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RELATIVE IMPORTANCE OF ANXIETY AND MOTIVATIONAL VARIABLES IN
PREDICTING LANGUAGE ACHIEVEMENT FOR COLLEGE LEARNERS OF
CHINESE

A Dissertation Presented

to

The Faculty of the School of Education
Learning and Instruction Department

In Partial Fulfillment
of the Requirements for the Degree
Doctor of Education

by
Qi Wang
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THE UNIVERSITY OF SAN FRANCISCO

Dissertation Abstract

Relative Importance of Anxiety and Motivational Variables in Predicting Language
Achievement for College Learners of Chinese

The growing worldwide enthusiasm in learning Chinese calls for more research
on learner characteristics in Chinese classrooms to better inform teaching practice.
Language anxiety, which falls under the umbrella of learner's affect, is considered an
important affective aspect that negatively influences language learning and acquisition.
As research on language anxiety mainly focused on the learning of Western languages,
this study constitutes an initial attempt to investigate anxiety in the learning of Chinese
through the testing of a structural model. The purpose of the study was to examine the
relative importance of language anxiety in predicting Chinese achievement when
motivation, integrativeness, and attitudes toward the learning situation were controlled.

The study took place in a Southwestern university in China. Adopting a
correlational design, this study measured 14 variables from which five constructs were
formed—anxiety, motivation, integrativeness, attitudes toward learning situation, and
Chinese achievement. The anxiety measures were from the *Chinese language learning
anxiety scale*. The motivational measures were adapted from the international *attitude
and motivation test battery*. The achievement measures included a HSK listening test, a
HSK reading test, and students' final course grades. A total of 223 students from the
International College participated in this study. Students completed a written survey
containing all the anxiety and motivational measures. Then they took the HSK listening

and reading test. Students' course grades in the Comprehensive Chinese course were collected at the end of the spring semester.

The findings of structural equation modeling suggested that language anxiety negatively predicted Chinese achievement when motivation and attitudes toward the learning situation were controlled. Students' attitudes toward the learning situation predicted their motivation, but motivation did not predict Chinese achievement. The follow-up analysis showed that motivation predicted student's course grades but not their performance on the HSK tests. It can be concluded that language anxiety had a negative effect on language achievement for international learners of Chinese. Teachers were recommended to have an awareness of the nervousness and discomfort experienced by their students in language classrooms and to take measures to create a low-anxiety learning environment.

This dissertation, written under the direction of the candidate's dissertation committee and approved by the members of the committee, has been presented to and accepted by the Faculty of the School of Education in partial fulfillment of the requirements for the degree of Doctor of Education. The content and research methodologies presented in this work represent the work of the candidate alone.

| Qi Wang | December 12, 2017 |
| Candidate | Date |

Dissertation Committee

| Robert Burns | December 12, 2017 |
| Chairperson | |

| Kevin Oh | December 12, 2017 |

| Helen Maniates | December 12, 2017 |

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CHAPTER I

STATEMENT OF THE PROBLEM

Language learning can be a stressful experience for many learners (Han, 2014; Horwitz, Horwitz, & Cope, 1986; Kim, 2000; Trang, Baldauf Jr, & Moni, 2013). It is common to observe students in language classrooms who are too anxious to perform successfully. They may squirm in their seats, trying to avoid being called by the teacher. They may experience "freezing up" when answering questions. They may find it very difficult to discriminate sounds and structures in listening and reading comprehension tasks. They may claim that they know the correct answer but put down the wrong one due to nervousness. These behaviors in language learning are considered manifestations of language anxiety, which is defined as "the feeling of tension and apprehension specifically associated with second language context" (MacIntyre & Gardner, 1994, p.284).

The number of anxious learners in the language classroom is significant. Research shows that about one third to two thirds of the learners in foreign language classrooms who have reported experiencing anxiety in language learning (Han, 2014; Kim, 2000; Trang, Baldauf Jr, & Moni, 2013) and that the level of anxiety reported has ranged from moderate to high (Bekleyen, 2009; Chang, 2008; Wang, 2010). Although language educators have been striving to create a learner-centered, low-anxiety classroom environment (Young, 1991), this goal is far from being achieved in reality. In fact, learners today still experience debilitating anxiety in language classes. Some teachers may have inadvertently fostered situational anxiety through inappropriate teaching methodology (Kim, 2000; Trang et al., 2013; Vogely, 1998).

The prevalence of anxiety in today's language classrooms may stem from a lack of clear understanding of this phenomenon. Despite the fact that abundant studies have suggested an adverse relationship between language anxiety and language achievement (Awan, Azher, Anwar, & Naz, 2010; Gardner & MacIntyre, 1993; Gregersen, 2003; Horwitz, 1986, Salehi & Marefat, 2014; Tanielian, 2014; Zhao & Whitchurch, 2011). These studies, however, have not addressed how anxiety takes effect when other major individual difference variables are considered. It is possible, for example, language anxiety no longer contributes to the variation in language achievement when motivation is accounted for.

There are different definitions of "affect". The "affective" category can be as narrow as including only emotions (Woodrow, 2006) and as broad as representing anything that impinges on language learning that is unrelated to cognition (Krashen, 1981, 1982). In the current study, affective variables are viewed as representing "emotionally relevant characteristics of the individual that influence how he or she will respond to any situation" (Gardner & Macintyre, 1993a, p.1). Anxiety, motivation, attitude, interest, orientations, and self-perceptions are regarded as important affective variables that contribute to language learning success. Variables such as introversion, extroversion, perfectionism, and willingness to communicate, despite of their importance in language learning, fall under the umbrella of personality, a construct beyond the scope of the present study.

Gardner's (1985, 2006, 2010) socio-educational model of second language acquisition proposed four affective constructs that influence the process and outcomes of second language learning and acquisition. They are language anxiety, motivation,

integrativeness, and attitudes toward the learning situation. Each construct encompasses several indicator variables. For instance, motivation is indicated by the learner's motivation intensity, desire to learn, and attitudes toward learning. Integrativeness is signified by learners' integrative orientation, interest in foreign languages, and attitudes toward the native speakers of the target language. Similarly, learners' attitudes toward the learning situation are indicated by their evaluations of the teacher and the language course. All four constructs have been shown to be statistically significant correlates of language achievement (Gardner, 2006; Hernández, 2008; Kiany & Shayestefar, 2011; Masgoret & Gardner, 2003; Sultan, 2012; Vahdany, Sabouri, & Ghafarnian, 2015) and at the same time they correlated with each other, jointly shaping the learners' affective profile in language learning. For example, motivation was found to be positively correlated with attitudes toward the learning situation (Jain & Sidhu, 2013), suggesting that students with higher motivation tended to have more positive attitudes in language learning. Language anxiety was found to be negatively associated with many affective variables such as motivation (Liu & Cheng, 2014; Liu & Huang, 2011), integrativeness, and attitude (Huang, Eslami, & Hu, 2010; Wei, 2007). That is, students with higher language anxiety tended to have lower motivation to learn and less favorable evaluation of the teacher and the course. Anxious students also tended to be less willing to integrate into other linguistic communities.

Unlike motivation that is intensively investigated, language anxiety remains a marginal construct with undetermined effects on language achievement. Only a few studies have been undertaken to investigate the importance of language anxiety in relation to other affective variables in predicting language achievement (Alkhateeb, 2014;

Gardner and Bernaus, 2010; Hsieh, 2008, Woodrow, 2011, Yu & Watkins, 2008), and conflicting results have been reported. While most studies suggested that language anxiety could predict language achievement when controlling for motivation, orientation, interest, attitude, and self-perceptions, Yu and Watkins (2008), in their investigation of affective predictors of Chinese achievement, found no influence of language anxiety, motivation, or attitude when integrativeness is considered. Given that Yu and Watkins (2008) is the only study on learners of Chinese, more research is needed before a definitive conclusion can be drawn regarding the role of language anxiety in Chinese learning.

Purpose of the Study

The purpose of the study was to investigate the relative importance of language anxiety in predicting Chinese achievement when other affective variables are controlled. Grounded in Gardner's (1985, 2006, 2010) socio-educational model of second language acquisition, the affective factors investigated included language anxiety, motivation, integrativeness, and attitudes toward the learning situation. Using a sample of college learners of Chinese in a university in China, the present study examined the anxiety profiles of students at different levels of instruction (*i.e.* elementary, intermediate, and advanced) and how language anxiety contributed to students' language achievement when course level, motivation, integrativeness, and attitude are accounted for.

The study aimed to extend previous research on Chinese language anxiety by using multiple measures of language achievement including a listening proficiency test, a reading proficiency tests, and students' course grades. Furthermore, in contrast with Yu

and Watkin's (2008) study that combined students from different course levels, the study examined the effects of course level on anxiety and other motivational variables.

Significance of the Study

The present study has both theoretical and practical importance. First, grounded in Gardner's (1985, 2006, 2010) socio-educational model, this study explored the interrelations among anxiety, motivation, integrativeness, and attitudes toward the learning situation as well as their simultaneous influence on Chinese achievement. The findings provided empirical evidence for Gardner's hypothesis concerning the functionality of major affective factors in second language learning.

Second, the study contributed to the knowledge base on the effects of language anxiety by focusing on a less-commonly taught language. The study extended previous research on Chinese anxiety by taking into consideration students' course levels and by using multiple measures of language achievement.

Third, this study provided insightful information for the training of language teachers. Modern language pedagogy calls for a student-centered approach that emphasizes the understanding of learners' individual differences in language learning. This study aimed to enhance teachers' understanding of language anxiety and provided empirical evidence for the relationship between anxiety and language achievement for the learning of Chinese.

In addition, findings of this study shed light on the functionality of major affective constructs during second language learning. Knowing the relative importance of anxiety and other major affective aspects in language learning, teachers would better prioritize in

curriculum planning, devoting more time and resources to the aspects that are crucial and amendable to instructional intervention.

Theoretical Rationale

Gardner's (1979, 1985, 2006, 2010) socio-educational model of second language acquisition constitutes the theoretical foundation of this study. The model examined the social and psychological factors involved in second language acquisition and the interrelations among these factors. The major assumption of the socio-educational model is that second language learning, unlike the learning of other school subjects, involves a process of incorporating the behavior patterns of other cultural groups into one's own identity. The extent to which the individual is willing to incorporate the elements of other cultures is important to their second language learning, as those who are more open to other cultural community will be more likely to achieve the final stage of second language learning, that is, the stage of language acquisition. Equally important is the learners' attitudes toward the learning situation. The educational contexts, as broad as government policies and as specific as classroom teaching practice, can influence learners' motivation to learn and thus lead to variation in their achievement. Given that students in the same classroom could display differences in language achievement, Gardner proposed that it is the students' attitudes toward the learning situation rather than the real learning environment that have significantly affected their language learning success.

Gardner's (1979) model identified four classes of variables that are critical in the process of second language acquisition: social milieu, individual differences, second language acquisition contexts, and outcomes. The social milieu refers to the social and

educational context in which language learning takes place. It was proposed that the

social milieu could influence the individual's ability and affect in language learning.

Although all individual difference variables play equally important role in the formal

learning context, motivation and anxiety are viewed as more important in the informal

context where language learning is incidental and voluntary. Furthermore, the language

learning experience in formal and informal contexts not only produces the language skills

but also generates motivation and attitudes toward future language learning. For example,

motivation and anxiety that influence language learning could themselves be influenced

by the act of language learning.

Gardner's (1985, 2006, 2010) model further introduced three affective constructs:

integrativeness, attitudes toward the learning situation, and instrumentality.

Integrativeness reflects the learners' willingness to communicate with and adopt the

behavior patterns of people in other linguistic communities. Attitudes toward the learning

situation, in school learning, refers to learners' attitudes toward the teacher, the learning

materials, the class activities, and so forth. Instrumentality refers to the instrumental

reasons for learning a second language. Figure 1 presents a schematic representation of

Gardner's (2006) hypothesis regarding the relationship among major affective factors in

language learning. It was hypothesized that integrativeness and attitudes toward the

learning situation would have a direct effect on motivation, which in turn influences

language achievement. Instrumentality could support motivation, but the relationship is

inconsistent, as represented by a dotted line between instrumentality and motivation.

Finally, Language anxiety develops because of the experiences in the language classroom

and it has direct effects on subsequent language learning and achievement. This is

represented by one arrow pointed from anxiety to achievement.
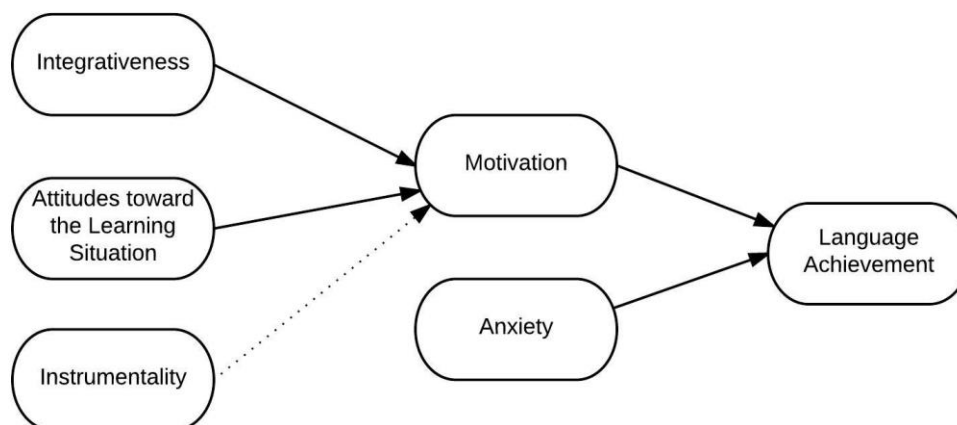
Figure 1. A schematic representation of the relationships among integrativness, attitude,

motivation, anxiety, and achievement

Gardner's (1979, 1985, 2006) socio-educational model provides a theoretical

framework for the examination of affective variables in language learning. Five higher-

order affective constructs were identified as having direct or indirect effects on language

achievement. They are integrativeness, attitudes toward the learning situation,

instrumentality, motivation, and anxiety. The present study will not include

instrumentality due to the weak reliability of the instrumentality measure (Gardner, 2010;

Hiseh, 2008; Masgoret & Gardner, 2003; Yu& Downing, 2011) and the inconsistent

findings regarding its relationship with language achievement (Hernández, 2008; Sultan

& Hussain, 2010). The socio-educational model also provides support for the relationship

between affective factors and language achievement. For example, motivation is

positively related to language achievement while anxiety is negatively associated with language learning and performance.

Background and Need

Over the past twenty years, the number of students enrolled in postsecondary-level Chinese language courses in the United States has increased from 19,427 in 1990 to 61,055 in fall 2013. The institutions reporting enrollments in Chinese has doubled from 413 in 1990 to 866 in fall 2013 (MLA, 2015). In addition to regular Chinese language courses, there is also an increasing number of government funded programs over the past ten years. In 2006, for example, the Department of State initiated the Chinese Flagship Program that offers both intensive language training and overseas internship to learners of Chinese in 12 universities across the United Sates. In 2007, the California State University System launched the Strategic Language Initiative Program that offers both summer language immersion and one-on-one tutoring to college students with intermediate-level Chinese language proficiency. Aside from the programs for college students, there are also federally funded Chinese language programs specially designed for military personnel, such as the intensive Chinese programs offered by the Department of Defense.

The global demand for Chinese teaching services is rising dramatically. By the end of 2015, the number of Confucius Institutes, a non-profit organization affiliated with Mistry of Education of the People's Republic of China, has been increased to 500, providing Chinese language and culture courses to college students in 125 countries (Office of Chinese Language Council International, 2016). Meanwhile, the number of

international students in higher education in China has reached 397,635 in 2015, a 12%
increase from the number in 2014 (Chai, 2016).

Although learners of Chinese are steadily increasing in postsecondary institutions
worldwide, the dropout rate in advanced Chinese courses remains high. For instance, a
comparison of the undergraduate enrollment between introductory and advanced Chinese
courses across more than 800 institutions in 2013 showed that only 21.9% of the students
enrolled in introductory Chinese courses continued in advanced level Chinese courses
(MLA, 2015). Among the possible causes of student dropout, language anxiety is a
prominent factor associated with decreased motivation and the decision to discontinue
language learning (Bailey, Onwuegbuzie, & Daley, 2003; Liu, 2012; Liu & Cheng, 2014;
Saito-Abbott & Samimy, 1997). Horwitz et al. (1986) discussed the ego-threatening
nature of second language learning and maintained that second language learning creates
a discrepancy between the learners' genuine self and the self expressed through a second
language. Due to insufficient language skills, the learners' self-image as effective
communicators are frequently challenged in language class, which may produce
considerable amount of anxiety not found in the learning of other subjects such as
mathematics and science. Research has shown that highly anxious learners tend to have
low motivation to learn (Liu, 2012; Liu & Cheng, 2014). Moreover, in an investigation of
the factors influencing the attrition of learners of Japanese, Saito-Abbott and Samimy
(1997) found that for intermediate-level learners, final grades, motivation, and Japanese
speaking anxiety differentiated learners who continued their Japanese study and those
who did not. Similarly, Bailey, et al. (2003) found that college students who dropped out
of Spanish, German, or French courses tended to report a higher level of foreign language

anxiety than those who did not drop out, with a moderate-to-large effect size according to Cohen's criterium (Cohen, 1988).

Like learners of other languages, learners of Chinese may experience considerable anxiety in their learning. In a study of American students learning Chinese in China, for instance, Le (2004) found that the learners were highly motivated but highly anxious in Chinese learning. Zhao and Whitchurch (2011) studied a sample of 122 college students learning Chinese in the U.S. and found that anxiety was negatively correlated with students' Chinese performance (r= -.30). The follow-up interview with 24 students showed that anxiety existed in all four skill modalities including speaking, listening, reading, and writing.

While language teachers have long been aware of the discomfort and nervousness experienced by some of their students, they have few opportunities to gain an in-depth understanding of language anxiety. A review of the past three years' conference programs of the Chinese Language Teachers Association, for example, reveals only two presentations on foreign language anxiety out of approximately 500 presentations. Most presentations focused on pedagogy, curriculum design, and technology-enhanced teaching practice. Furthermore, there is no workshop that offered information on learners' anxiety or on other affective factors that are critical to language learners' success. To help reduce students' attrition and increase learners' language performance and motivation, it is critical for language teachers to identify anxious learners in their classroom, to understand the influence of anxiety on language learning, and to take effective measures to create a low-anxiety learning environment.

Relationship between anxiety and language achievement

The phenomenon of language anxiety has garnered the attention of research community since the 1970s. Due to the inconsistency in the definition and measurement of the anxiety construct, early research on language anxiety has produced mixed results regarding the effects of anxiety on language learning and achievement (Scovel, 1978). In the late 1980s, a number of researchers, such as Horwitz et al. (1986) and MacIntyre and Gardner (1989), started to conceptualize language anxiety as a situation-specific, trait-like anxiety that is distinctive to the foreign or second language learning context. Since then, research using anxiety measures specific to the language learning context has generally reported adverse effects of anxiety on language learning and achievement.

With regard to the cognitive effects, anxiety was found to negatively influence students' task performance at the input, processing, and output stage of French learning (MacIntyre & Gardner, 1994). Chen and Chang (2009) investigated cognitive load of the college learners of English in Taiwan and found a positive relationship between anxiety and cognitive load ($r=.36$), suggesting that students with higher foreign-language anxiety tend to have a higher cognitive load in working memory during listening. In terms of academic effects, a number of studies have suggested a negative relationship between language anxiety and achievement measures across languages and social-educational contexts (Aida, 1994; Awan, Azher, Anwar, & Naz, 2010; Gardner, 2006, 2012; Gardner & MacIntyre, 1993; Horwitz, 1986; Salehi & Marefat, 2014; Zhao & Whitchurch, 2011). For example, Zhao and Whitchurch (2011), in their study of college learners enrolled in elementary and intermediate Chinese courses in an American university, found a negative correlation between language anxiety and students' final course grades ($r= -.30$). The

finding suggested that highly anxious learners of Chinese tended to have lower final grades than their less anxious counterparts. Furthermore, language anxiety was found to influence students' behaviors. In an interview with 54 English teacher candidates in a Turkish university, Bekleyen (2009) found that most of the teacher candidates who have high listening anxiety would avoid listening activities such as watching English TV programs, talking to native speakers, or participating in classroom activities that require listening. Some of them reported accelerated heartbeat and perspiration during English class.

Eysenck (1979) framed the relationship between anxiety and performance as a function of task difficulty. Anxiety may not be harmful to learning when the task is easy, but as the task difficulty increases, the learners can no longer cope with anxiety by increasing attention and effort and thus, their performance suffers. Although some scholars argued for the facilitating effects of anxiety on performance (Alpert & Haber, 1960; Kleinmann, 1977), anxiety is generally considered undesirable in language classrooms and should be carefully attended to by language teachers (Horwitz et al., 1986; Young, 1991).

Relationship between anxiety, motivation, and attitude measures

As one important aspect of learners' affect (Krashen, 1982), language anxiety does not operate in isolation. In his socio-educational model of second language acquisition, Gardner (1979, 1985, 2006, 2010) described the process of second language acquisition as a joint function of ability and affect. Language learners' anxiety, motivation, integrativeness, and attitudes toward the learning situation are the major affective factors that influence language learning and achievement.

Motivation has been consistently found to influence language achievement (Dörnyei & Chan, 2013; Gardner, 2006; Masgoret & Gardner, 2003; Wang, 2008) and it accounted for additional variance in language achievement even after controlling for learners' language aptitude (Kiss & Nikolov, 2005). Some researchers grappled with the relationship between language anxiety and motivation. Noels, Clément, and Pelletier (1999), for example, maintained that "the more students feel amotivated, the less effort they will expend and the more anxiety they will feel" (p.31). Liu and Cheng (2014) examined the relationship between anxiety and motivation of 150 college learners of English in Taiwan and found that foreign-language anxiety and motivation were negatively correlated with each other (r= -.52, p<.01). That is, students who had higher motivation in language learning tended to have lower language anxiety. Similarly, in their study of college learners of English in three universities in China, Liu and Huang (2011) found a negative correlation between language anxiety and motivational intensity (r= -.40, p<.01) and between anxiety and intrinsic motivation (r= -.47, p<.01).

Gardner (1985, 2006, 2010) differentiated two types of attitude in second language learning: integrativeness and attitudes toward the learning situation. Integrativeness was found to be positively associated with language achievement (Hernández, 2008; Sultan, 2012) and negatively correlated with language anxiety. For instance, Wei (2007) found a negative correlation between the college students' foreign language anxiety and their integrative orientation to learn English (r= -.33, p<.05), indicating that students with stronger desire to understand the target language and culture tended to have lower anxiety in their learning.

Statistically significant correlations were also observed between students'
attitudes toward the teacher and various achievement outcomes (Kiany & Shayestefar,
2011; Vahdany et al., 2015). In the meantime, students' attitudes were found to associate
with their anxiety in language learning. For example, in their investigation of students'
attitudes towards their English teachers in a university in Taiwan, Huang et al. (2010)
found that students' perceived academic support from English teachers was negatively
associated with their speaking anxiety (r= -.23, p<.001), comfort with English learning
(r=.19, p<.05), and fear of failing the class (r= -. 28, p<.01). The study also found a
negative relationship between students' perceived personal support from the teachers and
their comfort with English learning (r=.27, p<.01) and their fear of failing the class (r= -
.18, p<.05).

In a study of the affective profiles of college learners of English, Jain and Sidhu
(2013) found moderate-to-strong correlations among language anxiety, motivation, and
attitude variables measured by subscales adapted from the *Attitude and Motivation Test
Battery* (Gardner, 1985). While motivation and attitude variables were positively
correlated (r=.80, p<.01), language anxiety was adversely related to both motivation (r= -
.62) and attitude variables (r= -.68). Such relationship was observed regardless of the
participants' gender and major. The correlations among anxiety, motivation, and attitude
variables were only statistically significant, however, for students with low proficiency
(n=48). This is probably because the number of students with high proficiency (n=4) and
averaged proficiency (n=8) is too small to reach statistical significance.

In summary, research has shown that language anxiety is not the sole affective
variable that influences the process of language acquisition. In fact, anxiety interplays

with motivation, integrativeness, and attitudes toward the learning situation in the learning process and these variables jointly influence language learning outcomes. Language anxiety is negatively related to motivation and attitude: students with higher motivation and more favorable attitudes towards integrating into the target culture or towards the learning environment would be less likely to experience anxiety in learning. The interrelatedness of affective variables should be taken into consideration when examining the relationship between anxiety and language achievement.

Relative importance of anxiety as a predictor of language achievement

Several studies have been undertaken to examine the relative importance of affective variables of language learning. Hsieh (2008), in her study of college learners of Spanish, German, and French in an American university, found that learners' self-efficacy (β=.53), attitudes toward learning the target language (β=.22), and language class anxiety *(β= -.16)* were significant predictors of the students' final course grades (R^2=.38, *p*<.05). Gardner and Bernaus (2010) conducted a study investigating the motivation and anxiety of secondary school students learning English in Spain. The study found that for students at higher grade level (fourth year in high school), motivation (β=.15, p<.05) and language anxiety (β= -.17, p<.01) added significantly to the prediction of English grades after controlling for students' previous achievement. Students with higher motivation and lower language anxiety tended to have higher final grades regardless of their previous achievement. In addition, an interaction between motivation and anxiety was statistically significant (β= -.12, p<.05). That is, students' final grades were more strongly correlated with their motivation when their language anxiety level is low than when anxiety is high. Furthermore, Alkhateeb (2014) investigated the role of motivation, self-perception, and

anxiety in the Arabic learning of seventh and eighth graders. The results of the stepwise

regression analysis with motivation, self-perception, reading anxiety, and classroom

anxiety regressed onto students' total achievement scores showed that motivation

(β=.49), self-perception (β=.34) and reading anxiety $(\beta = -.22)$ were statistically

significant predictors of students' unit grades in Arabic reading, listening, speaking, and

writing (R^2=.62, p<.01). Overall, all studies confirmed that language anxiety could

predict language achievement even when controlling for the influence of other affective

variables.

So far only one study has been conducted on the relative importance of language

anxiety in the learning of Chinese. Yu and Watkins (2008) examined the motivation,

anxiety, integrativeness, and instrumental orientation of 118 international students in a

Chinese university. After calculating the correlations between the independent variables

and the language achievement measure, variables that were significantly correlated with

achievement were submitted into a simultaneous multiple regression. The results

indicated that integrativeness (β =.57) and gender (β=.37) were the only predictors of

Chinese language proficiency (R^2=.15, p<.01). Motivation and anxiety, however, did not

add to the prediction.

The findings of Yu and Watkins (2008) contradicts the majority of studies that

suggested significant contribution of language anxiety in the prediction of language

achievement when controlling for other affective variables. Therefore, more studies are

needed to fill the gap in knowledge pertaining to the effects of language anxiety in the

learning of Chinese. Notably, several limitations of Yu and Watkins (2008) need to be

addressed in future studies. First, the students' course level needs to be considered when

investigating the relationship between affective variables and achievement. Research

have shown that college students' language anxiety (Luo, 2013; Marcos-Llinás & Garau,

2009), motivation (Shaaban & Ghaith, 2000), and integrativeness (Kondo-Brown, 2013)

may differ at different years of instruction or course levels. Thus, combining the sample

from different levels may lead to inaccurate findings regarding the relationship between

affective variables and language achievement. Second, Yu and Watkins (2008) used

teachers' ratings as the sole measure of language achievement. More studies using

objective achievement measures are warranted to examine the effects of anxiety on

language learning.

The present study aimed to extend the previous research by investigating the

relative importance of language anxiety in predicting Chinese achievement, accounting

for the interference of motivation, integrativeness, attitudes toward the learning situation,

and course level. Furthermore, the present study aimed to extend research on Chinese

learning anxiety by using multiple measures of Chinese achievement, including language

proficiency tests and students' course grades.

Research Questions

1. What is the general profile of language anxiety of international learners of Chinese?

2. Do language anxiety, motivation, integrativness, and attitudes toward the learning

situation differ by students' course level?

3. What is the relative importance of language anxiety in predicting students' Chinese

proficiency test scores and course grades when motivation, integrativeness, attitudes

toward the learning situation, and course level are controlled?

Definition of Terms

Language anxiety is defined as "the feeling of tension and apprehension specifically associated with second language context" (MacIntyre & Gardner, 1994, p. 284). Language anxiety is a situation-specific anxiety that is independent from general anxiety (Gardner, 2010). It develops from the accumulation of state anxiety in language learning (MacIntyre & Gardner, 1989)

Motivation refers to "the driving force in any situation"(Gardner, 2010, p. 89). Motivation in language learning should reflect the learners' effort in language learning, their desire to achieve language learning goals, and their enjoyment in the language learning tasks. (Gardner, 2010). In the present study, motivation will be measured by motivational intensity, desire to learn Chinese, and attitudes toward learning Chinese.

Integrativeness refers to "a genuine interest in learning the second language for the purpose of communicating with members of other language community"(Gardner, 2010, p. 88). In the present study, integrativness will be measured by the learners' integrative orientation, interest in learning foreign languages, and attitudes toward native speakers of Chinese.

Attitudes toward the learning situation reflect the learners' "attitudes toward any aspect of the situation in which the language is learned"(Gardner, 2010, p. 89). As the present study examines language learning in a college context, attitudes toward the learning situation is mainly assessed by the students' evaluation of the teacher and the language course.

Students' course level was determined based on the students' performance in oral interview and the placement test upon entering the Chinese language program. The

elementary level students had no prior knowledge in Mandarin Chinese; the intermediate

level students had demonstrated basic vocabulary and grammar mastery in the Chinese

language. Students in the advanced level were those who had completed three years of

undergraduate language courses or those of equal proficiency.

CHAPTER II

REVIEW OF THE LITERATURE

This chapter will review the literature regarding the influence of language anxiety, motivation, and the two attitude variables on language learning as well as research on the influence of course level on learners' affect. The literature review is composed of four sections. The first section will present literature on the conceptualization of language anxiety and the relationship between language anxiety and language achievement. The second section will introduce studies on the relationship between second language motivation and language achievement, which are grounded in three different motivation theories. The third section will focus on the relationship between language attitude measures and second language attainment. Specifically, two types of attitude measures will be examined, one concerning learners' integrativness and the other concerning learners' attitudes toward the learning situation. The fourth section will introduce studies that found group difference on anxiety, motivation, and attitude across course levels.

Anxiety and Language Achievement

The concept of language anxiety

Anxiety as a psychological phenomenon has been studied since the 1920s. Early theories of anxiety viewed anxiety as a particular form of fear that was inherited at the birth time and developed in later life as a reaction to external threats (Strongman, 1995). Spielberger (1976) differentiated anxiety from fear. While fear is a reaction to real danger from the environment, the stimulus conditions for anxiety may be unknown. Spielberger (1983) defined anxiety as "a subjective feeling of tension, apprehension, nervousness, and worry associated with an arousal of the autonomic nervous system" (p.1). He further

proposed two types of anxiety: trait anxiety and state anxiety. Trait anxiety refers to a relatively stable personality trait of being nervous and anxious irrespective of the situations one is in. State anxiety was the nervousness and anxiety provoked at a particular moment and could change in a short time.

In terms of the effects of anxiety on learning, some researchers have differentiated facilitating anxiety from debilitating anxiety (Alpert & Haber, 1960; Kleinmann, 1977; Scovel, 1978). Facilitating anxiety is associated with proactive problem solving and improved performance. Debilitating anxiety, on the other hand, was associated with decreased performance. Eysenck (1979) discussed the detrimental effect of anxiety on academic performance. According to his theory, high-anxiety learners tend to have more worries and more self-evaluative thinking than learners with lower anxiety when performing tasks. This type of cognition is task-irrelevant and will compete with task-relevant cognition for space in working memory. High-anxiety learners will have less working memory space for effective decoding of information. Eysenck (1979) further proposed that there is a curvilinear relationship between anxiety and performance as a function of task difficulty. When the task is easy, high-anxiety learners could compensate for the negative impact of task-irrelevant cognition by increasing attention and effort. Thus, anxiety may not have debilitating effects to learning and performance. As the task demand increases, however, it becomes less likely that anxious learners could compensate for the loss in working memory capacity, as a result, anxiety begins to have negative effects on performance.

In his review of research on foreign language anxiety, Scovel (1978) described the mixed and confusing results in early studies with regard to the effects of anxiety on

foreign language learning. He attributed the confusing results to the lack of clear conceptualization and proper measurement of the anxiety construct. According to Scovel (1978), anxiety is not a unitary concept but "a cluster of affective states" (p. 18). Learners may experience "facilitating anxiety" that encourages them to do better as well as and "debilitating anxiety" that leads to avoidance and poor performance. In addition, language learners may experience "trait anxiety" that is general to all situations as well as "state anxiety" that is provoked by a specific stimulus (e.g. doing a specific task in language class). Scovel (1978) concluded that future research on language anxiety should have a clear definition of anxiety and use measures that match the conceptualization.

In the late 1980s, researchers such as Horwitz, et al. (1986) and MacIntyre and Gardner (1989) started to conceptualize language anxiety as a situation-specific anxiety. Language anxiety is "the feeling of tension and apprehension specifically associated with second language contexts, including speaking, listening, and learning" (MacIntyre & Gardner, 1994, p. 284). Different from general trait anxiety, situation anxiety connects emotional reactions to the specific situation that provokes such reactions. Unlike state anxiety that is transient in nature, situation anxiety is more stable and is formed by accumulating state anxiety over time (MacIntyre & Gardner, 1989). Some commonly observed situation-specific anxiety includes test anxiety, communication anxiety, and anxiety in learning a specific subject.

There are two major perspectives towards the nature of language anxiety as a situation anxiety. One perspective considers language anxiety as a manifestation of other forms of anxiety in the language learning context. For example, a student who is anxious about public speaking may experience the same anxiety in speaking a foreign language.

A student who worries about tests may feel anxious in the language class where he or her is frequently tested. Another perspective views foreign language anxiety as a distinctive form of anxiety that is only observed in language learning. As such, it is the unique experience of language learning that makes some people nervous. The uniqueness of language learning lies in the fact that language learning is a socialization process that involves not only the learning of linguistic codes but also the formation of a second identity (Gardner, 2010; Horwitz et al., 1986). Due to limited language skills, learners' self-concept as competent communicators may be challenged and their genuine self may not be expressed accurately, which creates considerable anxiety in learning (Horwitz et al., 1986).

Horwitz et al. (1986) conceptualized foreign language anxiety as related to communication apprehension, fear of negative evaluation, and test anxiety in the language classrooms. Communication apprehension may arise as students have difficulty understanding others or making themselves understood. Moreover, language learning usually requires frequent teacher and peer evaluations, causing apprehension towards negative evaluations. Finally, the students may experience test anxiety in language tests. Horwitz et al. (1986)'s conceptualization of language anxiety was partially confirmed by MacIntyre and Gardner (1989), however, test anxiety was considered as a general problem instead of something specific to language learning.

Anxiety and language achievement

Ever since language anxiety was identified as a situation-specific anxiety, scholars started to develop specific measures of language anxiety and they have found a negative relationship between anxiety and language achievement. Horwitz et al. (1986)

developed the *Foreign Language Classroom Anxiety Scale*, a 33-item Likert Scale that measures students' level of anxiety experienced in foreign language classrooms. Preliminary evidence for the scale validity was reported in Horwitz (1986), in which a statistically significant negative correlation between anxiety and the final grades was found for learners of Spanish (*r*= -.49, *p*=.003, *n*=35) and French (*r*= -.54, *p*=.001, *n*=32) at a U.S. university. The results indicated that at least in the beginning level of instruction, students with higher level of anxiety tended to receive lower final grades as compared to their less anxious counterparts.

In their validation study of the *Attitude and Motivation Test Battery*, Gardner and MacIntyre (1993b) examined the relationship between French learning anxiety and various measures of French achievement. The participants were 92 university students enrolled in introductory French courses. Three versions of the *French class anxiety* scale (i.e. Likert Scale, semantic differential scale, and single-item Guilford scale) and three versions of the *French use anxiety* scale were used to measure French learning anxiety. A French anxiety index was created for each version by aggregating the scores on the *French class anxiety* scale and the *French use anxiety* scale. The aggregate scores were correlated with nine measures of French achievement, resulting in 23 (out of 27) statistically significant correlations (*r*= -.23~. -65, *p*<.05). The findings suggested that learners with a higher level of anxiety tended to have lower French grades (Guilford scale only) and to perform less well on the French cloze test, the French word production task, the French prose writing task, and the French proficiency test. They also had lower self-ratings of French proficiency than those with lower anxiety.

The measures of French anxiety were of good reliability. The Cronbach's alpha was respectively .88 and .89 for the two Likert scales *French class anxiety* and *French use anxiety*. The Cronbach's alpha was .91 for the same two scales in semantic differential format. The measures of French anxiety also have good construct validity as all the measures loaded on the same factor. The findings have provided support for negative relationship between French anxiety and French achievement, but the fact that anxiety was correlated with the four proficiency test scores but not the French grades needs further explanation. In addition, the four measures of French proficiency are more concerned with vocabulary, grammar, and reading comprehension than with listening comprehension. In the present study, both reading and listening performance will be included to provide a more comprehensive measure of language proficiency.

While earlier studies on language anxiety mainly focused on the learning of Spanish and French, recently studies have been undertaken to investigate learners of English as a foreign language. For example, Salehi and Marefat (2014) examined the language anxiety for learners of English in an Iranian language institute. The purpose of the study was to find out the relationship among language anxiety, test anxiety, and English achievement. Two hundred pre-intermediate level learners participated in this study. They completed the *Foreign Language Classroom Anxiety Scale* adapted from Horwitz et al. (1986) and the *Test Anxiety Scale* adapted from In'nami (2006) and then took a 60-item final exam consisting of multiple choice questions targeting listening comprehension, vocabulary, grammar, and reading comprehension. Pearson product-moment correlation coefficients were calculated among the three measures. The results suggested that there was a negative correlation between English anxiety and the final

exam grades ($r= -.22$, $p<.01$). Test anxiety was moderately correlated with English

anxiety ($r=.69$, $p<.01$) and negatively correlated with the exam grades ($r= -.18$, $p<.01$).

The researchers concluded that both language anxiety and test anxiety could have a

debilitating effect on language achievement. The study did not provide reliability

estimate for the final exam, but the two instruments for anxiety were of good internal

consistency ($\alpha>.90$). The researchers also have ensured the normality of the score

distribution before conducting the correlational analysis. One limitation of this study is

that the majority of the participants were female students (193 out of 200), as a result, the

findings may have limited generalizability. The finding that test anxiety and language

anxiety were only moderately correlated supports the claim that test anxiety is a construct

independent from language anxiety (MacIntyre & Gardner, 1989). Although test anxiety

can influence students' test performance, the present study will focus only on language

anxiety that is found to have a stronger relationship with language achievement.

Similarly, Awan et al. (2010) found a negative relationship between anxiety and

English achievement with a sample of 149 undergraduate students (43% male) in a

Pakistan university. The students' scores on the Foreign Language Classroom Anxiety

Scale were correlated with their GPA in English classes. A negative correlation between

anxiety and English achievement was found ($r= -.27$, $p<.01$), suggesting that anxious

learners generally had lower overall performance in English classes than less-anxious

learners. GPA is a vague measure of language achievement given that different courses

may have different requirements and assessment strategies, but the fact that a statistically

significant negative relationship was found between language learning anxiety and GPA

seemed to demonstrate the debilitative role of language anxiety across learning situations.

A particularly interesting study is conducted by Tanielian (2014), which focused on secondary English learners in a bilingual program in Thailand. In this program, English was not only taught as a core subject but also was used to teach other content courses such as mathematics and science. Students in the basic and supplementary programs generally received English instructions by native speakers for one-to-three hours per week, and those in immersion programs generally received seven hours of English instruction per week. Both immersion and non-immersion students participated in this study. The major objective of this study was to discover the relationship between English anxiety and students' academic achievement. Four-hundred and twenty-four students from six grade levels and 11 classes completed the *Foreign Language Classroom Anxiety Scale* and their scores on the English and math midterm exams were collected as measures of academic achievement. Person product-moment correlations were calculated, yielding a -.16 correlation between English anxiety and English midterm for the whole group (N=424) and a -.52 correlation for the immersion group (n=37). In addition, no statistically significant correlation was found between English learning anxiety and math achievement even though the math classes were taught in English. It seems that the effect of language learning anxiety is most prominent in language classes rather than in content courses that are delivered in English. The latter may require not only linguistic ability but also other abilities such as reasoning and problem solving.

In addition to conducting correlational analysis, the researchers performed a series of one-way ANOVAs on students' English learning anxiety. The independent variables included gender, class, and program type. The study found that male students reported lower language learning anxiety than female students (F=5.34, p<.05). Statistically

significant difference was also discovered between two classes, M2/5 and M4/3, on students' anxiety level. The researchers did not take into consideration these differences when examining the relationship between anxiety and achievement for the whole group, which may lead to errors in the findings. This is relevant to the current study because the sample to be investigated consist of students from multiple classes and course levels. The present study will compare students' anxiety scores from different course levels and take into account the influence of course level in the prediction of language achievement. In addition, the students' final exam grades will be converted to standard scores to statistically control for the influence of class on achievement scores.

Furthermore, in his investigation of the relationship between language anxiety and speaking performance, Gregersen (2003) has noted the difference between anxious and non-anxious learners on errors making during English speaking. The participants were third-year Spanish speakers learning English as a foreign language in a university in Chile. After completing the *Foreign Language Classroom Anxiety Scale*, four students who had high language learning anxiety (over three standard deviations from the mean, M=92.96, SD=5.4) and four with low anxiety (at least over 3 standard deviations from the mean) participated in a 7-minute oral interview in English. The interview was videotaped, and the number of errors made by the students was marked by three raters. After the interview, the students were invited to watch the videotape of their interview. Their comments on their own performance and responses to several reflective questions were analyzed to determine the number of errors identified as well as students' estimation of errors they had made. The findings suggested that overall the highly anxious students made more mistakes in the oral interview than the less anxious students. Anxious

students also repaired more errors and used more native language during speaking. When reflecting on their performance in the interview, highly anxious students recognized fewer errors they made and overestimated the number of errors by 33.3% to 81.8%. To the contrary, learners with low anxiety underestimated their errors by 10 % to 90%. The author contended that there is a vicious circle of error-making for anxious learners. Those who were anxious make more mistakes, which lead to higher anxiety, lower self-image, and lower willingness to communicate. The lack of practice in speaking then caused even worse performance and more errors in future speaking tasks. The interrater reliability was ensured when counting the errors in speaking. Overall this study provided some preliminary evidence for the effect of anxiety on the language productions, but the sample is too small to detect any statistical significance for the difference on number of errors made by high anxiety and low anxiety students. In addition, more evidence is needed to determine whether the effect of anxiety on error making persists over time and across language proficiency levels.

Finally, in investigating a less-commonly taught language that is generally thought to be difficult for English speakers, Zhao and Whitchurch (2011) found a negative relationship between Chinese learning anxiety and students' final grades in Chinese courses. The study used a mixed-method design. The *Foreign Language Classroom Anxiety Scale* was administered to 122 college students enrolled in elementary and intermediate Chinese courses in a U.S. university, and email interviews were conducted with 24 students in order to find out the sources of Chinese learning anxiety as perceived by the students. The findings showed a negative correlation between anxiety and students' final grades ($r= -.30$, $p<.01$). Furthermore, anxiety was related to learners'

self-rated proficiency ($r=-.26$, p<.01), suggesting that students with higher level of anxiety tend to have a lower estimation of their language proficiency than those with lower anxiety.

Regarding the sources of Chinese learning anxiety, one-way ANOVA using anxiety as the dependent variable showed that students who perceived Chinese as harder than expected reported a higher level of anxiety than those who thought Chinese was as hard as expected ($F=10.67$, $p<.01$, Cohen's $d=0.69$). This finding was supported by the email interview in which many students reported that the difficulty of Chinese tones and characters made them feel frustrated and anxious in the language learning. The concept of "learning difficulty" is ambiguous as it is associated with many factors that include the learners' language ability, the difficulty of the course materials, and the quality of the instruction. As a result, it is difficult to make meaningful interpretation of this finding.

The study also compared students' Chinese anxiety by gender, course level, and experience in China with 2x2x2 ANOVA. The only significant effect was found on students' experience in China. Students who had visited China reported lower language learning anxiety than those who had never visited China before ($F=10.27$, $p<.05$). Students' email responses showed that the various opportunities to use the target language in China had motivated the them to learn Chinese. Connected to the present study of international students in China, this finding supports the assumption that international students who study Chinese in China may have distinctive motivational and affective profiles that influence their language learning. For example, the frequent contact with native speakers and the target culture may increase the students' motivation and decrease their anxiety in Chinese learning. Research on this distinctive group of learners

will enrich the extant literature on the relationship between language anxiety and achievement.

Summary

In summary, there is rich evidence that supports the negative relationship between language anxiety and language achievement. Across many instructional contexts and target languages, language anxiety was found to be negatively associated with learners' course grades, language proficiency, task performance, and test grades, with correlations ranging from small to moderate. Because all the scales measured situation-specific anxiety, the findings supported that language learning anxiety as a situation-specific anxiety can play a debilitative role in second and foreign language learning. Such anxiety may result from the accumulation of state anxiety in language learning and may lead to heightened state anxiety in future learning (MacIntyre & Gardner, 1989). The achievement studies reviewed above, however, showed that learners' background, class, and course level may cause variation in their anxiety level, as a result, these variables need to be considered when examining the relationship between anxiety and achievement.

Motivation and Language Achievement

It is generally accepted that motivation plays a critical role in second language acquisition (Dörnyei, 2005; Gardner, 2006; Masgoret & Gardner, 2003; Noels, Clément, & Pelletier, 2001; Ryan & Deci, 2000). Kiss and Nikolov (2005) investigated the relationship between motivation and English performance while controlling the influence of language aptitude and learner background. The participants were 419 Hungarian elementary school students. The students' motivation was measured by a 20-item Likert scale developed by the researchers. Six items reflected the integrative/instrumental and

intrinsic/extrinsic dichotomy of motivation, six items reflected the learners' self-image

and perceptions, and the other eight reflected motivations under specific learning

situations. The English proficiency test consisted of 58 items that assessed the listening,

reading, and writing skills. Based on multiple regression analysis, motivation was found

predicting the students' English proficiency even after controlling for the students'

language aptitude, English grades, hours of English instruction, and gender. While

language aptitude accounted for 21% of the variation in English proficiency, motivation

was responsible for about 8% additional variance in the proficiency scores. The results

indicated that at least for younger learners of English, the more motivated they are in

language learning, the better proficiency they would achieve regardless of the difference

on language aptitude.

Motivation in the Social-educational Model of L2 Acquisition

Motivation has long been the interest of second language scholars and teachers

probably because it could be fostered through instruction and intervention. The research

on second language motivation can be traced back to over forty years (Noels et al., 2001).

Since then, many theories of L2 motivation has been proposed, advocating different

perspectives concerning the nature and operationalization of motivation. Gardner (1979,

1985, 2006)'s socio-educational model of second language acquisition is one of the

leading theories that laid the foundation for many studies in second language motivation.

The major assumption of this theory is that language learners' motivation is shaped by

the social and educational contexts they are situated in. The learners' attitudes towards

the target cultural group and towards the learning situation can influence their motivation

in learning, which in turn influences the language learning achievement.

In their meta-analysis on the relationship between motivation and language achievement, Masgoret and Gardner (2003) examined the studies that utilized the *Attitude and Motivation Test Battery* to measure attitudes and motivation in language learning. A total of 75 independent samples involving 10,489 individuals were included in the analysis. Four constructs, integrativeness, attitude towards the learning situation, motivation, and orientations, were investigated in terms of their correlations with language students' course grades, self-ratings, and performance in objective language tests. The motivation construct was measured by aggregating the scores on three subscales, *Motivational intensity*, *Desire to learn the target language*, *and Attitudes toward learning the target language.* A single correlation was computed between each construct and achievement using the unweighted linear composite method. The correlations were corrected for attenuation using the reliability estimates reported for the attitude and motivation measures. For studies that did not provide necessary correlations to compute the composite correlation, simple average correlations were calculated.

The findings showed that the four attitude and motivation constructs were all positively related to second language achievement. These correlations were statistically significant at the .5 level. Specifically, the correlation between motivation and achievement was .37 for language course grades, .29 for objective measures of language performance, and .39 for self-ratings of language competence. Compared to the other three attitude constructs, motivation had the highest correlations with the achievement measures. Furthermore, the relationship between motivation and language achievement did not differ by the availability of the language in learning environment (i.e. second language environment vs. foreign language environment) or by age. The meta-analysis

supported the claim that motivation plays a positive role on second and foreign language achievement. Consistent with the socio-educational model, motivation is more closely associated with language achievement than attitude, which was viewed as the supporting force for motivation.

In recent years, Gardner and his associates extended their investigation to international contexts where English was learned as a foreign language. For example, as part of the validation study of the international Attitude and Motivation Test Battery, Gardner (2006) obtained the data from four European countries, Croatia, Poland, Romania, and Spain, where English was a foreign language for secondary school students. The participants from each country consisted of two age levels, approximately 12-13 and 15-16 years of age respectively. All students completed the international *Attitude and Motivation Test Battery* that measured integrativeness, attitudes toward the learning situation, motivation, and anxiety, instrumental orientation, and parental encouragement. Students' English achievement was measured their English grades obtained at the end of the academic year. In an attempt to investigate the predictive validity of the test battery, correlations between the attitudes and motivation measures and students' English grades were calculated with a significance level at .05. The finding showed that 35 of the 48 correlations were statistically significant. Six of the non-significant correlations involved the measure of parental encouragement, three involved the measure of attitudes towards the learning situation, and four concerned the instrumental orientation measure. Motivation was found to be a statistically significant predictor of English achievement across all the samples, and the magnitude of correlations ranged from .25 to .49. Motivation had stronger correlations with achievement than integrativeness and attitudes

towards the learning situation in all countries except Romania, which is consistent with the findings in Masgoret and Gardner (2003).

The findings of the studies by Gardner and associates is relevant to the present study because the present study adopts Gardner's conceptualization of motivation, which is a multi-faced concept that involves cognitive, affective, and behavioral components. The present study will adapt the subscales of the international Attitude and Motivation Test Battery to measure motivation, integrativeness, and attitudes toward the learning situation in Chinese learning. These subscales were found to have good internal consistency reliabilities and construct validity across samples and contexts. In addition, the studies by Gardner and associates showed that the relationship between motivation and language achievement could be found in both second language and foreign language learning contexts, which provides further support for the inclusion of motivation as the predictors of language achievement in the present investigation.

Intrinsic and extrinsic motivation

Another stream of research in second language motivation was influenced by self-determination theory (Ryan & Deci, 2000), which made distinctions between intrinsic motivation and extrinsic motivation. Intrinsic motivation comes from the innate drive to seek changes and development whereas extrinsic motivation, in its least autonomous form, is brought by external sources such as rewards and punishments. Although self-determination theory was not specific to language learning, some researchers adopted the concepts of intrinsic and extrinsic motivation in the investigation of motivation and language achievement.

Wang (2008), for example, explored the relationship between intrinsic motivation, extrinsic motivation, and language learning achievement for college learners of English in China. The measure of motivation was developed by the researcher and validated through exploratory factor analysis and confirmatory factor analysis with two independent samples. The final motivation questionnaire contained 24 five-point Likert items that addressed four motivation variables: motivation for knowledge, motivation for challenge, external utility regulation, and internal fulfillment regulation. The first two variables represented an intrinsic orientation to learn the language and the rest two reflected extrinsic motivation. The motivation questionnaire was administered to 328 freshmen enrolled in English courses. The students' course grades were used as a measure of English achievement. The results of multiple regression on English grades suggested that motivation for knowledge (β=.47) and external utility regulation (β=-.17) were statistically significant predictor of students' English achievement (p<.01). In other words, interest and curiosity towards the English language could increase the performance in English learning; on the contrary, external reasons such as passing the exam and graduating could undermine students' English performance. The other two motivational variables, motivation for challenge and internal fulfillment regulation, although not found to be statistically significant predictors of achievement, were both positively correlated with English grades. The researcher concluded that it is necessary to find ways to increase intrinsic motivation and facilitate the internalization of extrinsic motivation in English learning.

The study used valid measures of intrinsic and extrinsic motivation, but it is unclear whether the students were from the same English course. Their English grades may not be comparable if they were from different English courses.

The model of intrinsic and extrinsic motivation does not differ dramatically from Gardner's model. The concept of intrinsic motivation was related to the integrative orientation in the socio-educational model, and extrinsic motivation was related to the instrumental orientation in the model. Integrative orientation tended to correlate with the intrinsic motivation and integrated regulation, which is a more self-determined type of extrinsic motivation. Instrumental orientation, on the other hand, tended to correlate with the external regulation (Noels et al., 2001). Gardner (2010), however, argued that orientation is not motivation. Motivation is a multi-faceted construct that should "has cognitive, affective, and behavioral characteristics, and the motivated individual demonstrates all facets" (Gardner, 2010, p.10). An individual who agreed that they had good reasons to learn the language may or may not be motivated in language learning. As such, the dichotomy of intrinsic and extrinsic motivation may not adequately capture the motivation construct. The present study will adopt Gardner's conceptualization of motivation, which is assessed by the learners' desire to learn the target language, their motivational intensity, and their attitudes toward learning the target language.

Motivational self system

The latest emerging theory on second language motivation concerned with learners' self-perceptions. Dörnyei (2005, 2009) proposed a motivational self-system that consisted of ideal self, ought-to self, and learning experience. The ideal self is the learners' desired future selves regarding their language competence and usage; the ought-

to self concerns the future selves that the learners believe they should be in order to meet expectations or avoid negative consequences. The learning experience is the actual experience of the learners in second language learning, which could produce situational motivation for the learners. The motivational self-system maintained that it is the noticed discrepancy between the current actual self and future self that generates motivation and motived behaviors in language learning.

Research on the motivational self-system is still emerging and most research focused on motivated behaviors rather than the overall language achievement. Recently, Dörnyei and Chan (2013) investigated the relationship between future self-guides and language achievement for a group of secondary students in China. The participants were 172 eighth graders in a secondary school in Hong Kong. All students were native speakers of Cantonese and were learning Mandarin and English at a lower intermediate level. The two future-self constructs, idea self and ought-to self, was each measured by 5 items on a motivational questionnaire adapted from previous literature. The students' language achievement was assessed by the grades on the end-of-term language exams. In addition, the students reported their intended effort on a 5-point Likert Scale. The correlations between the future self-guides and the criterion measures were calculated, indicating that learners' ideal self was positively correlated with final exam grades in both English ($r=.24$, $p<.01$) and Mandarin ($r=.42$, $p<.001$). Ideal self was also positively correlated with intended effort in language learning (English, $r=.68$; Mandarin, $r=.67$, $p<.001$). On the contrary, ought-to self was not correlate with final exam grades although it was positively correlated with intended effort. The findings suggested that students who imagined themselves as a competent user of the target language tended to be more

willing to invest effort into learning and tended to achieve higher scores in final exams. External motivators, such as the parents' expectations and friends' influence, had no effect on the final exam scores although they were associated with the learners' intended effort.

Dörnyei and Chan's (2013) study supports the positive influence of motivation on language achievement. The conceptualization of motivation as self-perceptions is compatible with the previous motivation models. For example, the ideal self reflects the learners internal desire to become a competent second language user, which is conceptually similar to the intrinsic motivation in the self-determination theory. Likewise, the ought-to self is associated with the extrinsic motivation. The situational motivation from learning experience was reflected in the attitude towards the learning situation in Gardner's socio-educational model. The present study, however, will not use Dörnyei's conceptualization of motivation because (a) there is no strong evidence for the relationship between future self-guides and achievement as the research is still emerging; (b) research on future self guides assumes that the language learners could successfully produce imagination of themselves, which may not be the case for all language learners.

Summary

To sum up, motivation is a complex construct and there are multiple theories that tried to explain the role of motivation in second language learning. Gardner (1979, 1985, 2006)'s socio-educational model considered motivation as a multi-faceted concept that involves cognitive, affective, and behavior components. The self-determination theory, on the other hand, mainly concerns the origin of the motivation, which could be broadly divided as intrinsic or extrinsic. Dörnyei's works extended the self-determination theory

by introducing the concept of "self" and accounting for the influence of the learning experience on learners' motivation. Despite the differences in conceptualization, these theories are compatible with each other and the present study will adopt Gardner's conceptualization of motivation, which, in the Attitude and Motivation Test Battery, is assessed by the learners' desire to learn the target language, their motivational intensity, and their attitudes toward learning the target language.

Regardless of the difference in the conceptualization of motivation, the studies introduced above have unanimously suggested the positive influence of motivation on language achievement. Positive correlations between motivation and language achievement measures were found, with a magnitude ranging from .17 to .49. The higher the motivation to learn the target languages, the higher the scores on the achievement measures. These findings provide support for the inclusion of motivation as an important variable that contributes to the prediction of Chinese achievement.

Attitude and Language Achievement

Attitude and motivation are two closely related concepts that were often studied together (Gardner, 1986, 2006; Masgoret & Gardner, 2003; Ushida, 2005). Gardner (1985, 2006, 2010) made a distinction between attitude and motivation. Attitude concerns the learners' beliefs about the value of learning foreign languages and their evaluation of the learning situation, whereas motivation is viewed as the product of attitude, which concerns the desire, interest, and effort in the actual language learning process. This section mainly examines integrative orientation, attitudes toward the teacher, integrativeness, and attitudes toward the learning situation.

Integrative orientation

Integrative orientation, or the learners' willingness to incorporate the linguistic and behavioral patterns of other culture groups, was studied in Hernández (2008). The purpose of the study is to investigate the role of integrative orientation and instrumental orientation in Spanish learning. The participants were students enrolled in a fourth-semester Spanish course in a Midwestern university. Language learners who were willing to interact with the speakers of the target language and to integrate into their culture were considered to have an integrative orientation; in contrast, those learning the language for instrumental reasons, such as finding a Spanish-related job or being more competitive than others, were viewed as having instrumental orientation. In the first week of instruction, the students completed a 26-item questionnaire that consisted of twelve background questions and fourteen items asking the importance of various reasons to learn Spanish. In the third week, the students completed a simulated oral proficiency interview that measured Spanish speaking proficiency. The students' final course grades and final exam scores were collected as measures of their Spanish achievement.

To investigate the relationship between orientations and language achievement, a series of simultaneous multiple regressions were conducted using the type of orientation as the independent variable and students oral interview scores, final course grades, and final exam scores as the dependent variables. The students' GPA and the number of years learning Spanish were included in the regression to rule out their influence on achievement. The findings suggested that among various reasons to learn Spanish (*i.e.* integrative orientation, instrumental orientation, and foreign language requirement), integrative orientation was the only statistically significant predictor of students' oral

interview performance (β=.33, *p*<.05) after controlling for students' GPA and years learning Spanish. GPA was the only predictor of students' course grades (β=.50, *p*<.05). Furthermore, GPA (*β*=.53) and integrative orientation (β=.19) were the two predictors of final exam scores. In the subsequent logistic regression analyses that examined students' willingness to continue Spanish study and become Spanish major, integrative orientation was found to be a predictor of students' decisions. Students with higher integrative orientation were more likely to continue Spanish study after the fourth-semester course (e^B=1.26, *p*<.001) and to study towards a major in Spanish (e^B=1.40, *p*<.001).

The orientation questionnaire used in this study has good reliability. The Cronbach alpha coefficients ranged from .85 to .90 for the integrative orientation, instrumental orientation, and foreign language requirement subscale. The research also found a three-factor structure that supported the three subscales of the orientation measure. The study did not provide details for the GPA measure. If students' GPA was based on their completion of course assignments and scores on course exams during the semester of the investigation, it is likely that GPA was strongly correlated with students' final course grade. This may explain why integrative orientation was not a predictor of students' course grade when GPA was in the regression model. Nevertheless, the findings suggested that integrative orientation had a positive influence on students' language achievement while instrumental orientation had not. This is relevant to the present study because the integrative orientation is an indicator of the integrativeness construct, which will be examined in current investigation.

Similarly, Sultan and Hussain (2010)'s study, which examined the integrative and instrumental orientation for Pakistani EFL learners, found that overall the students'

achievement was positively associated with their integrative orientation but not with their instrumental orientation. The participants of the study were 234 university students enrolled in introductory English courses. The scale for motivation was adapted from the *Integrative orientation* and *Instrumental orientation* subscale of the *Attitude and Motivation Test Battery* (Gardner, 1985). Students' English achievement was assessed by the midterm exam and final exam that focused on reading and writing skills. The scores from the two exams were combined to obtain a total achievement score. To analyze the relationship between motivation and English achievement, Pearson Product-moment correlation was performed, and only integrative orientation was found to be correlated with their exam scores ($r=.47$, $p<.05$). That is, students who were more willing to integrate into the target culture scored higher on the exams. The study further examined the difference between high achievers and low achievers in their orientation to learning English. Students whose scored above the mean was considered as high achievers ($n=140$) and those scoring below the mean was considered as low achievers ($n=94$). It turned out that the relationship between integrative orientation and exam scores was observed only in high achievers ($r=.72$, $p<.05$). No statistically significant relationship was found between orientations and achievement for low achievers.

The method used to divide the students into high and low achieving group may be problematic given that some students might score quite close to the mean. It would be advisable to group the students according to the standard deviation difference between their scores and the mean. An inspection of the mean of the two groups, however, showed that the high achiever group had noticeably higher mean achievement score ($M=77.06$, $SD=8.75$) than the low achievers ($M=51.34$, $SD=9.55$). The relationship between

motivation and achievement may still hold even if the two groups were divided according to the standard deviation distance from the mean. The finding of this study is relevant to the present study because it showed that the relationship between integrative orientation and language achievement may differ by student proficiency levels. One objective of the current investigation is to find out whether the relationship between individual characteristics and language achievement will be different for learners at different levels of learning and instruction.

Attitudes toward the teacher

Another type of attitude concerns the learning environment. It is believed that language teachers' behaviors and characteristics could have an effect on students' achievement (Akbari & Allvar, 2010; Nouri, 2015; Swanson, 2013; Talebinejad & Akhgar, 2015). Students' perception of the teacher may have equal, if not more, influence on their language achievement as it is directly related to their motivation to learn. Vahdany et al. (2015) conducted a study on Iranian high school students' attitudes toward their English teachers. Three-hundred and thirty-five students from several female high schools in Iran participated in this study. The students' attitudes toward their teachers were assessed by a 30-item scale with statements on the teachers' teaching methodology, classroom management, evaluation method, and support for student motivation and autonomy. The students rated the statement on the scale from 1(*strongly disagree*) to 4 (*strongly agree*). The students' English achievement was assessed by their final course grades that consisted of final exam grades, class participation, and mid-term exam grades. The findings suggested that the students' attitudes toward their teachers had a positive correlation with their course grades for those who scored below 10 ($r=.23$, $p<.05$). For

those who scored above 10, the correlation was statistically significant but near zero (r=.01, p<.05). Overall the findings suggested that students who had more positive attitudes toward their teachers would have higher course grades.

The researchers did not, however, provide the mean and range of the students' course scores, making it difficult to interpret the difference between the above-10 group and the below-10 group on the relationship between attitude and achievement. Furthermore, the fact that the students were from different schools may cause errors in the findings. Due to the possible clustering of course grades at the school level, a single correlation between the attitude measure and the course grade may not accurately reflect the relationship between attitude and achievement.

Focusing on a specific aspect of teacher behaviors, Kiany and Shayestefar (2011) studied the relationship between students' perceived teacher control in language class and their English achievement. The sample were 732 high school students from 27 classes in Iran. Majored in Mathematics, Natural Sciences, and Humanities, all the students were from the same class level (*i.e.* third level of the intermediate education stream) and were learning English as a foreign language. Students' perception of teachers' regulative behavior in class was assessed by a questionnaire adapted from two previously published scales. The adapted version was piloted with 132 students and the Cronbach's alpha coefficient for the overall scale was .79. The results of exploratory factor analysis revealed a three-factor structure of the questionnaire. The "strong control" factor included items concerning the directions teachers provided in class. The "shared control" factor represented teachers' facilitating behaviors, such as stimulating student's thinking and encouraging collaboration. The "loose control" factor was loaded by items that reflected

autonomous learning. The pilot study produced a 22-item questionnaire that was used in the main study. In the main study, the students' English achievement was measured by the Standardized National Achievement Test for third-level classes. The students also completed a pre-English achievement test developed by the researchers.

To examine the relationship between students' perceived teacher control and English achievement, a multi-level regression was conducted with scores on the Standardized National Achievement Test as the dependent variable. The independent variables at the class level included perceived teacher control, pre-achievement, and students' major fields; the independent variable at the student level was students' gender. The results of the multi-level regression showed that perceived teacher control at the class level negatively predicted students' English achievement when controlling for previous achievement and major ($\beta= -1.1$, $p<.05$). That is, classes that perceived stronger teacher control tended to have lower English achievement than classes that perceived less teacher control. Using multi-model regression procedures, this study has addressed the influence of class and school on the prediction of language achievement. As a result, the finding could better support the claim that students' attitudes toward the teacher will have an effect on their language achievement.

Integrativeness and attitudes toward the learning situation

In Gardner's socio-educational model there are two attitude constructs: integrativeness and attitudes toward the learning situation. A number of studies conducted by Gardner and associates have confirmed the relationship between integrativeness, attitudes toward the learning situation, and language achievement (Gardner, 2006, 2010, 2012; Gardner & MacIntyre, 1993; Masgoret & Gardner, 2003). In

their recent international studies of English learners (Gardner, 2010), for instance,

students' attitudes were measured by the *Integrativeness* index and the *Attitudes toward*

the learning situation index on the international version of *Attitude and Motivation Test*

Battery. There were twelve samples from six countries: the samples from Croatia (n=319),

Poland (n=410), Romania(n=313), Spain (n=431), and Brazil (n=306) consisted of

primary and secondary school students, two samples for each country. The Japan sample

(n=344) consisted of university students in their first and second year of English study.

Achievement in English was measured by the end-of-year English course grades. The

results of path analysis showed that integrativeness had a direct effect on students'

English grades across all the samples, with standardized regression coefficients ranging

from .20 to .46. In ten of the twelve samples, integrativeness also had an indirect effect

on students' grades through motivation. Likewise, attitudes toward the learning situation

had a direct effect on students' English grades in eight of the twelve samples, with

standardized regression coefficients ranging from .18 to .35. In addition, attitudes toward

the learning situation had an indirect effect on students' grades, which was mediated

through motivation.

These studies however, did not address the possible interference of class on

students' course grades. Because each sample was composed of several classes, the

relationship between attitudes and course grades may be confounded by the different

grading standards. Connected to the present study, which also has participants from

multiple classes, the students' final exam grades will be converted into standard scores

before combing them for further analysis.

Compared to the studies on integrative orientation, Gardner (2010)'s international studies employed a broader measure of cultural attitudes that included not only learners' integrative orientation but also their attitudes toward foreign language and native speakers of foreign languages. The studies by Gardner and associates also employed a more comprehensive measure of situation-related attitudes that consisted of both the evaluation of teacher and the evaluation of the language course. Therefore, the present study will measure integrativeness and attitudes toward the learning situation that simultaneously influence the Chinese learning and achievement.

Summary

In summary, the research on language learners' attitude generally revealed a positive relationship between attitude and language achievement. Specifically, learners' attitudes toward the other culture, operationalized as integrative orientation or integrativeness, were consistently found to correlate with achievement measures such as course grades and exam scores. Learners' attitudes toward learning situation, reflected by their evaluation of the teacher and the course, were found to influence language achievement at least in some of the samples. All the studies reviewed, however, concerned Western languages such as Spanish and English. As more and more learners around the world start to learn Chinese, it is important to understand the learners' attitudes toward Chinese language, culture and the learning experience. The present study aims to add to the literature base by investigating the integrativeness and attitudes of Chinese language learners and the relationship between these attitude measures and Chinese achievement.

Course Level as a Confounding Variable

Although language anxiety, motivation, integrativeness, and attitudes toward the learning situation were all significant correlates of the language achievement, it does not rule out the possibility that other uncontrolled variables are responsible for the relationship observed. In the case of college-level language programs, it is important to consider the influence of students' course level on their affective profiles. This section reviews studies that have investigated the confounding effects of course level on students' motivation, integrativness, and anxiety in language learning.

Effect of course level on motivation and integrativeness

Attempting to investigate the motivation of college learners of English, Shaaban and Ghaith (2000) found that students in the intermediate courses and those in the high intermediate courses differed in their orientation to learn, their effort invested into learning, and their perceived value of English learning.

All participants were native speakers of Arabic. Forty-one were enrolled in Level II (Intermediate) and 139 were enrolled in Level III (High Intermediate) courses. One objective of this study was to find out whether students at different course level had similar motivation and attitudes in English learning. The students' motivation and attitudes were measured by a modified scale that contained three parts. Part I asked demographic questions such as gender, age, major, and course level. Part II consisted of three subscales measuring integrative orientation, instrumental orientation, and effort. Part III consisted of three subscales that measured valence (i.e. the perceived the outcome of English learning), expectancy (the perceived probability of success in learning) and perceived ability to learn English. To examine the effect of course level on the various

affective variables, an MANOVA was performed using course level as the independent variable and the six motivational/attitudinal variables as the dependent variables.

The results showed that there was statistically significant difference on the dependent measures by course level, F (6,161) =.90, p=.01. The follow-up univariate analyses indicated that students at Level II had higher integrative orientation than those at Level III, F (1,166) =7.16, p=.00. Students at Level II also reported more effort than Level III students, F (1,166) =4.25, p=.04. In addition, students at Level II had higher valence scores than their Level III counterparts, F (1,166) =4.27, p=.04. The findings suggested that students at the lower course level had a stronger orientation to interact with English speakers and to integrate into the English culture. They also reported more effort in language learning and perceived the greater value of English learning than students at the higher course level.

The study provides support for effect of course level on students' motivation and attitudes. The reliability of the overall motivation/attitude scale is good (α=.83), but the internal reliabilities for the integrative orientation subscale and the effort subscale were only .59 and .63, respectively. Therefore, the results regarding integrative orientation and effort should be interpreted with caution.

Kondo-Brown (2013) conducted a study on the affective profile of learners of Japanese at a two-year college language program. The study consisted of two parts: a longitudinal study concerning students who continued Japanese learning from the first semester to the fourth semester (n=38) and a cross-sectional study comparing students in the first semester (n=252) and those in the fourth semester (n=80). The instrument for the affective profile was a 24-item questionnaire developed by the researcher. There were six

components on the questionnaire: intrinsic orientation, instrumental-integrative orientation, motivational intensity, self-efficacy, speaking anxiety, and Japanese identity (i.e. statements indicating recognition of Japanese as part of identity). The Cronbach's alpha reliabilities for the six components ranged from .66 to .86. A two-way repeated measure ANOVA was performed for the longitudinal data and for the cross-sectional data, with time as one factor and the type of affect as the other factor.

The results revealed a significant difference between first-semester students and fourth-semester students on their overall affective profile. Specifically, for the longitudinal sample, students' instrumental-integrative orientation increased as they proceeded to the fourth semester ($t=3.074$, $p=.00$), so did their motivational intensity increase ($t=3.356$, $p=.00$). For the cross-sectional sample, students in the first semester had lower instrumental-integrative orientation than those in the fourth semester ($t=2.76$, $p=.01$). Their motivation, on the other hand, was higher than students in the fourth semester ($t=6.217$, $p=.00$). The findings suggested that students in the fourth-semester courses had more positive attitudes towards the value of learning Japanese than beginner learners, but they reported less effort in language learning than their first-semester counterparts. The findings regarding the cross-sectional data are especially important because such findings provide support for the effect of course level on integrativeness and motivation.

Both Shaaban and Ghaith (2000) and Kondo-Brown (2013) found that students' motivation was lower at the higher course level, but conflicting results were found regarding the difference in students' integrative orientation. This may be due to the difference in the language to be learned. Because English is a global language that is

widely spoken, learners of English may be familiar with the language and culture since the beginning of the language program and their integrative orientation may be high at the lower course level. On the contrary, Japanese is a less-commonly taught language and the learners must reach a certain level to develop an appreciation of the Japanese language and culture. As a result, students' integrative orientation may be higher at the higher course level. Nevertheless, if statistically significant differences exist in students' motivation and integrativeness across different course levels, it is conceivable to control for course level in the investigation of the relationship between learners' affect and achievement.

Effect of course level on language anxiety

In an attempt to discover the relationship between course level and language anxiety, Marcos-Llinás and Garau (2009) conducted a study with 134 college students enrolled in Spanish courses in a Midwestern American university. There were 49 students from the elementary level, 43 from intermediate, and 42 from advanced level. The placement of students was based on the results of a placement test administered upon the students' arrival at the university. Language anxiety was measured by the *Foreign Language Classroom Anxiety Scale* adapted for Spanish learners. The adapted scale had an internal reliability of .94 and a test-retest reliability of .80 in a five-week period. The students' language achievement was assessed by their final course grade that was on a grading scale of 0-100.

Both ANOVA and Pearson bivariate correlation was performed to examine the effect of course level on students' language anxiety. The results of the ANOVA showed that there was statistically significant difference on students' anxiety scores as a function

of course level, F (3,59) =3.54, p<.03. The Post-Hoc Scheffe test showed that students at the elementary level had lower anxiety than students at the advanced level. This finding was confirmed by the correlation analysis. A negative correlation was found between course level and anxiety level, indicating that students at the higher course level tended to have higher anxiety scores (r= -.23, p<.01). In addition, course level was found to have an effect on students' language achievement (p<.03). Students at advanced level had significantly higher course grades (M=90.45, SD=3.24) than elementary level students (M=82.22, SD=13.85). The findings of this study suggested that course level could influence students' language anxiety as well as their language achievement. There may be a problem with the measure of language achievement as the students were from different classes. Moreover, there may be issues with missing data as the statistics for ANOVA indicated that only 62 students were included in the analysis.

More solid evidence was found in Luo (2013) that examined the effect of course level on the language anxiety of Chinese learners. The participants were 428 students from two public universities in the United States. A number of background variables were investigated, including school, gender, heritage status (i.e. whether the students had family members who speak Chinese), ethnic background (i.e. Chinese American, Asian but not Chinese, Non-Asian), years in college, elective-required status, and proficiency level. The classification of students' proficiency level was based on their course level: students in first year Chinese courses were classified as elementary level (n=234); students in second year Chinese were intermediate level (n=118), and those in the third year were advanced level (n=76). Language anxiety was measured by *the Chinese Language Learning Anxiety Scale* developed by the researcher, which is a 16-item scale

measuring anxiety associated with four language skills, speaking, listening, reading, and writing. The scale had a reliability of .90 and good construct validity according to cross-validation analysis.

The effect of course level on language anxiety was confirmed by a two-way ANOVA with course level and elective-required status being the two independent variables and anxiety being the dependent variable. While no statistically significant effect was found for elective-required status or the interaction between course level and elective-required status, the main effect of course level was found ($p=.00$). Post-Hoc Scheffe tests comparing the anxiety scores by course level revealed that students at elementary level had higher anxiety scores than advanced students ($p=.00$) Intermediate students' anxiety scores were also higher than those of advanced student (p= .03). Students at elementary level also had higher anxiety scores than intermediate students, but the difference did not reach statistical significance. This finding is consistent with Zhao and Whitchurch (2011) that found no statistically significant difference on Chinese anxiety between elementary level students and intermediate level students at a southern university in the United States. Overall, Luo (2013)'s findings suggested that language anxiety differed between advanced learners and those at lower levels. As the course level increased, learners' anxiety in Chinese learning decreased.

Luo (2013) is relevant to the present study in three ways. First, the university where the present study will be conducted has a similar classification of course levels. Students in the first-year Chinese courses are at elementary level, students in the second year are at intermediate level, and those in the third and fourth year are considered advanced level. Even though course level may not accurately reflect students' language

proficiency level, the placement of students into different course levels was based on their students' years of learning Chinese and the number of Chinese vocabularies and grammars they have learned, which should not greatly divert from their actual proficiency level. Second, as students' Chinese anxiety was found to differ by course level, the present study will compare the anxiety scores of students at the elementary, intermediate, and advanced level before investigating the relationship between anxiety and achievement. Third, the present study will use the *Chinese Learning Anxiety Scale* in Luo (2013) to measure students' anxiety. Compared to the widely used Foreign Language Classroom Anxiety, this scale is designed for Chinese learning with items that describe experience in specific learning tasks. It also covers all four language skills, which is more comprehensive than the Foreign Language Classroom Anxiety Scale that mainly focuses on anxiety in speaking.

Summary

To sum up, this section introduces studies on the effects of course level on students' motivation, integrativeness, and anxiety in language learning. All the studies reviewed above suggested that these affective variables differed by course level. Regarding motivation, students in the lower level courses reported higher motivational intensity in language learning than those in the higher-level courses. Regarding integrativeness and anxiety, the findings have been mixed. For example, Shaaban and Ghaith (2000) found that students at the intermediate-level Spanish courses had higher integrative orientation than those at the high-intermediate level, while Kondo-Brown (2013) found that students at the first-semester Japanese courses had lower integrative-instrumental orientation than those in fourth-semester courses. Similarly, conflicting

results were found on the relationship between course level and anxiety. While Marcos-Llinás and Garau (2009) found that advanced learners of Spanish had higher anxiety than students at elementary level, Luo (2013) suggested the opposite, with advanced college learners of Chinese reporting the lowest anxiety in learning. The discrepancy in findings could be due to many factors. For example, the effect of course level on integrativeness and anxiety may be sensitive to the language to be learned. Despite of the discrepancy in previous findings, these studies all provide support for the confounding effect of course level on the relationship between affective variables and language achievement. The present study will consider the effect of course level when examining the relationship between affective variables and language achievement.

CHAPTER III

METHODOLOGY

The purpose of this study was to investigate the relative importance of language anxiety in predicting Chinese achievement when motivation, integrativeness, attitudes toward the learning situation, and course level are accounted for. The major research questions were (a) What is the general profile of language anxiety for the college-level learners of Chinese? (b) Do language anxiety, motivation, integrativness, and attitudes toward the learning situation differ by students' course level? (c) What is the relative importance of language anxiety in predicting students' Chinese proficiency test scores and course grades when motivation, integrativeness, attitudes toward the learning situation, and course level are controlled?

Research Design

Using a correlational design, the study examined language anxiety, motivation, integrativeness, attitudes toward the learning situation, and language achievement of students attending a college-level Chinese language program in China. A major goal of this study was to investigate the relative importance of anxiety as a predictor of language achievement. The dependent variables were the students' Chinese proficiency test scores and final course grades. The independent variables included language anxiety, motivation, integrativeness, attitudes toward the learning situation, and course level. These variables were assessed by the *Chinese Language Learning Anxiety Scale* and the subscales of the international *Attitude and Motivation Test Battery*. Information on student course level was obtained from the instructors prior to class visit. In addition, a researcher-designed background questionnaire was used to collect information about

student's age, gender, major, native language, heritage language status, years learning

Chinese and years staying in China.

   The data collection lasted four months and were completed in three steps. First,

in the beginning of the spring 2017 semester, students completed the background

questionnaire and the scales measuring anxiety, motivation, integrativeness, and attitudes

toward the learning situation. Second, in the middle of the spring semester, students took

a Chinese listening and reading proficiency test. Finally, at the end of the spring

semester, students' final course grades in the Comprehensive Chinese courses were

collected from the department registry.

   Descriptive statistics (e.g. means, standard deviations, range) were used to

illuminate the students' general level of language anxiety in Chinese learning. One-way

fixed effects ANOVAs were performed to reveal whether students' language anxiety,

motivation, integrativeness, and attitudes toward the learning situation differ by course

level. Finally, to investigate the relative importance of language anxiety in the prediction

of Chinese achievement, a latent variable structural equation model (Hoyle, 2012) was

tested.

   As shown in Figure 2, this structural model hypothesized the structure of each

construct (i.e. anxiety, motivation, integrativeness, attitudes toward learning situation,

and achievement) as well as the relationship among these constructs. Integrativeness,

motivation, anxiety, and language achievement each was indicated by three measured

variables. Attitudes toward the learning situation was indicated by two measured

variables. These constructs were called latent variables in structural equation modeling

because they were not directly measured. It was hypothesized that motivation and anxiety

have direct effect on language achievement; integrativeness and attitudes toward the learning situation have direct effect on motivation and indirect effect language achievement through motivation. The circle with a letter *e* written in it stands for error, or variance in the latent variable that was not explained by the measured variables. Similarly, a letter with *d* written in stands for disturbance. It represents variance in the latent variable that was not accounted for by the presumed causes in the model.
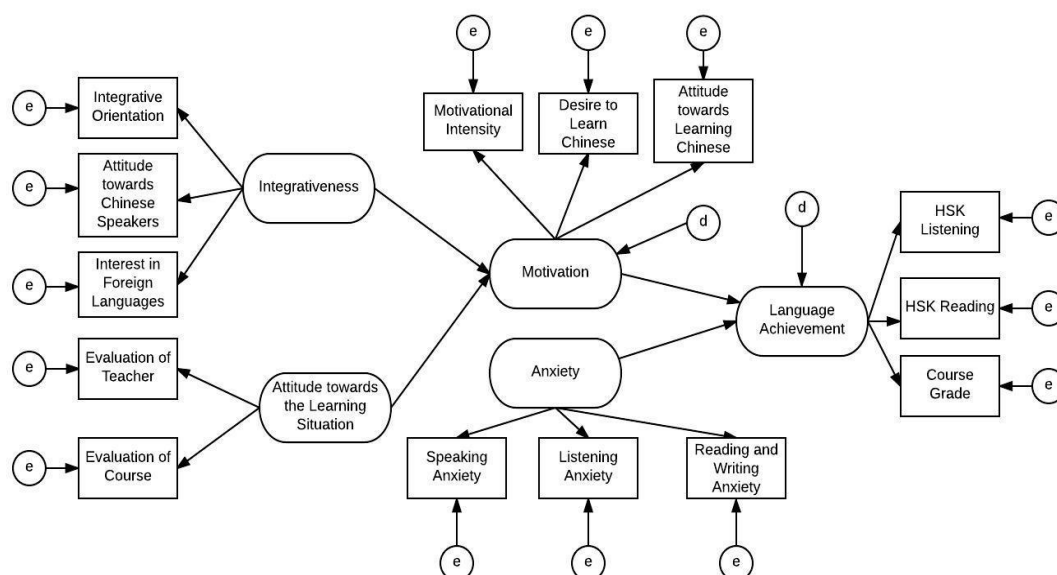
Figure 2. A schematic representation of the proposed model

Sample

The participants were international students from a major university in Southwestern China. The university is one of the top 100 universities under the jurisdiction of the Ministry of Education. According to the information on the school website, there were about 50,000 full-time students and about 600 international students at the time of investigation. The location of the study was the International College where Chinese language courses were offered to degree-seeking students as part of their degree requirements and to non-degree students as part of their language training. All students

were required to take a Comprehensive Chinese Course that corresponds to their language proficiency level. There were 18 classes and 282 students from which the research participants were recruited.

A total of 223 students participated in the study. Seventy-eight were male and 145 were female, with an average age of 21. Forty-nine percent of the participants were majored in Chinese Language and Literature, 27% were in the International Education program, 9% were in the Business Management program, and the remaining 15% were in the language training program. The participants were from 28 different countries. Figure 3 shows the nationality composition of all the participants. The largest group was from Thailand, followed by Kazakhstan and Vietnam. With respect to world region, 84% of the participants were from Asian countries, 9% were from African countries, 4% from Europe, 2% from North America, and 1% from South America.

Upon admission to the above programs, students were placed into elementary, intermediate, or advanced level courses based on students' performance on two placement tests. Students who failed the first placement test were assigned to the elementary courses. The remaining students took the second placement test and those who failed the second test were assigned to the intermediate courses. Each placement test had a total score of 100 and consisted of multiple choice questions, cloze test, and a short essay that focused on listening, reading, and writing skills. The current sample consisted of 90 students from elementary level, 109 from intermediate level, and 24 from advanced level.

Nationality Composition

Congo 1%
Indonesia 4%
Mexico 1%
Brazil 1%
Sudan 1%
Madagascar 4%
Mongolia 1%
Vitenam 6%
Canada 1%
Russia 3%
Korea 2%
Other 7%
Kazakhstan 27%
Uzbekistan 2%
Thailand 39%

Nationality Composition by Continent

North America 2%
South America 1%
Europe 4%
Africa 9%
Aisa 84%
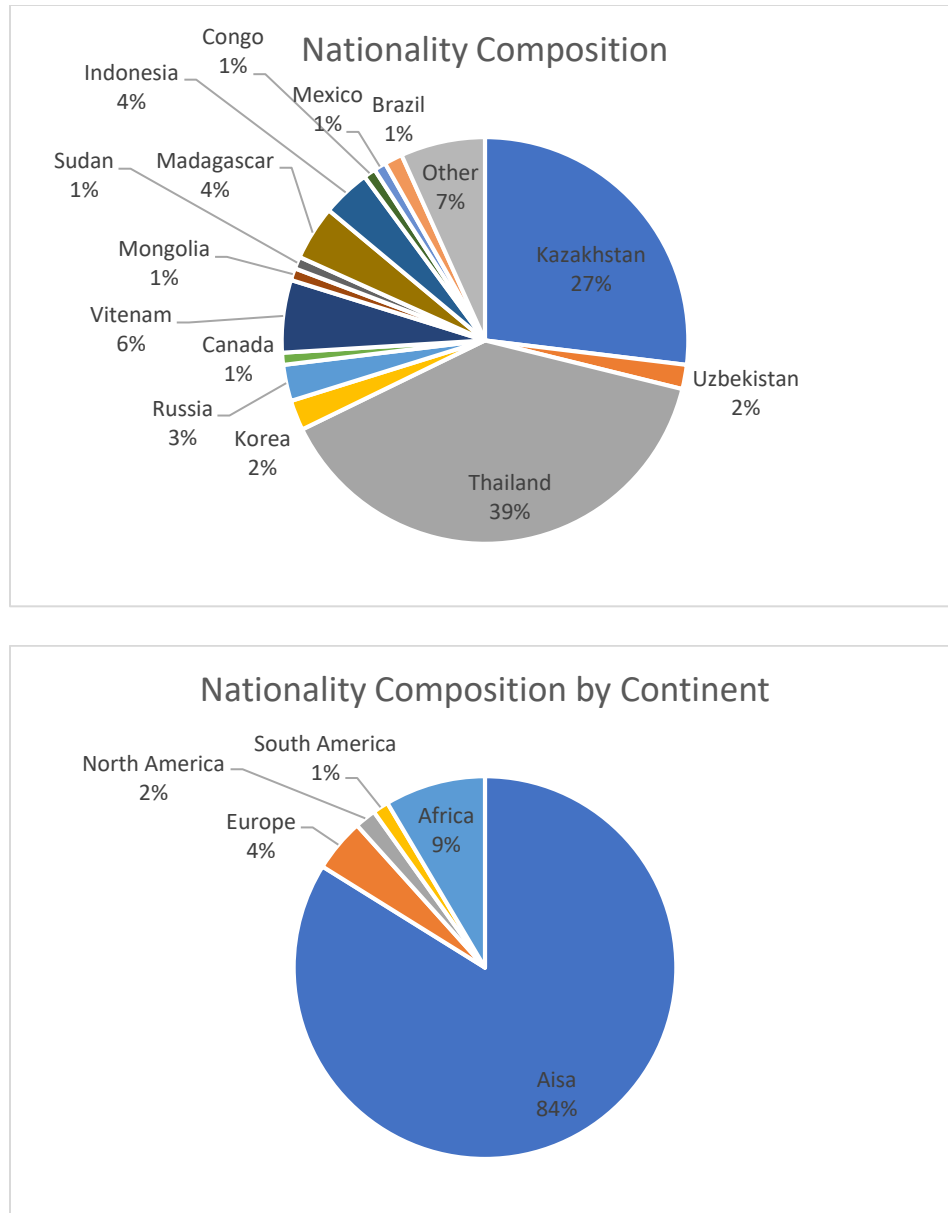
Figure 3. Nationality composition of all study participants.

Protection of Human Subjects

This study has complied with the standard set by the American Psychology

Association to protect the rights of the human subjects. Consent from the students was

obtained based on a clear introduction of the purpose of the study, tasks to be completed,

and the confidentiality of the students' information. Students' participation was

voluntary, and they had the right to withdraw from the study at any time. Interested

students had the opportunity to view the results of the Chinese proficiency test and to

learn the findings of the study. The completed questionnaires and tests was kept in a

secure location to which only the researcher has access. Students' responses were kept

confidential and reported anonymously.

Instrumentation

Indicator variables

The study investigated five constructs, language anxiety, motivation,

integrativeness, attitudes toward the learning situation, and language achievement. The

scales for the anxiety construct were taken from the *Chinese Language Learning Anxiety*

Scale by Luo (2014), which has been administered to 425 college students at a

southwestern university in the United States. The scales for motivation, integrativeness,

and attitude towards the learning situation were adapted from the international *Attitude*

and Motivation Test Battery by Gardner (2010). These scales have been validated in

twelve samples from six countries (i.e. Croatia, Poland, Romania, Spain, Brazil, and

Japan). The language achievement measures consisted of a listening proficiency test, a

reading proficiency test, and students' final course grade.

Each construct was measured by several indicator variables. There were 14

indicator variables in total. The 11 affective variables were measured using Likert scale

items, with both positively worded and negatively worded items. Responses on the

negatively worded items were reverse coded so the higher score indicates higher level in

the observed variable. The 3 outcome variables were measured by HSK listening test,

HSK reading test, and course grades. Because the participants were recruited from 18

different classes, the course grades were converted to z scores within each class. Similarly, HSK listening and HSK reading scores were converted to z scores within each class to help rule out teacher's influence on test selection. Cronbach's alpha was calculated for all the variables except for course grade.

The 14 variables investigated are described below along with the reliability estimate of each measure. Variables 1-3 were assessed by 5-point Likert scales from 1 (*strongly disagree*) to 5 (*strongly agree*). Variables 4-11 were assessed by 7-point Likert scales ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

1. *Speaking anxiety*. The scale measures students' anxiety in Chinese speaking activities. It contains three positively worded items and one negatively worded item. A high score indicates a high level of speaking anxiety. The maximum score is 20 (α=.63).

2. *Listening anxiety*. The scale measures students' anxiety in Chinese listening activities. It contains four items that are all positively worded. A high score indicates a high level of listening anxiety. The maximum score is 20 (α=.63).

3. *Reading and writing anxiety*. The scale contains eight items reflecting anxiety in Chinese reading and writing activities. Six items are positively worded and two are negatively worded. A high score indicates a high level of reading and writing anxiety. The maximum score is 40 (α=.65).

4. *Motivational intensity*. The scale measures the amount of effort students feel they have invested in learning Chinese. Five items are positively worded and five are negatively worded. A high score represents a large amount of effort devoted to learning Chinese. The maximum score is 70 (α=.73).

5. *Desire to learn Chinese*. The scale measures students' desire to learn Chinese. There are five positively worded items and five negative worded items. A high score represents a strong desire to learn Chinese. The maximum score is 70 (α=.76).

6. *Attitudes toward learning Chinese*. The scale measures students' attitude towards the learning of the Chinese language. It includes 10 items, five positively worded and five negatively worded. A high score represents favorable attitudes toward learning the Chinese language. The scale has a maximum score of 70 (α=.81).

7. *Integrative orientation*. This scale contains four items. These items measure the students' willingness to communicate with Chinese people and to integrate into the Chinese culture. Students with a high score are considered having higher integrative orientation. The scale has a maximum score of 28 (α=.83).

8. *Attitudes toward Chinese speakers*. This scale contains eight items. These items measure how the students think of native speakers of Chinese and their willingness to interact with Chinese speakers. A high score represents a positive attitude towards native speakers of Chinese. The maximum score is 56. The Cronbach's alpha for this subscale is .79.

9. *Interest in foreign languages*. This scale measures students' interest in learning foreign languages in general. Ten items comprised this scale. Five items are positively worded and five are negatively worded. A high score represents a high interest in learning foreign languages. The maximum score is 70 and the Cronbach's alpha is .81.

10. *Chinese teacher evaluation*. This scale measures students' attitude towards their teachers in the Comprehensive Chinese courses. This scale includes 10 items with five positively worded items and five negatively worded items. A high score indicates a

favorable evaluation of the teacher in the Comprehensive Chinese class. The scale has a maximum score of 70 and a Cronbach's alpha of .85.

11. *Chinese course evaluation*. This scale measures students attitude towards the Comprehensive Chinese courses. It consisted of 10 items, five are positively worded and five are negatively worded. A high score indicates a favorable evaluation of the Comprehensive Chinese course. The maximum score is 70. The Cronbach's alpha for this subscale is .88.

12-13. *The HSK listening and reading test*. The HSK test is a standardized Chinese proficiency test developed by the Office of Chinese Language Council International under the jurisdiction of Ministry of Education of People's Republic of China. The HSK test is the only Chinese proficiency test in China and is used worldwide to measure the proficiency level of non-native speakers of Mandarin Chinese. The test is divided into six levels, HSK level I, HSK level II, HSK level III, HSK level IV, HSK level V, and HSK level VI. The higher level corresponds to higher language proficiency in Chinese.

The present study used the 2013 HSK level IV, HSK level V, and HSK Level VI tests obtained from official website of the Confucius Institution at the University of Manchester. Each student took one of the three HSK listening tests and one of the three reading tests depending on their proficiency level. Because the number of test items varied by HSK level, mean item score was used instead of the total score as a measure of test performance. In addition, the mean item scores were standardized within class to rule out teachers' influence on the test selection for their class. The Cronbach's alpha was calculated for each test and they are shown in Table 1.

Table 1
Number of Test Items and Cronbach's Alpha for the HSK Tests

Test Level	Test	Number of Items	α
HSK Level IV	Listening	45	.88
	Reading	40	.93
HSK Level V	Listening	45	.90
	Reading	45	.90
HSK Level VI	Listening	50	.84
	Reading	50	.82

14. *Final course grade*. The final grade reflects students' overall performance in the Comprehensive Chinese course. It was comprised of the students' final exam grade (50%), attendance (20%), homework (10%), quizzes (10%), and participation (10%). Because the students were from 18 different classes, the final grades were standardized within class to control for teacher's influence on the grading.

Course level

Students' course level was determined based on the teachers' feedback during the first class visit to teachers. Course level was determined based on the students' performance in oral interview and the placement test upon entering the Chinese language program. The elementary level students had no prior knowledge in Mandarin Chinese. The intermediate level students had demonstrated basic vocabulary and grammar mastery in the Chinese language. Students in the advanced level were those who had completed three years of undergraduate language courses or those of equal proficiency.

Background variables

Information about students' demographic composition and language learning background was collected via a background questionnaire. The background variables included students' age, gender, major, nationality, native language, language heritage

status (i.e. whether their immediate family members speak Chinese), years learning Chinese, and years staying in China.

Procedures

Prior to data collection, a proposal of the study was submitted to the International College of the university and a permission letter was issued, granting access to all the Chinese language classes in the International College. The *Chinese Language Learning Anxiety Scale*, the eight subscales adapted from the international *Attitude and Motivation Test Battery*, and the background questionnaire were compiled into one 98-item survey and translated into Chinese. The Chinese version was then back-translated by an English teacher at a university in China to assure translation accuracy. Discrepancies between the original survey and the back-translated survey were discussed and modifications were made to 13 items on the Chinese survey. Given that students at the elementary level may have difficulty understanding the Chinese survey and that many students came from non-English speaking countries, the English survey was further translated into seven languages (i.e. Thai, Russian, Vietnamese, French, Korean, Japanese, and Arabic) by certified translators. These languages were considered the most commonly spoken languages according to the information provided by the department official.

In March 2017, fifteen instructors of the Comprehensive Chinese course were contacted, and all were willing to participate in the study. Individual meetings were scheduled with each instructor, during which I introduced the purpose and procedures of the study and asked about students' background and course level. Teachers were invited to review the Chinese survey and the HSK tests, specifically, they were asked to comment on the appropriateness and readability of the survey and whether the HSK test

is appropriate in difficulty for their class. The Chinese version of the survey was considered appropriate by all the teachers. Two teachers from the elementary level classes considered the survey items to be a little difficult for their students, but they both agreed that the students could understand the survey with the help of the translations. The instructors then scheduled a time for me to visit the class and recruit student participants.

The data collection was carried out in three steps. In April, class visit began during which students were introduced to the purpose and procedures of the study and assured the confidentiality of their information. Due to time constraint, students who were willing to participate in the study completed the survey after class on the same day of class visit and returned them the next day. Students who were absent at the time of class visit were contacted later for participation. Overall 223 students completed and return the survey. Table 2 displays the number of students and the number of participants from each class.

After completing the surveys, students took a HSK listening test and a HSK reading test in class. The tests were administered by the teachers as part of the course assessment. HSK IV test took about 70 minutes to complete, the HSK V test took about 80 minutes, and the HSK VI took about 90 minutes. Then the test papers were collected from the instructors, graded by the researcher, and returned to the instructors if requested. Finally, in early July 2017, the students' course grades in the Comprehensive Chinese courses were collected from the department registry.

Table 2

Number of Students and Participants by Class

Class	Number of Students	Number of Participants
1	16	11
2	13	6
3	6	4
4	14	13
5	16	15
6	27	21
7	16	12
8	19	17
9	12	11
10	13	13
11	14	13
12	24	20
13	14	14
14	13	9
15	23	10
16	11	11
17	9	9
18	22	14
Total	282	223

After data collection, the item scores of the survey and the HSK tests, the course

grades, and the students' background data were entered in SPSS (Green & Salkind,

2010). The data file was checked for out-of-range values and no mistakes were found.

Data Analysis

Missing value analysis

Because there were missing values in the data set, the pattern of missing was

assessed by Little's Missing Completely at Random (MCAR) test in SPSS 24.0. A non-

significant Little's MCAR test of all the 14 variables (11 independent variables and three

outcome variables), $\chi^2(389) = 381.43$, $p=.60$, indicated that the data were missing

completely at random (Little, 1988). Because the data were missing completely at

random and only a small portion of data were missing (see Table 3), a single imputation

using the expectation maximization algorithm can provide unbiased parameter estimates

(Enders, 2001; Scheffer, 2002). Therefore, single imputation was conducted. The

complete data set included 223 respondents. Table 4 shows the means, standard

deviations, and correlations of all variables of interest. Because the students were from 18

different classes, the three outcome variables, course grade, HSK listening, and HSK

reading, were converted to z-score within each class to control for teacher's influence on

grading and test selection. As a result, these variables had means that were slightly lower

or higher than 0.

Table 3
Frequencies and Percentages of Missing Values

Variables	Number of responses	Missing	
		n	%
Speaking Anxiety	217	6	2.7
Listening Anxiety	216	7	3.1
Reading Writing Anxiety	213	10	4.5
Integrative Orientation	221	2	0.9
Attitudes toward Native Speakers	217	6	2.7
Interest in Foreign Languages	212	11	4.9
Motivational Intensity	212	11	4.9
Desire to Learn	212	11	4.9
Attitudes toward Learning	218	5	2.2
Teacher Evaluation	212	11	4.9
Course Evaluation	220	3	1.3
Course Grade	212	11	4.9
HSK Listening	201	22	9.9
HSK Reading	201	22	9.9

Table 4

Mean, Standard Deviation, and Correlations among Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Course Grade														
2. HSK Listening	.54													
3. HSK Reading	.51	.66												
4. Speaking Anxiety	-.21	-.14	-.22											
5. Listening Anxiety	-.16	-.08	-.13	.36										
6. Reading Writing Anxiety	-.24	-.09	-.19	.40	.47									
7. Integrative Orientation	.11	-.06	-.03	-.06	.09	-.04								
8. Attitudes toward Native Speakers	.05	.07	.03	-.09	.19	.02	.52							
9. Interest in Foreign Languages	.23	.02	.09	-.13	-.09	-.16	.49	.33						
10. Motivational Intensity	.29	.16	.19	-.38	-.10	-.27	.35	.44	.45					
11. Desire to Learn	.23	-.02	-.01	-.15	-.07	-.23	.45	.46	.60	.58				
12. Attitudes toward Learning	.16	.04	.04	-.11	-.06	-.25	.53	.48	.57	.51	.64			
13. Teacher Evaluation	.05	.06	.15	-.19	-.02	-.23	.27	.38	.35	.43	.38	.49		
14. Course Evaluation	.10	.07	.14	-.13	-.06	-.19	.37	.35	.33	.42	.39	.53	.71	
Mean	0.01	-0.01	-0.01	10.91	11.36	21.13	24.49	40.44	61.47	53.23	57.13	58.34	53.88	53.76
SD	0.94	0.93	0.92	2.99	3.07	4.20	3.77	7.65	7.11	7.36	7.04	7.24	9.70	9.69

Note: N=223. Correlations greater than .13 are statistically significant at the .05 level.

Preliminary analysis

Checking for normality

Normality of all variables was assessed. According to Kline (2011), a variable is normally distributed if its skewness index (i.e., skewness statistic/standard error) is less than three and if its kurtosis index (i.e., kurtosis statistic/standard error) is less than 20. As shown in Table 5, eight variables had a skewness index above three. The Integrative Orientation variable was highly skewed and was transformed using a log10 function. The other seven variables were moderately skewed, and a square root transformation was applied to bring them more in line with a normal distribution (Tabachnick & Fidell, 2013). The skewness index of the transformed variables fell below three, therefore, these transformed variables were used in subsequent procedures.

Table 5
Skewness and Kurtosis Values for the Study Variables (N = 223)

	Skewness		Kurtosis	
Variable	Statistic	Index	Statistic	Index
Speaking Anxiety	-.02	-1.25	-.54	-1.69
Listening Anxiety	-.19	-1.19	-.22	.69
Reading Writing Anxiety	.00	.00	.66	2.06
Integrative Orientation	-1.87	-11.69	5.27	16.47
Attitudes toward Native Speakers	-.69	-4.31	.58	1.81
Interest in Foreign Languages	-1.51	-9.44	3.07	9.59
Motivational Intensity	-.46	-2.88	.04	.13
Desire to Learn	-.81	-5.06	2.98	9.31
Attitude towards Learning	-1.14	-7.13	2.21	6.91
Teacher Evaluation	-1.18	-7.38	2.12	6.63
Course Evaluation	-1.23	-7.69	2.08	6.50
Course Grade	-.59	-3.69	-.08	-.25
HSK Listening	-.39	-2.44	-.59	-1.84
HSK Reading	-.19	-1.19	-.45	-1.41

Note. Standard error for skewness statistic = .16. Standard error for kurtosis statistic = .32

Principal component analysis

Principal Component Analysis (PCA) was conducted to check the construct validity of the measurement model. PCA with varimax rotation identified four factors with eigen values larger than one. The four-factor solution explained 68% of the total variance. In contrast to the five-factor structure in the proposed model, the integrativeness construct and the motivation construct were not distinguishable, that is, the variables indicating integrativeness and those indicating motivation loaded on the same factor (see Table 6). Given that the sample of the study were international students who had stayed in China for at least eight months, the items for integrativeness may be less of a measure of students' willingness to integrate into the target language community, but rather a measure of how motivated they were in the process of integration. Therefore, the three variables measuring integrativeness and the three variables measuring motivation were combined to indicate a general "motivation" construct (see Figure 4).

Table 6
Results of principal components analysis with varimax rotation (N=223)

Variables	Motivation	Achievement	Anxiety	Attitudes toward Learning Situation
Speaking Anxiety	.09	-.17	.67	.15
Listening Anxiety	.01	-.03	.81	-.12
Reading Writing Anxiety	.08	-.08	.78	.17
Integrative Orientation	.78	.08	-.04	.03
Attitudes toward Native Speakers	.67	-.05	-.23	.30
Interest in Foreign Languages	.74	-.10	.17	.06
Motivational Intensity	-.59	.23	-.26	-.36
Desire to Learn	.82	.04	. 13	.21
Attitudes toward Learning	.75	-.02	.13	.35
Teacher Evaluation	.28	-.00	.08	.85
Course Evaluation	.31	-.06	.09	.82
Course Grade	.21	-.77	.21	-.12
HSK Listening	.05	.88	.00	-.06
HSK Reading	.06	.85	-.12	-.13
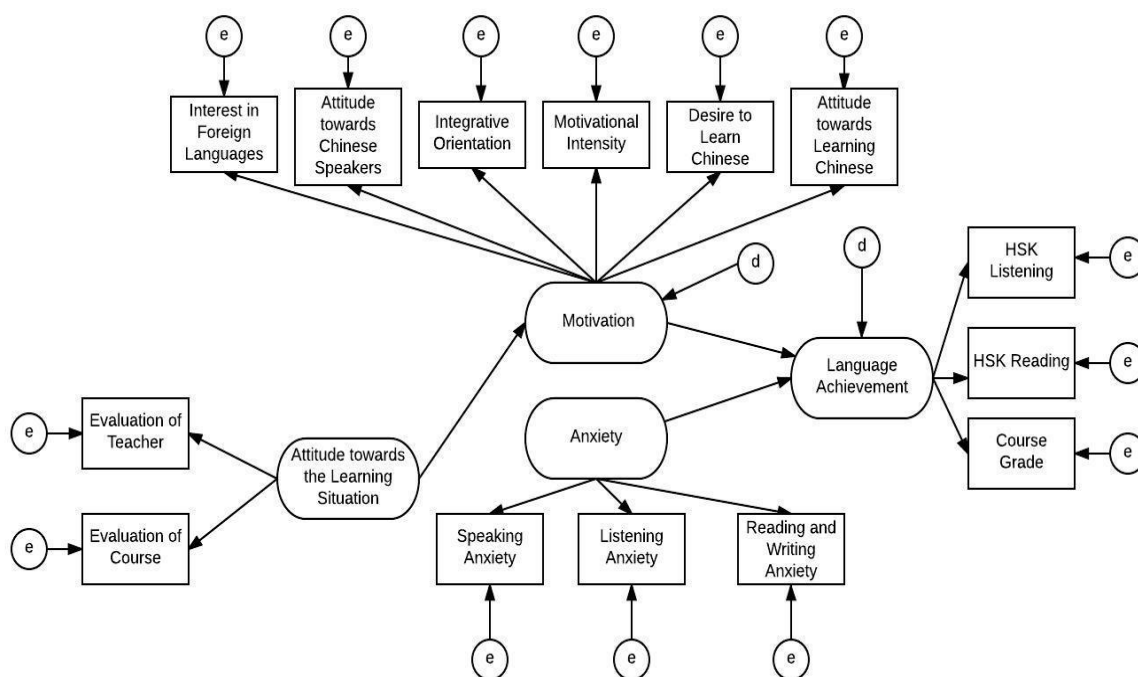
Figure 4. A schematic representation of the revised model

Data Analysis

To provide information regarding the general profile of students' language anxiety, descriptive statistics (*i.e*. mean, standard deviation, and range) for the anxiety measures were calculated. To investigate whether language anxiety, motivation, integrativeness, and attitude towards the learning situation differ by course level, four one-way ANOVAs were performed, each regressing one of the four affective constructs onto the course level variable. The overall error rate for the analysis was controlled at .05 level. To answer the third research question regarding the relative importance of language anxiety in predicting Chinese achievement, a latent variable structural equation model was tested using LISREL 9.30.

CHAPTER IV

RESULTS

The purpose of this study was to investigate the predictive relationship between language learning anxiety and language achievement for college learners of Chinese. Quantitative data were collected from 223 international students from a university in Southwestern China. A total of 14 measures were collected, 11 were affective measures (*i.e.* speaking anxiety, listening anxiety, reading and writing anxiety, integrative orientation, attitude towards native speakers, interest in foreign languages, motivational intensity, desire to learn, attitude towards learning, teacher evaluation, and course evaluation) and three were achievement measures (*i.e.* final grade, HSK listening, HSK reading). Results are presented below by research question.

Research Questions

Research Question 1: What is the general profile of language anxiety for the college-level learners of Chinese?

The means, standard deviations, minimum scores, and maximum scores on the anxiety measures for all the participants are presented in Table 7. The speaking anxiety measure has 4 items and a total score of 20. A mean of 10.91 indicates a moderate level of anxiety in speaking activities. The listening anxiety measure also has 4 items and a total score of 20. A mean of 11.36 indicates a moderate level of anxiety in listening. The reading and writing anxiety measure contains 8 items and a possible total of 40 points. A mean of 21.13 suggests a moderate level of anxiety in reading and writing activities. Overall, the students did not report high anxiety in Chinese language learning and there was no noticeable difference on the anxiety level across language skills (*i.e.* listening,

speaking, reading, and writing). In this study, a score that is one standard deviation above

the mean is considered a high score and a score that is one standard deviation below the

mean is a considered a low score. Thirty-four students reported high anxiety and 35

reported low anxiety, respectively accounting for 15% and 16% of the research sample.

Table 7

Number of Items, Range, Means, Standard Deviations, Minimum scores, and Maximum
scores for Speaking Anxiety, Listening Anxiety, Reading and Writing anxiety, and
Overall Anxiety (N=223)

Variable	Number of Items	Possible Range	*M*	*SD*	Minimum Score	Maximum Score
Speaking Anxiety	4	4-20	10.91	2.99	4	18
Listening Anxiety	4	4-20	11.36	3.07	4	19
Reading Writing Anxiety	8	8-40	21.13	4.20	8	36
Overall Anxiety	16	16-80	43.40	8.04	16	66

Research Question 2: Do language anxiety, motivation, integrativness, and attitudes

toward the learning situation differ by students' course level?

Table 8 presents the means and standard deviations of language anxiety, motivation,

integrativeness, and attitudes toward the learning situation. Score on the language anxiety

construct was the sum of speaking anxiety, listening anxiety, and reading and writing

anxiety. The motivation score was the sum of motivational intensity, desire to learn, and

attitudes toward learning. The integrativeness score was the sum of scores on integrative

orientation, attitudes toward native speakers, and interests in foreign languages. Finally,

attitudes toward the learning situation was the sum of teacher evaluation and the course

evaluation.

Table 8
Number of Items, Range, Means, and Standard Deviations for the Anxiety,
Integrativeness, Motivation, and Attitude towards Learning Situation Composite by
Course Level

Composite	Number of Items	Possible Range	Elementary M (SD)	Intermediate M (SD)	Advanced M (SD)	Total M (SD)
Anxiety	16	16-80	43.16 (7.72)	43.20 (8.67)	45.24 (6.05)	43.40 (8.04)
Motivation	30	30-210	167.39 (18.95)	171.02 (16.80)	163.12 (21.27)	168.71 (18.30)
Integrativeness	22	22-154	127.12 (15.89)	126.46 (13.48)	123.43 (15.22)	126.40 (14.66)
Attitudes toward the Learning Situation	20	20-140	107.45 (20.41)	108.90 (15.22)	102.71 (19.10)	107.65 (17.91)

An inspection of the scores revealed that students' anxiety level was the lowest at the elementary level and increased as they entered higher level courses. Motivation and attitudes toward the learning situation were the highest at the intermediate level, followed by the elementary level and the advanced level. Students had the highest integrativeness at elementary level and their willingness to integrate into Chinese culture decreased as their course level went up. However, the differences on all four constructs were small. There was about one-third of a standard deviation difference on anxiety and attitudes toward the learning situation, two-fifths of a stand deviation difference on motivation, and one-fourth of a stand deviation difference on integrativeness.

To test the statistical significance of the difference on the four affective constructs by course level, four one-way fixed effects ANOVAs were conducted. The indepdent variable was the course level (i.e. elementary, intermediate, and advanced) and the dependent variables were the composite score for anxiety, motivation, integrativeness, and attitudes toward the learning situation, one for each analysis.

Because some subscales had unequal number of items, raw scores were first converted to

z-scores and then summed up to form the four composites.

The ANOVA results are presented through Table 9 to Table 12. No statistically

significant differences were found on the four composites across course levels. That is,

students' anxiety, motivation, integrativeness, and attitude towards the learning situation

did not differ by course level.

Similar procedure was applied to test the difference on language achievement

across three course levels. The results suggested that students' language achievement,

measured as a composite of the final grades, HSK listening scores and HSK reading

scores, did not differ significantly by course level, F (2, 220) =.03, p=.97. Because no

statistically significant differences were found on the major constructs of the study, the

students from different course levels were combined in later analysis.

Table 9
One-Way ANOVA Results for Anxiety by Course Level

Source	SS	df	MS	F	Sig.
Course Level	90.68	2	45.34	.70	.50
Error	14267.11	220	64.85		
Total	14357.79	223			

Note: the overall error rate is controlled at .05 level. Levene's Test was statistically non-significant, F (2,220) =1.68, p=.19

Table 10
One-Way ANOVA Results for Integrativeness by Course Level

Source	SS	df	MS	F	Sig.
Course Level	6.06	2	3.03	.80	.45
Error	832.65	220	3.79		
Total	838.71	223			

Note: the overall error rate is controlled at .05 level. Levene's Test was statistically non-significant, F (2,220) =0.34, p=.71

Table 11
One-Way ANOVA Results for Motivation by Course Level

Source	SS	df	MS	F	Sig.
Course Level	234.57	2	117.29	2.90	.06
Error	8886.38	220	40.39		
Total	9120.95	223			

Note: the overall error rate is controlled at .05 level. Levene's Test was statistically non-significant, $F (2,220) =0.44, p=.65$

Table 12
One-Way ANOVA Results for Attitudes toward Learning Situation by Course Level

Source	SS	df	MS	F	Sig.
Course Level	10.20	2	5.10	1.14	.32
Error	984.50	220	4.48		
Total	994.70	223			

Note: the overall error rate is controlled at .05 level. Levene's Test was statistically significant, $F (2,220) =5.40, p=.01$, Welch test was applied, Welch's $F (2, 62.67) =1.13, p=.33$

Research Question 3: What is the relative importance of language anxiety in predicting students' Chinese achievement when motivation, integrativeness, attitudes toward the learning situation, and course level are controlled?

To answer this question, a structural model was tested via LISREL (Mels, 2006). The original model contained five latent variables (i.e. anxiety, motivation, integrativeness, attitudes toward the learning situation, language achievement), but as discussed in Chapter Three, a principal component analysis of all the indicator variables in the original model suggested that the motivation variables and the integrativeness variables loaded onto the same factor. Therefore, a general motivation construct was created which is indicated by six variables (i.e. integrative orientation, attitudes toward native speakers, interest in foreign languages, motivational intensity, desire to learn Chinese, attitudes toward learning Chinese). The revised model was tested that contained four latent variables: anxiety, motivation, attitude towards learning situation, and

achievement. The fit of the structural model was evaluated using the chi-square statistic

and the fit indices shown in Table 13.

Table 13
Fit Indices and Their Threshold Values

Index	Threshold	Reference
Comparative Fit Index (CFI)	> .95	Keith, 2015
Root Mean Square Error of Approximation (RMSEA)	< .06	Hu & Bentler, 1999; Steiger, 2007
Standardized root mean square residual (SRMR)	< .08	Keith, 2015

Before testing the structural model, several assumptions were tested. Kline (2011)

noted that one can detect multivariate non-normality by assessing univariate normality.

Because all variables were distributed normally after data transformation, the assumption

of multivariate normality was met. Furthermore, the Mahalanobis Distance values were

examined and cases that had p-values less than .001 were considered as multivariate

outliers (Tabachnick & Fidell, 2013). Three cases met this criterion and thus were

removed from the data set. Finally, two collinearity statistics, tolerance and VIF, were

checked to determine collinearity among the independent variables. A tolerance value

less than .10 and a VIF larger than 10 was deemed to be problematic (Keith, 2015).

Because all the variables had tolerance larger than 1 and VIF less than 10, the assumption

of collinearity was met.

The revised model fit the data adequately but not well. The CFI was .92, the

RMSEA was .07, and the SRMR was .07. As such, the CFI and the RMSEA did not meet

the criteria for a good fit. The revised model was shown in Figure 5.
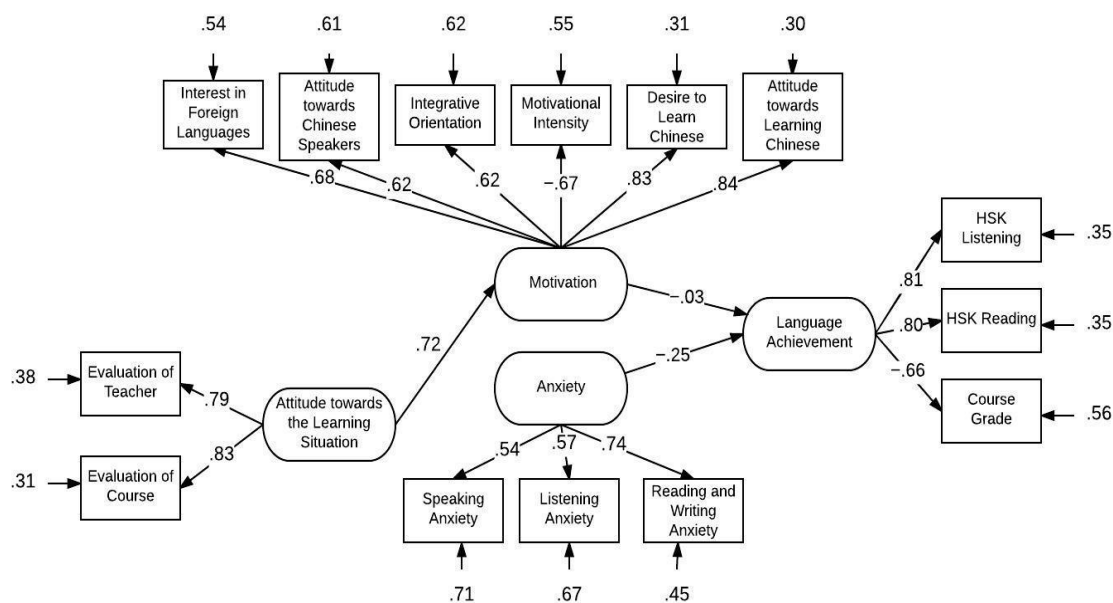
Figure 5. Standardized coefficients for the revised model

An inspection of the modification indices in the LISREL output file suggested that the motivational intensity variable was problematic as its correlations with several other variables were not adequately accounted for in the proposed model. A model without the motivation intensity variable was tested. This new model fit the data well and all fit indices met their respective criterion (see Table 14). The final model was depicted in Figure 6.

Table 14
Fit Indices for the Structural Models

Index	Model 1	Model 2
Chi-square	160.60	105.40
Degrees of freedom	73	61
Probability level	.00	.00
Comparative Fit Index (CFI)	.92	.96
Root Mean Square Error of Approximation (RMSEA)	.07	.06
Standardized root mean square residual (SRMR)	.07	.06

Note. Model 1 = the revised structural model. Model 2 = model without the motivational intensity variable.
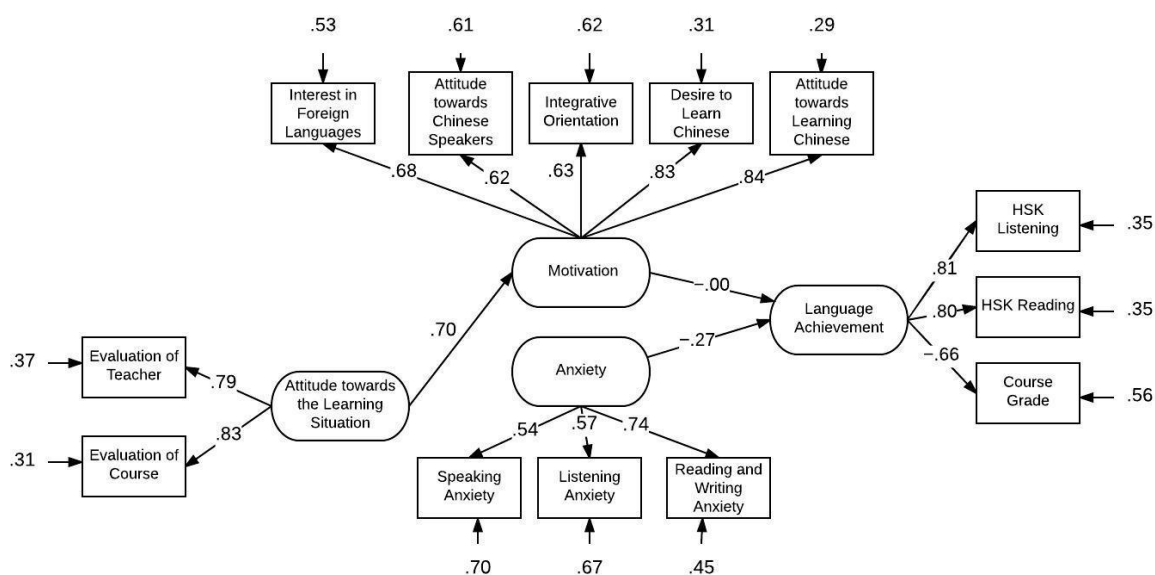
Figure 6. Standardized coefficient for the final model

The findings in Table 15 show that the variable attitude towards learning situation positively predicted motivation, β=.70, *p*<.01, R^2=.48. For each standard deviation increase in the students' attitude towards the learning situation, motivation have increased by .70 of a standard deviation. Cohen's f^2 was be used as a measure of effect size. A f^2 of .02 represents a small effect, .15 a medium effect, and .35 a large effect (Cohen et al., 2003). The findings suggested a large effect (f^2=.92) of attitude towards the learning situation on motivation. Anxiety negatively predicted achievement, β=-.27, *p*<.05, that is, for every standard deviation increase in students' language learning anxiety, there was a .27 standard deviation decrease in their language achievement, other things being equal. The finding suggested a small effect of Anxiety (f^2=.08) on Achievement. Motivation did not predict language achievement that was measured by HSK listening, HSK reading, and course grade.

The negative path coefficient from course grade to language achievement was due

to the data transformation procedure. Because the scores on the course grade variable were negatively skewed, a reflection was conducted to convert the distribution to be positively skewed before the square root transformation was applied. As a result of the reflection, higher scores on the course grade variable actually indicated lower performance, resulting in a negative correlation between the course grade variable and the language achievement construct.

Table 15
Standardized Path Coefficients for the Revised Structural Model

Path	β	SE	t	p
Attitude to motivation	.70	.03	7.06	.00
Anxiety to achievement	-.27	.04	-2.68	.01
Motivation to achievement	-.00	.27	-.02	.98

Note: the error rate is controlled at .05 level

Additional Analysis

Additional analysis was conducted to further explore the relationship between motivation and language achievement. Because motivation and anxiety were hypothesized to influence language achievement simultaneously, three multiple regressions were conducted, each regressing one achievement measure (i.e. course grade, HSK listening, HSK reading) onto the motivation and anxiety composite. To be consistent with the final model, a new motivation composite was created by summing the z scores on five variables, integrative orientation, attitudes toward Chinese speakers, interest in foreign languages, desire to learn, and attitudes toward learning Chinese. The results are presented through Table 16 to Table 18.

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Table 16
Summary of Simultaneous Multiple Regression Analysis for Variables Predicting Course Grade (N=223)

Variable	B	SE B	β	R^2	F
Anxiety	.03	.01	.24*	.09	10.20*
Motivation	.01	.01	.13*		

Note: * Statistically significant when the overall error rate is controlled at .05 level.

Table 17
Summary of Simultaneous Multiple Regression Analysis for Variables Predicting HSK listening score (N=223)

Variable	B	SE B	β	R^2	F
Anxiety	-.05	.03	-.13	.02	1.87
Motivation	.00	.02	.00		

Note: * Statistically significant when the overall error rate is controlled at .05 level.

Table 18
Summary of Simultaneous Multiple Regression Analysis for Variables Predicting HSK reading score (N=223)

Variable	B	SE B	β	R^2	F
Anxiety	-.09	.03	-.23*	.05	6.10*
Motivation	.00	.02	.00		

Note: * Statistically significant when the overall error rate is controlled at .05 level.

The results of the multiple regression analysis suggested that motivation was a statistically significant predictor of students' course grade when anxiety was controlled. For every standard deviation increase in motivation, there was .13 of a standard deviation increase in students' course grade. Motivation was not a statistically significant predictor of the HSK listening or HSK reading test score. Anxiety was a statistically significant predictor of the course grade and the HSK reading score but not the HSK listening score. Because the data on the course grade was reflected and transformed to meet the normality assumption, higher scores in the transformed course grade variable indicated lower

performance in the language course. Therefore, the results suggested that for students with higher anxiety tended to have lower course grade. For every standard deviation increase in anxiety, there was .24 of a standard deviation decrease in students' course grade and .23 of standard deviation decrease in HSK reading score.

CHAPTER V

SUMMARY, LIMITATIONS, DISUCSSION, AND IMPLICATIONS

This chapter provides a summary of the study, followed by discussions on the limitations and relevance to previous theory and research. Conclusions are then presented based on the findings, along with implications for research and practice.

Summary of Study

In an era of globalization, millions of people worldwide are studying a foreign or second language as a vital step towards cross-cultural understanding and communication, but as many studies have shown, learning a language is not a simple task. Many factors, such as age, aptitude, personality, learning style, and affective factors, are involved in the process of language learning that makes some learners more successful than others. One particular area of concern, which falls under the category of affective factors, is language anxiety.

Language anxiety was the single largest correlate of foreign language achievement amongst a number of affective variables (Gardner & MacIntyre, 1993). Anxiety interfered with cognitive processing at all stages of language learning (Chen & Chang, 2009, MacIntyre & Gardner, 1994), preventing learners from achieving desired performance (Awan, et al., 2010; Gardner & MacIntyre, 1993; Gregersen, 2003; Horwitz, 1986, Salehi & Marefat, 2014; Tanielian, 2014; Zhao & Whitchurch, 2011). Anxious learners tend to have low motivation and negative feeling about language study (Liu, 2012; Liu & Cheng, 2014), and those who are more anxious in language classrooms are more likely to withdraw from language courses or programs (Bailey et al., 2003; Saito-Abbott & Samimy, 1997). There are approximately one-third of foreign language

students who experienced at least a moderate level anxiety in language learning (Horwitz, 2010; Trang, et al., 2013). The fact that one student in every three reported language anxiety in classroom is a serious concern warranting the attention of researchers. As Horwitz (1995) pointed out, "to discuss foreign language learning without considering the emotional reactions of the learner to language learning is a serious oversight" (p.573).

The effects of anxiety on language achievement has been widely studied in Western languages for 40 years (Horwitz, et al. 1968; Macintyre & Gardner, 1989; Horwitz et al.2010), whereas such literature is largely absent in the learning of less-commonly taught languages such as Chinese. Chinese is a "category four" language in terms of language difficulty. That is, it takes about 2200 hours to bring the students to the same level of proficiency that could be reached after about 600 hours of instruction in French and Spanish (Foreign Service Institute). It is not difficult to foresee how anxiety might rise in the learning of Chinese, at least for English speakers. In a study of American students learning Chinese in China, for instance, Le (2004) found that the learners were highly motivated but highly anxious in Chinese learning. Regarding the effects of anxiety on Chinese achievement, Zhao and Whitchurch (2011) found a negative relationship between anxiety and course grade for college learners of Chinese in American universities ($r= -.30$). Yu and Watkins (2008) was the only study to investigate the relative contribution of anxiety in predicting Chinese achievement while controlling motivation and attitude variables, but the study focused on an all-inclusive model where achievement was regressed onto all the possible predictors and found no effect of anxiety on achievement. The present study is an initial attempt to investigate the influence of anxiety on Chinese achievement through a latent variable structural model, in which both

a measurement model of each latent variable and a structural model of the relationship among all the variables were proposed and tested.

Gardner's (1979, 1985, 2006) socio-educational model of second language acquisition laid the theoretical foundation for the present study. A major assumption of this theory is that language acquisition takes place in a social milieu where the learning process is shaped by social and educational factors. The community one lives in could influence his or her beliefs about the value of the second language and the goal of language learning; likewise, individuals could develop different attitudes in response to the educational environment in which language learning occurs.

Gardner (1985) proposed an operational formulation of the socio-educational model in which the effects of the social milieu are assessed by two constructs, integrativeness and attitudes toward the learning situation. The former represents the socio-cultural influence on one's language learning and the latter represent the educational influence. Integrativeness reflects the learners' willingness to communicate with people in other linguistic communities and to adopt their behavior patterns. Attitudes toward the learning situation, in formal learning context, refers to learners' attitudes toward the course structure, the teacher, the materials and activities associated with the course, etc. These two constructs directly influence the learner's motivation in language learning, which in turn influences their language achievement. Gardner (2006) extended the earlier model by adding the construct of language anxiety. Language anxiety and motivation are the two major affective factors that directly influence second language achievement. Gardner's socio-educational model provides theoretical support for the present study by (a) identifying the major constructs pertaining to second

language learning; (b) hypothesizing the relationship between the major constructs: anxiety, motivation, integrativeness, attitude, and achievement.

The main purpose of this study was to examine the relative importance of language anxiety in the prediction of Chinese achievement when the influence of other affective variables is accounted for. To tackle this research problem, three questions need to be answered: (a) What is the general profile of language anxiety for learners of Chinese? (b) Do language anxiety, motivation, integrivness, and attitudes toward the learning situation differ by students' course level? (c) What is the relative importance of language anxiety in predicting students' Chinese proficiency test scores and final course grades when motivation, integrativeness, attitudes toward the learning situation, and course level are controlled?

A total of 15 measures were used in this study. The anxiety construct was measured by three scales, *speaking anxiety*, *listening anxiety*, and *reading and writing anxiety*. Motivation was measured by *motivational intensity*, *desire to learn* Chinese, and *attitudes toward learning Chinese*. Integrativeness was measured by *integrative orientation*, *attitudes toward Chinese speakers*, and *interest in foreign languages*. Attitude towards the learning situation was measured by *teacher evaluation* and *course evaluation*. Finally, Chinese achievement was measured by HSK Listening test, HSK Reading test, and students' final course grade. In addition, a background questionnaire was used to collect information regarding students' class, major, age, gender, language heritage status, years learning Chinese, and years staying in China. The three measures of anxiety were taken from the *Chinese Language Learning Anxiety Scale* developed by Luo

(2014). The eight measures of motivation, integrativeness, and attitude were adapted from the international *Attitude and Motivation Test Battery* designed by Gardner (2010).

The participants were international students enrolled in the Comprehensive Chinese courses in a university in Southwestern China. The participants were from 18 classes, 90 were at the elementary level, 109 at the intermediate level, and 24 at the advanced level. In March 2017, one-on-one meetings were scheduled with the teachers where they provided information on students' course level and the appropriate HSK test level. The teachers provided feedback on the language difficulty of the instruments. In April, the researcher visited 18 classes and requested students who were willing to participate to complete a survey on their own time that contained a background questionnaire and scales for all the affective variables. These students then took an HSK listening and a reading test in class as part of their course assessment. At the end of the Spring 2017 semester, students' course grades in the Comprehensive Chinese course were collected from the department registry. The data were input into SPSS for statistical analysis. Given that students were from 18 different classes and teacher from each class selected the HSK test level for their students, the final course grades and HSK test scores were standardized within classes to control for the difference in grading and selecting. Descriptive statistics (*i.e.* means, standard deviations, range), one-way fixed effects ANOVAs, and latent variable structural modeling were conducted to answer the research questions.

Summary of Findings

For research question one, pertaining to students' anxiety profile, the current sample reported a moderate level of language anxiety in Chinese learning with no

noticeable difference among the four language skills (*i.e*. speaking, listening, reading, and writing). There were about 15% of students who reported high language anxiety and 16% who reported low anxiety.

For research question two, the results of one-way fixed effects ANOVAs revealed no statistically significant difference on anxiety, motivation, integrativeness, and attitude towards the learning situation across course levels.

For research question three, a five-factor model was proposed based on Gardner's socio-educational model of second language acquisition. Based on the findings in the principal component analysis, the original model was revised so that the motivation and integrativeness factor were combined into one general motivation factor. A test of the revised model showed an adequate but not good fit. The model was then revised again by removing one indicator variable, motivational intensity, from the model. The final model showed a good fit with the data. The path coefficients of the final model suggested that attitude towards learning situation positively predicted motivation. For each standard deviation increase in the students' attitude towards the learning situation, motivation increased by .70 of a standard deviation. This finding represented a large effect of the construct attitude towards the learning situation on motivation. Anxiety negatively predicted achievement, that is, for every standard deviation increase in students' language learning anxiety, there was a .27 standard deviation decrease in their language achievement, other things being equal. This finding suggested a small effect of Anxiety on Achievement. Additionally, motivation did not significantly predict language achievement measured by HSK reading test, HSK listening test, and final course grade.

Limitations

The study had four limitations. First, the study used a convenience sample. Due to the lack of random sampling, the findings may not be generalizable to the larger population of international students learning Chinese in Chinese universities. Compared with the national statistics released by the Ministry of Education in People's Republic of China (Ministry of Education, 2016), the current sample had a higher percentage of Asian students (84%) than the national sample (60%). These were also fewer students from Europe (4%) and North America (2%) compared to the national sample (17% from Europe and 9% from North America). The national statistics, however, included not only enrollment in universities but also in research institutes and other higher-educational institutions. The study had 223 participants, mostly from Asian countries. The findings of the study may be generalized to programs with similar composition in terms of students' nationalities.

Second, because the participants of this study were international students with diverse language backgrounds and Chinese proficiency levels, some students may have difficulty understanding the items on the Chinese survey. Two measures were taken to address the possible language barrier in data collection. First, translations of the survey were provided in six languages, which represented the most commonly spoken languages among the international students. Second, the Chinese survey were reviewed by the teachers before administration. Two teachers agreed that the survey was readable for the elementary level students with the assistance of the translations; all others considered the Chinese survey to be easy to understand for their students.

Third, this study used self-reports to measure language anxiety, motivation, and all other affective constructs. Although self-reported data are widely used in social science research, self-reported measures are often criticized for (1) the lack of construct validity, (2) inflated correlations between self-reported measures, and (3) the bias in individuals' responses (Chan, 2009). The present study used instruments that were reported to have good construct validity (Gardner, 2010; Luo, 2014). Chinese achievement was measured by objective tests rather than subjective ratings, thus averting inflations in the correlations between affective measures and outcome measures. To reduce the bias in responses, the researcher distributed the surveys in envelopes and collected them in person. Students' names were coded in a separate sheet and did not appear on the survey. Moreover, students were assured confidentiality of their responses before taking the surveys.

Finally, due to the lack of an adaptive test that assesses all proficiency levels, students had to take different HSK tests depending on their language proficiency. That is, each student took one of the three HSK listening tests (HSKIV, HSKV, HSKVI) and one of the three HSK reading tests (HSK IV, HSKV, HSKVI) based on teachers' evaluation of his or her proficiency levels. Although students' test scores were converted to z-scores within classes to rule out teachers' influence, there is no guarantee that all tests are equal in difficulty and item quality. As no information could be obtained regarding the equivalence of the HSK tests, this study is based on the premise that these tests are equal.

Discussion of Findings

Findings regarding anxiety level

This study first examined the general profiles of Chinese language learning anxiety for the group of international students in a Southwestern university in China. The findings suggested that the students generally reported a moderate level of language anxiety in all four language skills (i.e. speaking, listening, reading, and writing). This study used the 16-item *Chinese Language Learning Anxiety Scale* created specifically for learners of Chinese (Luo, 2013). In order to compare the anxiety score in this study with other studies, a mean item response was calculated by dividing the total anxiety score by the number of items. The mean item response for this study and for previous studies are shown below.

Table 19
Studies that Reported Language Anxiety Scores for College-level Learners

Studies	Language	Anxiety Scale	Mean Item Score (Total=5)
Rastegar & Karami (2015)	English	FLCAS	2.55
Luo (2013)	Chinese	CLLAS	2.58
Sellers (2000)	Spanish	FLCAS	2.60
Zhao & Whitchurch, (2011)	Chinese	FLCAS	2.69
This Study	Chinese	CLLAS	2.71
Yu & Watkins (2008)	Chinese	AMTB	2.79
Liu & Jackson (2008)	English	FLCAS	2.81
Demirdaş & Bozdoğan, (2013)	English	FLCAS	2.83
Horwitz (1986)	Spanish	FLCAS	2.86
Chen & Chang (2009)	English	FLCAS	2.94
Le (2004)	Chinese	FLCAS	3.34

As can be seen from Table 19, the studies that used the *Foreign Language Classroom Anxiety Scale* (FLCAS) generally reported moderate language anxiety, with mean item responses ranging from 2.55 to 2.95 (out of 5). With respect to Chinese learning, Zhao and Whitchurch (2011) conducted a study to investigate the Chinese learning anxiety of 122 college students in a public research university in Southern U.S. The finding revealed a moderate level of anxiety among the students and the mean item score was 2.69. Luo (2013) studied the Chinese learning anxiety of 428 students from two public universities in the Southwestern and Midwestern U.S. She also found a moderate level of language anxiety in Chinese learning with mean item response of 2.58. Using a sample of international students from two universities in China, Yu and Watkins (2008) reported a mean item response of 2.79 on the anxiety measure, which indicates a moderate level of Chinese anxiety for international learners. The only exception is the study by Le (2004) that investigated American students enrolled in Chinese courses in seven universities in China. The mean item score for the anxiety measure was 3.34 (out of 5), higher than most of the studies mentioned above. One reason could be that Le's (2004) study had a homogenous sample of American students who studied in China in study abroad programs. The educational system and teaching method in China may be quite different from that in America, causing the students to be more anxious than those in domestic programs. Meanwhile, given the fact that all the students were native speakers of English, they may find Chinese tones and characters more foreign than students from Japan, Vietnam, and other Asian countries do. In brief, the result of this study is generally consistent with previous studies suggesting a moderate level of anxiety in the language learning of college-level students.

Findings regarding the effects of the course level

The results of the present study indicated that students in elementary, intermediate, and advanced courses reported similar levels of anxiety, motivation, integrativeness, and attitudes toward the learning situation. This finding is inconsistent with previous studies (Kondo-Brown, 2013; Luo, 2013; Marcos-Llinás & Garau, 2009; Shaaban & Ghaith, 2000) that found statistically significant differences on affective variables by course level. Marcos-Llinás and Garau (2009)'s study on college learners of Spanish, for example, found that students at the elementary level had lower anxiety than students at the advanced level. In contrast, Luo (2013) investigated the effect of course level on anxiety with a sample of 428 college learners of Chinese. This study suggested that students in elementary and intermediate level courses had higher anxiety scores than those in the advanced course.

With respect to motivation and attitudinal variables, Kondo-Brown (2013) found differences on motivation and integrative orientation between first semester and fourth semester learners of Japanese. They found that students in the fourth-semester courses had more positive attitudes toward the value of learning Japanese than beginner learners, but they reported less effort in language learning than their first-semester counterparts. Shaaban and Ghaith's (2000) study of Arabic learners of English lends further support to the effect of course level on motivation and integrativeness. Students in the high intermediate level reported less effort in language learning and perceived less value of learning English than students in the intermediate level.

It is interesting to note that the effect of course level on language anxiety was not found in the lower proficiency levels. For example, Both Marcos-Llinás and Garau (2009)

and Luo (2013) compared beginner, intermediate, and advanced learners and none of the studies found statistically significant differences between beginner and intermediate learners on language anxiety. Zhao and Whitchurch (2011) compared year-one (elementary) and year-two (intermediate) learners of Chinese in an American university and found no difference on the anxiety measure. One possible explanation is that learners of a foreign language may need a long time to reach a stage where their anxiety, motivation, and attitude change dramatically. Such a stage may correspond to an advanced phase of learning. In this sense, the present study is consistent with previous studies because it found no difference between beginner and intermediate learners on language anxiety. The fact that no statistically significant differences were found between advanced learners and less-advanced learners in the present study may be due to the small sample size (n=23) at the advanced level. An examination of the descriptive statistics does reveal larger difference on the anxiety measure between the advanced level (M=45.24, SD=6.05) and the less-advanced levels than between the elementary (M=43.16, SD=7.72) and the intermediate level (M=43.20, SD=8.67).

Findings regarding the structural equation model

Findings on the measurement model

This study tested a model that specified the causal relationship between anxiety, motivation, integrativeness, attitudes toward the learning situation, and Chinese achievement. An examination of the measurement model using principal component analysis with varimax rotation found a four-factor structure. While anxiety, attitudes toward the learning situation, and language achievement loaded on three separate factors, measures for motivation and integrativeness loaded onto the same factor, which is

inconsistent with the model proposed by Gardner (2006, 2010). One possibility for the discrepancy is that the constructs as operationally defined in the AMTB may have different properties in different languages. Gardner's early studies on learners of French as a second language generally found motivation and integrativeness to be two separate constructs. In contrast, in a series of international studies by Gardner and associates concerning learners of English as a foreign language, motivation and integrativeness generally formed one single construct across twelve samples. Bernaus, Masgoret, Gardner, and Reyes (2004) administered a mini-AMTB to 114 secondary students in Spain and the results of principal component analysis with varimax rotation suggested that there were three distinctive motivation factors, one for each language (i.e. Catalan, Spain, and English). Thus, more studies need to be conducted to examine the construct validity of AMTB across languages.

Findings on language anxiety

This study found that language anxiety had a direct and negative effect on Chinese achievement. Anxious learners tend to have lower course grade and lower scores on the Chinese proficiency tests. This finding provides support to the Gardner's (2006, 2010) hypothesis that anxiety is one of the major affective variables that influence language achievement. The finding also confirms Krashen's (1981, 1982, 1985) affective filter hypothesis. Based on substantial empirical findings, Krashen proposed that the true causative variables that lead to second language acquisition are comprehensive input and low affective filter. On one hand, learners need to be exposed to sufficient amount of comprehensible input—the language input that is a little beyond the learners' level but is comprehensible with the help of context and extra-linguistic information—in order to

progress in second language acquisition. On the other hand, the learners need to have a low affective filter, so the language input could be processed successfully by the learner. Anxiety is considered a major component of the affective filter. High anxiety is associated with high affective filter and low language achievement.

The result regarding the effect of language anxiety expands upon previous research that has mainly focused on zero-order correlations between anxiety and language achievement. Since the 1980s, a number of studies have indicated a negative correlation between language anxiety and achievement measures across linguistic and instructional contexts (Aida, 1994; Awan, Azher, Anwar, & Naz, 2010; Gardner, 2006, 2012; Gardner & MacIntyre, 1993; Horwitz, 1986; Salehi & Marefat, 2014; Zhao & Whitchurch, 2011). In the context of Chinese language anxiety research, Zhao and Whichurch (2011) found a negative correlation between language anxiety and students' final course grades ($r= -. 30$). Although these studies provide important insights regarding anxiety in second language classrooms, they did not account for other individual difference variables that simultaneously influence the language learning process. A few studies sought to examine the relative importance of anxiety in predicting language achievement (Alkhateeb, 2014; Gardner and Bernaus, 2010; Hsieh, 2008), however, the results are inconclusive because these studies adopted different regression models that may or may not be supported by theory or research. This study was the first to test a structural model of relationships among anxiety, motivational variables, and Chinese achievement. The findings reveal that anxiety not only negatively correlates with the achievement measures but also predicts Chinese achievement when other motivational variables are controlled. Furthermore, this study utilized multiple measures

of achievement, including a standardized listening proficiency test, a reading proficiency test, and students' course grades. As such, the test of a measurement model reduces the measurement error and the findings provide stronger support to the negative effect of language anxiety on students' Chinese achievement.

Findings on motivation

Motivation is a complex construct that has been conceptualized differently in different theoretical frameworks. Gardner's socio-educational approach viewed motivation as a combination of individual's desire to learn, effort in learning, and enjoyment in the learning process. The self-determination theory by Ryan and Deci (2000) made distinctions between intrinsic motivation and extrinsic motivation; the former comes from the innate drive to seek changes and development whereas latter is generated by external sources such as rewards and punishments. Dörnyei (2005, 2009) proposed a motivational self-system that consisted of ideal self, ought-to self, and learning experience. The motivational self-system maintained that it is the noticed discrepancy between the current actual self and future self that generates motivation and motivated behaviors in language learning. Regardless of the different conceptualizations of motivation, all theories agree that motivation influences language learning process and outcomes.

In Masgoret and Gardner's (2003) meta-analysis on studies that utilized *the Attitude and Motivation Test Battery*, motivation was found to correlate with language course grades ($r=.37$), objective measures of language performance ($r=.29$), and self-ratings of language competence ($r=.39$). In another validation study of the international *Attitude and Motivation Test Battery*, Gardner (2006) found that motivation was a

statistically significant predictor of English course grades across all samples (r's =. 25 ~.49). Gardner and Bernaus (2010) conducted a study investigating the relative importance of motivation and anxiety in predicting the English achievement of secondary school students in Spain. The study found that motivation and language anxiety added significantly to the prediction of English grades after controlling for students' previous achievement.

The fact that this study found no statistically significant effect of motivation on Chinese achievement seems to contradict the findings of Gardner and Bernaus (2010). On closer examination, however, the achievement construct in the present study was measured by course grades and scores on two standardized proficiency tests. In contrast, the studies by Gardner and associates used course grades and achievement tests, the latter measured how much the students learned in specific language courses (*i.e.* achievement) rather than their ability to use the language in real-life situations (*i.e.* proficiency). It is likely that course grades and proficiency tests used in the present study are measuring different aspects of language achievement. The HSK listening and reading tests, although assessing the students' linguistic knowledge (e.g. vocabulary and grammar), are not designed for any specific language curriculum. The unfamiliar vocabulary and contexts in the proficiency tests require skill transfer, background knowledge, and a tolerance to ambiguity, all of which are not taught explicitly in class. On the other hand, students' course grade was an evaluation of what was learned in class as well as teacher's value judgement of the students' effort. It is conceivable to regard proficiency test as a reflection of deep learning while course grade is more indicative of students' effort.

To further explore this possibility, three separate regressions were performed with the data. Specifically, course grade, HSK listening score, and HSK reading score were regressed onto anxiety and motivation. Interestingly, both anxiety and motivation predicted course grade (anxiety: β=.24, p=.00; motivation: β=.13, p=.04, R^2=.09); anxiety predicted HSK reading score (β=-.23, p=.00, R^2=.05) but not motivation; neither anxiety nor motivation predicted HSK listening score. The fact that motivation predicted course grade but not proficiency test scores seems to suggest that motivation has a stronger association with students' performance in the language course than with their actual language proficiency. It is likely that motivated students are more engaged in learning and have invested more effort into homework and test, all of which could lead to higher course grade. On the other hand, the influence of motivation on language proficiency may be weak compared to the influence of learners' language background, years of learning, and language aptitude. Future studies may profit from measuring both course achievement and language proficiency. Additional measures of course performance, such as homework, quizzes, and unit exams could be used to further examine the relationship between motivation and language achievement.

Findings on attitudes toward the learning situation

This study suggests that students' attitudes toward the teacher and the course have a large effect on their motivation to learn the Chinese language. The more positively they viewed the teacher and the course, the more likely they reported investing effort into language and cultural learning. The findings of this study lend empirical support to the relationship between attitude towards the learning situation and motivation hypothesized in the socio-educational model (Gardner, 2006, 2010). According to the socio-

educational model, language learning occurs in a particular social and educational environment. Students' attitudes toward the learning environment directly influence their motivation to learn. In this study, the educational environment is operationalized as the learners' attitudes toward the Chinese teacher and the Chinese course. Furthermore, the attitude-motivation finding is consistent with the multiple regression study by Chua, Wong, and Chen (2009) that indicated a positive effect of students' perceived Chinese classroom environment on their motivation to learn Chinese. Of the three statistically significant predictors of motivation, "teacher support" concerns students' evaluation of teacher; "involvement" and "task orientation" pertains to the evaluation of the language course.

Conclusion

This study investigated the language anxiety profiles of international learners of Chinese and examined the relative importance of anxiety and motivational variables in predicting Chinese achievement. As for students' anxiety profile, the study suggested that learners of Chinese generally reported a moderate level of anxiety in language learning, which is consistent with what was reported in previous studies for learners of French, Spanish, and English. It seems that language anxiety is stable across different languages—Chinese is not more anxiety-inducing than other languages even though it is considered difficult to learn.

The study did not find statistically significant difference among elementary, intermediate, and advanced students on their anxiety, motivation, integrativeness, and attitudes toward the learning situation. Such difference has been found in previous research between advanced students and non-advanced students but not between

elementary and intermediate students. Due to the small sample size in the advanced group of the present study, it remains unclear whether advanced students had different affective profiles compared to their less-advanced counterparts.

The results of latent variable structural equation modeling partially confirmed Gardner (1985, 2006, 2010)'s socio-educational model of second language acquisition. Gardner hypothesized that anxiety and motivation are the two major affective variables that directly influence language learning and achievement. On one hand, consistent with previous literature on language anxiety, this study found a small negative effect of language anxiety on achievement. That is, students with higher anxiety in Chinese learning are likely to have lower course grades and proficiency test scores. On the other hand, the findings of this study contradict theories and research that found motivation to be an important predictor of language achievement. When the three achievement measures were looked at separately, for example, motivation was found to predict the course grade over and above the influence of anxiety. It is probable to conclude that anxiety and motivation both contribute to the prediction of language achievement when it is measured by course grade.

Gardner's (2006, 2010) model hypothesized two predictors of motivation, integrativeness and attitudes toward the learning situation, which are posited to indirectly influence language achievement through the mediation of motivation. This study found a large effect of attitudes toward the learning situation on students' motivation to learn. Integrativeness, however, was found be inseparable from the motivation construct. Measures of integrativeness correlated strongly with measures of motivation. Thus, these measures were combined to indicate a general motivation construct. As integrativeness

indicates social and cultural influence on language learning (Gardner, 2006, 2010), it is possible that in the special context of current study, integrativeness does not fully capture the influence of social environment on language learning. In other words, some factors other than students' willingness to integrate into Chinese culture may have exerted strong influence on students' motivation.

Implications for Research

There are several theoretical implications that can be drawn from this study. As the findings of this study shows that anxiety can influence language achievement in structural equation modelling, models of second language acquisition should incorporate this component and recognize the importance of anxiety in language learning. In second language research, anxiety has been treated as part of self-confidence (Clement, 1985), personality (McCrae & Costa, 2003), or a manifestation of emotion. Further studies are needed to increase understanding of the role of anxiety in second language learning and its relations with personality, self-confidence, and emotion. More traditional individual difference variables (e.g. language aptitude, learning strategy) can be incorporated in the model to paint a comprehensive picture of second language learning process.

This study found a moderate degree of language anxiety in learners of Chinese. Like prior studies that reported a moderate level of language anxiety, the focus was on the existence of language anxiety rather than the learners' experience. What does a moderate level of anxiety mean? It represents nothing more than a response between "disagree" and "neither disagree or agree" in various anxiety scales. As the negative effects of anxiety are consistently confirmed in theory and research, qualitative research

should be conducted to study how anxiety is manifested in language learning and how it is processed.

While this study did not find a statistically significant relationship between motivation and language achievement in general, the findings lend support to the predictive relationship between motivation and students' course grade. It is worth examining whether motivation influences language achievement in its different measurements. For example, Gardner (1997) suggested that motivation correlates higher with global measures of achievement (*e.g.* GPA, course grade) than objective measures (*e.g.* achievement test, quiz). More studies on motivation should be undertaken to examine students' performance in specific skills, tasks or phase of learning. Furthermore, longitudinal studies on language proficiency growth could provide valuable information on the long-term effect of anxiety and motivational variables in second language learning.

The motivation construct in this study is indicated by a combined measure of integrativness and motivation. Because the motivation construct as measured by the *Attitude and Motivation Test Battery* tend to differ by language (Bernaus, et al., 2004; Gardner, 2010), more studies are needed to test the validity of the motivation construct in different languages and learning contexts. In addition, other conceptualizations of motivation, such as intrinsic/extrinsic motivation, attribution, and ideal self/ought-to self can be incorporated into models of language learning to test the relations between motivation and other variables.

Finally, the uniqueness of the international sample of this study needs to be taken into consideration when interpreting the findings. The current sample has diverse

language backgrounds. Of the 223 students, 60 were learning Chinese as a second language, 91 were learning Chinese as a third language, 53 as a fourth language, and 19 as fifth or sixth language. Previous research has found a consistent effect of multilingualism on foreign language anxiety (Dewaele, 2007; Dewaele et al. 2008, Dewaele, 2010). Knowing more languages is linked to higher self-confidence, higher perceived communicative competence, and lower anxiety in foreign language learning. This may explain why the language anxiety level of the current sample was at the lower realm when compared to previous findings.

The international students also differ from domestic students academically. In the current investigation, for example, all students majored in international education have received scholarship from the university, accounting for 27% of the research sample. Given the fact that the university or government scholarship requires good academic standing and strong motivation to learn, there may be less variability in the international sample in terms of their affective profile and language achievement, which may lead to a weakened relationship between the affective variables and language achievement.

The fact that 85% of the sample was from Asian countries needs to be considered when we interpret the findings. Compared to learners of Chinese in American universities, the current sample may have closer cultural affinity with Chinese culture than typical American students. For example, Asian students in this sample are accustomed to teacher-centered instructional methodology prevalent in Asian higher education institutions, rendering them less anxious in a similar Chinese classroom. Thus, it is recommended that future researchers should consider the characteristics of student sample (e.g., international students learning Chinese in China, American students

learning Chinese in China, and students learning Chinese in their native country) in the development of research hypothesis and interpretation of findings.

Implications for Practice

Since the 1980s, research on second and foreign language anxiety generally has focused on learners of western languages, little is known about learners of less-commonly languages such as Chinese. The growing worldwide enthusiasm in learning Chinese calls for more research on learner characteristics in Chinese classrooms to better guide teaching practice. This study constitutes an initial attempt to investigate the effect of anxiety through testing a model of relationship among anxiety, motivation, attitude, and language achievement. The study found that anxiety negatively influenced Chinese achievement when motivation and attitude were accounted for.

While language programs generally emphasize the cultivation of motivation in language learning, the importance of anxiety is not recognized. Students' anxious reactions, such as avoiding answering questions, being unwilling to participate in class activities, or performing poorly in language learning tasks, are sometimes interpreted as lack of effort or ability. The findings of this study and those of previous studies suggested that anxiety exists in almost every language classroom regardless of language and instructional contexts. Language teachers should be aware of anxious learners in their classrooms and give them due attention and assistance.

Given the debilitating role of anxiety in Chinese learning, measures need to be taken to reduce students' anxiety. There are three main sources of language anxiety (Vogeley, 1998; Young, 1991; Trang et al. 2013). The first one is task difficulty, namely, anxiety arises when the learning task is too difficult for the students. It is recommended

that teachers reduce students' perceived task difficulty by providing scaffolding in task completion. For example, topic preparation, vocabulary instruction, preview of questions, and repetition of aural input can be used to reduce students' English listening anxiety (Chang and Read, 2008). In addition, Audio-visual aids can be used in listening and reading comprehension tasks to assist decoding of information (Lee, Lee, Liao, and Wang, 2015).

The second source of anxiety pertains to learners' beliefs. Anxious learners usually think that they need to give correct answers all the time (Pishghadam & Akhondpoor, 2011). Teachers can tackle such thinking by offering students' opportunity to openly discuss their fear and concerns and by encouraging the students to embrace ambiguity in language learning. Gregersen (2006) found that students who perceived a disparity in their language skills (i.e. speaking, listening, reading, and writing) had significantly higher anxiety than those who didn't. As such, schools and teachers should consider integrating four skills in language instruction through content-based instruction, task-based instruction, and experiential learning.

The last source of anxiety results from instructional practice. Lack of practice and test situations are generally reported as anxiety-provoking for the students (Bekleyen, 2009; Chang, 2010; Kim, 2000). It is advisable to leave students ample time for practice and use more informal assessment that focuses on the process instead of the product. Several methods of giving feedback are conducive to a supportive classroom atmosphere, such as using indirect correction of students' mistakes, keeping the confidentiality of test scores, using more non-verbal praise than direct verbal praise, etc. Moreover, a sense of

teacher immediacy can be fostered through using of humor and positive eye contact and gestures.

Teachers do not need to follow all the suggestions above in order to create a low-anxiety classroom. Alrabai (2016) conducted a study on motivational intervention for EFL learners and found that students' motivation increased when the teachers followed the six general guidelines (*i.e.* develop a positive relationship with students, help students cope with language anxiety, build students' self-confidence, enhance students' autonomy and control, and establish relevance between what is learned in class and students' lives outside the classroom). Teachers behaviors vary from classroom to classroom, and perhaps simply an awareness of students' affect and a caring attitude could make a significant difference in students' learning experience, thus positively influencing the learning outcomes.

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Appendices

Appendix A

Personal Background Questionnaire

The questions below are for research purpose only, and any information obtained will remain confidential. Please answer the following questions or check the proper answers.

1) What is your age?
   ……………………………………………………………………………

2) Are you: ❏ male ❏ female

3) What is your major?
………………………………………………………………………

4) What is your nationality?
………………………………………………………………………

5) What language or languages do you mostly use at home?
……………………………………

6) Does anyone in your immediate family speak Mandarin Chinese?

   ❏ no
   ❏ yes, one or more?
………………………………………………………………………

7) How many years have you studied Chinese? ……………………………

8) Have you ever traveled to or lived in China before?

   ❏ no
   ❏ yes, for how long? …………………………………………………

9) How would you rate your level of Chinese proficiency?

   ❏ poor ❏ not good ❏ average ❏ good ❏ excellen

Appendix B

Changes in the Attitude and Motivation Test Battery from Gardner (2010)

Changes in the Attitude and Motivation Test Battery

Item	Modification
1. "English"	"Chinese"
2. "English"	"Chinese"
3. "English"	"Chinese"
4. "English"	"Chinese"
5. "English speaking countries"	"Chinese speaking countries and regions"
6. "English"	"Chinese"
7. "English"	"Chinese"
8. "English"	"Chinese"
9. "English"	"Chinese"
10. "English"	"Chinese"
11. "English"	"Chinese"
12. "English"	"Chinese"
23. "English"	"Chinese"
24. "English"	"Chinese"
25. "English"	"Chinese"
26. "English"	"Chinese"
27. "English"	"Chinese"
28. "English"	"Chinese"
29. "English"	"Chinese"
30. "English"	"Chinese"
31. "English"	"Chinese"
32. "English"	"Chinese"
33. "English"	"Chinese"
34. "English"	"Chinese"

35. "English"   "Chinese"

36. "English"   "Chinese"

37. "English"   "Chinese"

38. "English"   "Chinese"

39. "English"   "Chinese"

40. "English"   "Chinese"

41. "English"   "Chinese"

42. "English"   "Chinese"

43. "English"   "Chinese"

44. "English"   "Chinese"

45. "English", "school program"   "Chinese", "my high school program"

46. "English"   "Chinese"

47. "English"   "Chinese"

48. "English"   "Chinese"

49. "English"   "the Chinese language"

50. "English"   "Chinese"

51. "English"   "Chinese"

52. "English"   "Chinese"

53. "English"   "Chinese"

54. "English teacher"   "Chinese teacher in this class"

55. "English"   "Chinese"

56. "English"   "Chinese"

57. "English"   "Chinese"

58. "English"   "Chinese"

59. "English"   "Chinese"

60. "English"   "Chinese"

61. "English"   "Chinese"

62. "English"   "Chinese"

63. "English class"   "this class"

64. "our English class"   "this class"

65. "my English class"   "this class"

66. "English class"   "this class"

67. "English"   "this class"

68. "English"   "this class"

69. "English"   "this class"

70. "my English class"   "this class"

71. "my English class"   "this class"

72. "my English class"   "this class"

Appendix C

Consent form for Students

CONSENT TO PARTICIPATE IN A RESEARCH STUDY

Dear Participant:

Below is a description of the research procedures and an explanation of your rights as a research participant. You should read this information carefully. If you agree to participate, you will sign in the space provided to indicate that you have read and understand the information on this consent form. You are entitled to and will receive a copy of this form.

You have been asked to participate in a research study conducted by Qi Wang, a graduate student in the Department of Learning and Instruction at University of San Francisco. This faculty supervisor for this study is Robert Burns, a professor in the Department of Learning and Instruction at University of San Francisco.

WHAT THE STUDY IS ABOUT:

The purpose of this research study is to examine the predictive relationship between language anxiety and language achievement for learners of Chinese. Language anxiety refers to the feeling of tension and apprehension specifically associated with second language context. The analysis will show the relative importance of language anxiety in relation to motivation and attitudes in the prediction of Chinese achievement.

WHAT WE WILL ASK YOU TO DO:

During this study, the following will happen:

1. You will complete a questionnaire consists of a background form, a survey about language anxiety and a survey about motivation and attitude in language learning.   The background form will give basic information about you, including name, age, gender, major, nationality, native language, experience learning Chinese, and self-rating of language proficiency. The survey about language anxiety has 16 items. You will be asked to rate your perception of each item using a five-point Likert scale from 5 = Strongly Agree to 1 = Strongly Disagree. The survey about motivation and attitude has 72 items. You will be asked to rate your perception of each item using a seven-point Likert scale from 7=Strongly Agree to 1=Strongly Disagree.

2. You will complete a Chinese language proficiency test comprised of a listening section and a reading section. The test may contain 70-90 items depending on the proficiency level associated with the test.

3. At the end of the Spring 2017 semester, your final exam grades in the Comprehensive Chinese course will be collected from your instructor.

DURATION AND LOCATION OF THE STUDY:

Your participation in this study will involve one session that lasts 25-30 minutes and one session that lasts 60-75 minutes. The study will take place in class.

POTENTIAL RISKS AND DISCOMFORTS:

We do not anticipate any risks or discomforts to you from participating in this research. If you wish, you may choose to withdraw your consent and discontinue your participation at any time during the study without penalty.

BENEFITS:

You will receive no direct benefit from your participation in this study; however, we hope to learn more about the phenomenon of language anxiety from your participation. Findings from this study will have important implications for language teachers to create a low-anxiety learning environment.

PRIVACY/CONFIDENTIALITY:

Any data you provide in this study will be kept confidential unless disclosure is required by law. In any report we publish, we will not include information that will make it possible to identify you or any individual participant. Specifically, your names and data will be visible only to the researcher and kept in a secure location where only the researcher has the access. Once the linkage between your survey data and achievement data is established, the page containing your name will be destroyed by the researcher.

COMPENSATION/PAYMENT FOR PARTICIPATION:

You will receive 50 RMB via amazon gift card for your time if you complete the questionnaire and the language test. You will receive 25 RMB via an amazon gift card for your participation after completing each of the two activities. If you choose to withdraw before you have completed participating, you will still receive full reimbursement.

VOLUNTARY NATURE OF THE STUDY:

Your participation is voluntary and you may refuse to participate without penalty. Furthermore, you may skip any questions that make you uncomfortable and may discontinue your participation at any time without penalty. Non-participation or withdrawal from the study will not affect your grade. In addition, the researcher has the right to withdraw you from participation in the study at any time.

Please ask any questions you have now. If you have questions later, you should contact the principal investigator: Qi Wang at 831-277-6981 or qwang37@dons.usfca.edu. If you have questions or concerns about your rights as a participant in this study, you may contact the University of San Francisco Institutional Review Board at IRBPHS@usfca.edu.

Thank you so much for taking the time to participate in this study!

Kind regards,

Qi Wang

I HAVE READ THE ABOVE INFORMATION. ANY QUESTIONS I HAVE ASKED HAVE BEEN ANSWERED. I AGREE TO PARTICIPATE IN THIS RESEARCH PROJECT AND I WILL RECEIVE A COPY OF THIS CONSENT FORM.

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PARTICIPANT'S SIGNATURE   *DATE*