TLI = 0.92                   | yes                |
| Is the CFI Index greater than 0.90?                           | CFI = 0.95                   | yes                |
| Whether the IFI Index is greater than 0.90?                   | IFI = 0.95                   | yes                |
| <b>Simplicity of fit</b>                                      |                              |                    |
| Is the PNFI Index greater than 0.50?                          | PNFI = 0.58                  | yes                |
| Is the PCFI Index greater than 0.50?                          | PCFI = 0.58                  | yes                |
| Is the CN (Critical N) index greater than 200?                | CN = 217                     | yes                |

### Intrinsic Structural Fitness Assessment of the Structural Equation Model of Student Learning Disturbances and Coping Strategies in Vietnamese Chinese Language Centers

Adopting the recommendations of Chen et al. (2011) and Chiou (2017), the results of this study showed that the reliabilities of the items of the indicators for this study, except for the items of basic characteristics of the Chinese language, extracurricular language environment, learning strategies, and positive psychological responses, were not greater than the 0.45 scale, and the rest were between 0.50 and 0.81. The reliability of the remaining items ranged from 0.50 to 0.81, meeting the standard of 0.45 or above for each item. Regarding the reliability of the components of the latent variables, except for the external factors that did not meet the criterion of 0.60 or above, the index of the internal factors was 0.71, the index of positive positivity was 0.70, and the index of negative negativity was 0.79, which were all in line with the criterion of 0.60 or above. As for the latent

variables, except for the extrinsic factors, which did not meet the criterion of 0.50 or above, the intrinsic factor index of 0.56, the positive index of 0.55, and the negative index of 0.66 met the criterion of 0.50 or above.

Table 6

*Structural Equation Model of Student Learning Disturbances and Coping Strategies in Vietnamese Chinese Language Centers Within the Structural Fitness Summary Table (N = 834) Modified*

| Project                              | Individual reliability of indicators | Compositional reliability of potential variables | Average variation extraction of potential variables |
|--------------------------------------|--------------------------------------|--------------------------------------------------|-----------------------------------------------------|
| External factor                      |                                      | 0.51                                             | 0.28                                                |
| Basic Chinese characteristics        | 0.13                                 |                                                  |                                                     |
| Classroom teaching                   | 0.55                                 |                                                  |                                                     |
| Extracurricular language environment | 0.17                                 |                                                  |                                                     |
| Internal factors                     |                                      | 0.71                                             | 0.56                                                |
| Learning strategies                  | 0.44                                 |                                                  |                                                     |
| Learning attitude                    | 0.69                                 |                                                  |                                                     |
| Positive                             |                                      | 0.70                                             | 0.55                                                |
| Psychological                        | 0.31                                 |                                                  |                                                     |
| Behavioral                           | 0.79                                 |                                                  |                                                     |
| Negative                             |                                      | 0.79                                             | 0.66                                                |
| Psychological                        | 0.81                                 |                                                  |                                                     |
| Behavioral                           | 0.50                                 |                                                  |                                                     |

Overall, the evaluation results generally meet the evaluation criteria, therefore, the model of learning disturbance and coping strategies for students in Vietnamese Chinese Language Centers constructed in this study should have acceptable intrinsic qualities that can be used to explain the observational data.

### **The Effectiveness of the Model of Learning Disturbances and Coping Strategies Among Potential Variables for Students in Vietnamese Chinese Language Center**

The purpose of this paragraph is to test the theoretical model of learning disturbance and coping strategies of students in Vietnamese Chinese Language Centers, in order to understand the predictions among the potential variables of this study. As shown in Figure 3, the path coefficients of external factors on positive are 0.83 ( $t = 2.24, p < 0.05$ ), and external factors on negative are 0.31 ( $t = 2.66, p < 0.05$ ), and external factors have a direct effect on both of them to a significant extent, with external factors having a higher direct effect on positive and a lower direct effect on negative. The direct effect of the externalities on the positive is higher and the direct effect of the externalities on the negative is lower. Furthermore, the path coefficients of internal factors were -0.85 ( $t = -2.35, p < 0.05$ ) for positive and 0.55 ( $t = 4.88, p < 0.05$ ) for negative, and the internal factors had a direct effect on both of them to a significant level, where the internal factors had a positive direct effect on negative, and the internal factors had a negative direct effect on positive. The direct effect of internal factors on negativity is positive and the direct effect of internal factors on positivity is negative.

## **Conclusions and Recommendations**

### **Conclusion**

In this study, a structural equation model was used to examine the direct effect of learning disturbance and coping strategies among Vietnamese Chinese Language Centers students. The modified parameter estimates indicated that Vietnamese Chinese Language Centers students would adopt more positive coping strategies when

they face higher levels of external factors of learning disturbance, which is also in line with the research hypothesis. Therefore, the researcher hypothesized that the reason for this is that the higher the level of extrinsic learning disturbances faced by the Vietnamese students, the more positive coping strategies they would adopt to solve the learning disturbances they encountered, which in turn would lead to better academic performance and a higher sense of achievement in learning.

Furthermore, the negative direct effect of the intrinsic factors of learning distress on the positive coping strategies is also inconsistent with the ideal result, which suggests that Vietnamese Chinese Language Centers students would choose to adopt more negative coping strategies when facing intrinsic learning distress. From this, the researcher deduces that Vietnamese Chinese Language Centers students facing internal learning disturbances may be more likely to adopt negative coping strategies because they do not know how to reduce their learning disturbances. In other words, if Vietnamese Chinese Language Centers students can appropriately utilize positive coping strategies, it is hypothesized that the internal factors may reduce their learning disturbance, which is an area that needs to be explored in the future.

### **Recommendations**

As the saying goes, “resting is the best way to take a longer walk”; therefore, appropriate relaxation can also help you perform better in your Chinese language studies. If you encounter problems that you do not understand, you should not only take the initiative to ask your teachers and classmates questions, but also take the initiative to check other learning resources such as materials and textbooks. In Vietnam, there are many channels and resources for learning Chinese, and learners can also use multimedia resources of their own interest to learn Chinese language knowledge that is not provided in textbooks.

In the process of teaching, Vietnamese Chinese Language Centers teachers must provide timely encouragement and counseling so that they will not give up on their learning path, and find and design different teaching resources or methods. In addition, as Vietnamese Chinese Language Centers’ students are the main learners, it is worthwhile to think about how to help Vietnamese Chinese Language Centers learners to apply appropriate positive coping strategies to enhance their learning effectiveness and to reduce their difficulties in learning Chinese.

For future research, the researcher offers the following recommendations and reflections.

(a) Research variables: Future studies may add other variables for in-depth examination, such as educational attainment, family factors, school size, school location, and other research variables.

(b) Research method: This study used quantitative research as the research method, and the sampling method was a questionnaire survey. Although a large amount of research data could be obtained quickly, it did not take into account factors such as the subjects’ time, emotions, and whether or not they understood the topic of this study, which affected their responses. In the follow-up study, interviews and observations can be added to better understand the reasons why Vietnamese Chinese Language Centers learners tend to adopt certain coping strategies when facing learning disturbances.

(c) Research instrument: The instrument of this study is the “Questionnaire on Learning Disturbances and Coping Strategies of Vietnamese Chinese Language Centers Students”. In the analysis of the structural equation model, the content of the questions on basic Chinese language knowledge and learning motivation showed poor indicators, and the subsequent study can explore the compilation of the scale questions on these two dimensions, so as to make the scale questions more precise and more appropriate to reflect and measure the concepts of these

two dimensions, and then I believe that it is possible to grasp more complete and detailed information. In this way, it is believed that we will be able to obtain more complete and detailed information, which will help us to analyze and make inferences on the results of the study.

(d) Research framework: Based on the literature, this study investigated the direct effect of learning disturbance on the coping strategies, and the subsequent study could investigate the predictive results of the coping strategies adopted by the students in the Vietnamese Chinses Language Centers on the learning disturbance; in other words, it would be useful to investigate whether the Vietnamese Chinese Language Centers learners can reduce the disturbance of learning Chinese by adopting more positive coping strategies, and whether more negative coping strategies can cause more disturbance in learning Chinese, so that the results of this study could be more valuable. It is believed that the results of such a study would be more valuable. In this way, it would be possible to understand more about learning disturbance and coping strategies, and to see whether they can predict each other by using cross-lagged analyses.

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