ABSTRACT

Title of Document: LANGUAGE LEARNING STRATEGIES IN RELATION TO ATTITUDES, MOTIVATIONS, AND LEARNER BELIEFS: INVESTIGATING LEARNER VARIABLES IN THE CONTEXT OF ENGLISH AS A FOREIGN LANGUAGE IN CHINA

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As China progresses toward learner-centered pedagogy, understanding how learners learn and what influences their learning has become just as important as determining what they learn. This is especially true in the context of English as a foreign language in China. In this context, knowledge of English has increasingly become a tool for participation in the international arena, and the number of English language learners is growing at an unprecedented rate. In addition, research on Chinese learners of English is receiving mounting attention.

This dissertation explored the relationships among learners' use of language learning strategies, attitudes, motivations, beliefs about language learning, and English language proficiency for 1,201 university students in China. Group differences and manifestations of these variables in individual learners were also examined. Findings of this study suggested that two sources of influence were the most powerful in relation to learners' use of language learning strategies: (a) ability beliefs, and (b) motivational orientations, especially orientation toward competition and academic self-efficacy. These two factors,

i.e., ability beliefs and the above-mentioned motivational orientation, in conjunction with two other factors, intrinsic motivation and compensatory vocabulary learning strategy use, accounted for a significant portion of the variance in English language proficiency in the latent variable path analysis. Findings also suggested that a multitude of contextual issues, such as English curriculum, national standardized English tests, the status of English as an international language, classroom language instruction, and peer influence, interplayed to affect learners' strategy use, motivational orientations, and attitudes about language learning, resulting in distinct dimensions and patterns. Results of this study speak cogently to the need for language pedagogy in China to explicitly integrate strategy instruction and address the motivational aspect of language learning for the purpose of engaging learners and enhancing learning effectiveness. Future research should systematically examine patterns and sources of variation in these learner variables as well as identify their developmental trajectories.

LANGUAGE LEARNING STRATEGIES IN RELATION TO ATTITUDES, MOTIVATIONS, AND LEARNER BELIEFS: INVESTIGATING LEARNER VARIABLES IN THE CONTEXT OF ENGLISH AS A FOREIGN LANGUAGE IN CHINA

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Dedication

To my family

My mother Xinglan Wan

For her love and enduring support

My father Xiuli Yin

For his passion and faith in my education

My husband Qingyu Wei

For his tenderness and affection

My beloved son Hongbo Wei

For the joy and vitality he brings into my life

And my brother Chengwei Yin

For his companionship

This dissertation is dedicated to them.

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husband for patiently waiting for the graduation day to come, and my brother for always giving me strong moral support. I am very blessed to have the treasure of my life, my son, who is now four years old.

Most important of all, I would like to thank the 1,201 students in China who participated in this study and, especially, the eighteen students who trustworthily shared with me their stories about language learning.

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Chapter 1: Introduction

The impetus for this study stemmed from my experience as a classroom teacher at a foreign language university in China. In the late 1990s, the English curriculum was long standardized nationwide at the secondary and postsecondary level. Additionally, the trend of learning English burgeoned and flourished, and the number of English language learners in China started to grow at an unprecedented speed.

Reflecting on my experience as an English teacher and learner in China in the late 1990s and early 2000s, I saw myself as inextricably woven into this trend. As a teacher, I took delight in sharing with my students the fruits of teaching and learning and seeing them make progress. I also saw some of them experience difficulties in, for instance, understanding reading or listening material. As a learner, I experienced fruitful and joyful learning when I was able to acquire language skills and develop my second language competence over time. There also were times when learning seemed to be less gratifying.

As language educators, we all seemed to be aware of the fact that some learners enjoy learning while others describe it as unpleasant or overly difficult. It also occurred to us that learners do not necessarily learn the same way and how they learn relates directly to learning outcomes. It is, therefore, important for us to understand how learners learn and to use that knowledge to help improve their learning.

This thread of thought coincided with the line of research on language learning strategies that dated back to the 1970s when research on the theme "What the good language learner can tell us" debuted (Naiman, Fröhlich, Stern, & Todesco, 1978; Rubin, 1975; Stern, 1975). This research bloomed in the late 1980s and 1990s with a richness in theoretical conceptualizations as well as empirical evidence validating the relationship

between learners' strategy use and learning outcomes. It also expanded in scope as educators and researchers stepped beyond the focus on this relationship to examine key learner variables that affected strategy use. These included, among others, gender, academic major, attitudes/motivation, and learner beliefs.

EFL Context in China

Since as early as 1985, China has had the largest number of English language learners in the world (Cheng, 2008; Crystal, 1985). English language education was mandated in the mid 1990s from Grade 3 in elementary school to junior high school (Cheng, 2008). The study of English is a compulsory subject for all tertiary students (Cheng, 2008; Yang, 2001). Non-English majors are required to learn English for at least two years (Cheng, 2008). Annually, around 5.5 million college students take the College English Test (CET), a national standardized English language proficiency test (Yang, 2001). In September 2000, 2 million school graduates were enrolled in universities (Wu, 2001). In 2004, the number of secondary school graduates was estimated to be 7.23 million (Cheng & Qi, 2006). Millions of English as a foreign language (EFL) learners take regular English courses, 4 class hours a week, 18 weeks one semester, for 12 semesters in high school and 4-8 semesters at university (Wu, 2001).

In China's drive toward economic prosperity and modernity, English has acquired high prestige. It is perceived as a medium for intercultural communication and a key to facilitating China's participation in the international arena and its acquisition of western scientific knowledge and technological expertise (Ross, 1992, as cited in Hu, 2002). Zhao (1995) argues that English is primarily perceived as a medium for social and economic mobility. Performance on national standardized English tests, for instance, is an

important criterion for determining students' access to higher levels of education. Certificates in nationally accredited English tests such as the CET have become important job qualifications.

Learning English in a Chinese language environment, however, is described as a "rather daunting task" (Wu, 2001, p. 191). The EFL context in China is typically depicted as an input-poor and acquisition-poor environment and, compared with the English as a Second Language (ESL) context, is characterized by limited availability of native speakers for conversational purposes and of authentic learning materials (Gu, 2002; Hu, 2002). Prior to the 1980s, the grammar-translation method dominated English language education in China (Hu, 2002). Since the 1980s, communicative language teaching (CLT) arose to replace the traditional grammar-translation method and was advocated strongly for the purpose of developing learners' communicative competence (Yu, 2001). Full-fledged implementation of CLT, however, was inhibited by a host of factors. These included, among others, limited teaching resources, large class size, and a lack of full understanding of Chinese learners' learning process in the formal school environment (Hu, 2002; Wu, 2001; Yu, 2001). Hu (2002) argues, for instance, that despite the top-down reform initiative, CLT in China did not seem to produce expected fundamental changes partly due to the conflict between the CLT tenets and practices and the traditional Chinese culture of teaching and learning. In this culture, for instance, teachers are "virtuosos of learning" (Cortazzi & Jin, 1996). They assume a directive role and have the sole right to evaluate their students (Hu, 2002). Students in this culture "tend to feel uneasy in a more egalitarian communicative learning environment" (Hu, 2002, p. 100). In such a context, research on learner variables has the potential to unleash learner

initiatives, enhance learning, and facilitate the implementation of learner-centered pedagogy.

This dissertation explored how university EFL students in China learned English, their attitudes about language learning, their motivations for learning, and their beliefs about language learning. It also probed the relationships among strategy use, attitudes and motivation, learner beliefs, and English language proficiency, as well as group differences and developmental patterns of these variables. This chapter presents: (a) the statement of the problem; (b) the purposes of this study; (c) research questions; (d) the significance of this study; (e) defining key terms; (f) the overall research design; (g) limitations; and (h) the organization of this dissertation.

Statement of the Problem

The problem includes: (a) unexplored relationships between strategy use and other key learner variables such as attitudes, motivation, and learner beliefs in the EFL context in China; (b) strategy use that is measured at the observed level rather than through deeper latent constructs; (c) the existence of unknown relationships among latent strategy use factors, attitude and motivation factors, belief factors, and English language proficiency; and (d) the need for strategy research in this context to examine a wide range of academic majors.

A multitude of research has been conducted in this context since the 1980s and the 1990s (Bedell, 1996; Gu, 2002; Gu & Johnson 1996; Huang, 1982; Huang & van Naerssen, 1987; Nisbet, 2002; Wen & Johnson, 1997; Zhang, 1999, 2003). These studies have examined strategy use in relation to learner beliefs (e.g. Gu, 2002; Gu & Johnson, 1996; Wen & Johnson, 1997), gender (e.g., Gu, 2002; Wen & Johnson, 1997), and

academic majors (Gu, 2002). To date, however, few Chinese studies have systematically explored and validated the relationships among strategy use, attitudes and motivation, and learner beliefs.

Further, unlike strategy research conducted in the U.S. and Taiwan (Ehrman & Oxford, 1988; Hsiao & Oxford, 2002; Oxford & Nyikos,1989), strategy research in China has examined strategy use mostly in terms of observed frequency of use (e.g., Bedell, 1996; Huang & van Naerssen, 1987; Gu, 2002). Few Chinese studies have explored and validated latent strategy use factors and the relationships between strategy use factors and other latent learner factors. This gives rise to the need to conduct strategy research at the latent level in China.

The relationships between strategy use and English language proficiency have been examined in China (Gu, 2002; Gu & Johnson, 1996; Wen & Johnson, 1997). However, since not many studies have probed the relationship between strategy use and other key learner variables such as motivation and learner beliefs, it is yet to be determined how the inclusion of these other variables affects the relationship. How the aforementioned learner variables relate to English language proficiency is yet to be explored.

The effect of academic major on strategy use has been explored in the U.S. (e.g. Ehrman & Oxford, 1988; Oxford & Nyikos, 1989), in Hong Kong (Peacock & Ho, 2003), and in China (Gu, 2002). Gu (2002), for instance, compared arts and science majors in terms of their strategy use. How the inclusion of other academic majors, such as engineering, affects the comparison remains largely unexplored. This creates a vacuum in China's strategy research in the sense that the differences among academic majors

beyond arts and science students in the use of language learning strategies remain mostly unknown.

Purposes of the Study

The purposes of the present study were (a) to explore and validate the factor structure underlying the three scales in the *Language Learning Questionnaire* (Yin, 2005) used to measure strategy use, attitudes and motivation, and learner beliefs, (b) to identify the effect of gender and academic major on the aforementioned learner variables, and the relationships among them and the English language proficiency, and (c) to examine how the aforementioned learner variables manifested in individual learners.

The first purpose was to explore and validate the factor structure underlying the three scales used to measure the three learner variables in the present study. A variety of findings have been generated thus far in studies of these learner variables in different cultural contexts (e.g., Brown, 1996; Griffiths, 2003; Hatcher, 2000; Hsiao & Oxford, 2002; Nakanoko, 2004; Nisbet, 2002; Oxford & Nyikos, 1989; Park, 1995; Schmidt & Watanabe, 2001; Tamada, 1996; Yang, 1999). This study, therefore, contributed to a better understanding of the dimensions underlying the aforementioned learner variables among university students in the EFL context in China.

The second purpose was to identify group differences in the three learner variables. This study explored differences in strategy use, attitudes, motivations, and learner beliefs that related to gender and academic major. Significant differences found between males and females and among different academic majors not only revealed patterns of these group differences but also strengthened the validity of the latent factors identified here.

The third purpose of the present study was to explore manifestations of these variables in individual learners. This entailed understanding what general strategies learners of various proficiency levels at different universities used to learn English, how they developed their knowledge about strategy use, and what their attitudes and motivational orientations were. By examining patterns of differences and similarities aggregated across individual learners, the present study shed light on how these learner variables developed and changed, and what influences contributed to the developmental trajectories of these variables.

Theoretical Framework

The theoretical framework of this research consists of three components: (a) Oxford's 1990 system of language learning strategies; (b) Horwitz's (1988, 1999) system of beliefs about language learning; and (c) Schmidt and Watanabe's (2001) model of language learning motivation. Details about these models, their components, the instruments that reflect the models, and empirical evidence validating the models are presented in chapters 2 and 3.

Oxford's 1990 Model of Language Learning Strategies

In Oxford's 1990 model, learning strategies are "steps taken by students to enhance their own learning" (Oxford, 1990, p. 1) and "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, and more transferrable to new situations" (p.8). All language learning strategies are geared toward the broad goal of communicative competence, which requires learner engagement in authentic interactions using meaningful, contextualized language. Further, learning strategies

fosters greater self-direction for all learners. This model recognizes the relevance of cognitive functions such as rehearsal and memorization for language learning. It additionally acknowledges that metacognition, affect, and social interaction play just as important a role in language learning and, therefore, organizes learning strategies around six central categories: *cognitive strategies*, *memory strategies*, *metacognitive strategies*, *affective strategies*, *social strategies*, and *compensation strategies*. Among the many factors that affect the choice of learning strategies are motivation and learning purposes.

Horwitz's (1988, 1999) System of Beliefs about Language Learning

Learner beliefs about language learning are notions that learners hold about learning a new language (Horwitz, 1988). Learners develop their own theories about language learning, and these are likely to influence learners' effectiveness in the classroom. They also seem to "have direct relevance to the understanding of student expectations of, commitment to, success in, and satisfaction with their language classes" (Horwitz, 1988). Learner beliefs connect naturalistically to learners' use of language learning strategies. Students' description of language learning strategy use, for instance, was found to be consistent with their stated beliefs about language learning (Wenden, 1987).

Horwitz's system of beliefs about language learning, as reflected in the *Beliefs about Language Learning Inventory* (BALLI), consists of the following five major areas: (a) beliefs about the difficulty of language learning, which concerns the general difficulty of learning a second language as well as perceptions of the difficulty of a specific target language; (b) foreign language aptitude, which concerns the existence of aptitude and opinions about the kind of individuals who possess it; (c) beliefs about the language learning process, which concerns student ideas about "what it means to learn a language

and how to go about it" (Horwitz, 1999, p. 565); (d) beliefs about how to communicate; and (e) motivation and learner expectations (Horwitz, 1988, 1999). The present study adopts this system and adapts specific items in the *BALLI*. Details regarding how the adaptations were made are presented in chapters 2 and 3.

Schmidt and Watanabe's (2001) Model of Language Learning Motivation

Motivation comes from the Latin verb *movere*, which means to move (Pintrich, 2003). Motivation theories attempt to answer questions about "what gets individuals moving" (energization), and toward what activities or tasks (direction: Pintrich & Schunk, 2002, as cited in Pintrich, 2003, p. 669). In second language research, "motivation provides the primary impetus to initiate learning in the L2 and later the driving force to sustain the long and often tedious learning process" (Dörnyei, 2005, p. 65). Research has found that significant relationships exist between motivation and the use of language learning strategies (e.g., MacIntyre & Noels, 1994; Oxford & Nyikos, 1989; Schmidt & Watanabe, 2001).

This present study adopts Schmidt and Watanabe's (2001) model of language learning motivation. Schmidt and Watanabe's (2001) conceptualization of language learning motivation is reflected in a questionnaire used to investigate the relationships among motivation, strategy use, and instructional preferences among 2,089 foreign language learners at the University of Hawai'i. In the study, motivation was conceptualized as consisting of 13 constructs: (a) *intrinsic motivation*, i.e., enjoyment of learning; (b) *language requirement*; (c) *instrumental orientation*, i.e., the benefits of learning a language; (d) *heritage language*, i.e., students' attachment to the language as part of their own identity and cultural heritage; (e) *integrative orientation*, i.e., interaction

with members of another cultural group; (f) *interest in foreign languages and cultures*; (g) *task value*, i.e., the value of a language course; (h) *expectancy*, i.e., students' beliefs that they will do well and receive a *good* grade in the course; (i) *anxiety in language learning*; (j) *language aptitude*, i.e., the student's own perception of her/his aptitude for grammar pronunciation, and so forth; (k) *competitiveness*; (l) *cooperativeness*, i.e., relationships with other students and the teacher in a cooperative learning environment; and (m) *motivational strength*, i.e., effort-making intention (Schmidt & Watanabe, 2001). The present study does not adopt constructs considered irrelevant to the EFL context in China. Details concerning adaptations of the model are presented in Chapter 3.

Research Questions

Five research questions are central to this study:

1.a. What factor structure underlay *Part D: Language Learning Strategy Use Scale* (Appendix 3)?

1.b. How did study participants learn English prior to being admitted to university?

1.c. What general strategies did study participants use to learn English?

1.d. How did study participants develop their knowledge about the use of language learning strategies?

2.a. What factor structure underlay *Part B: Language Learning Attitude and Motivation Scale* (Appendix 3)?

2.b. What motivated study participants to learn English?

2.c. What were study participants' attitudes toward learning English?

3.a. What factor structure underlay *Part C: Beliefs about Language Learning Scale* (Appendix 3)?

3.b. What beliefs did study participants hold about learning English?

4. Did gender affect (a) latent strategy use factors, (b) latent attitudes and motivation factors, and (c) latent belief factors, and if so, in what ways? Did academic major affect these latent factors, and if so, in what ways? Was there an interaction between gender and academic major, and if so, in what ways?

5. How did latent strategy use factors, latent motivation factors, and latent belief factors relate to each other and to English language proficiency?

Significance of the Study

The present study presented a broad quantitative sketch as well as an in-depth qualitative view of university EFL students' strategy use in China, their language learning attitudes and motivations, and their beliefs about language learning. By elucidating the underlying dimensions of these variables and their relationships with English language proficiency, this study might in the future aid the teachers of millions of EFL learners in China by providing them with an understanding of what important influences exist in language learning.

The present study additionally shed light on how learners developed their knowledge about strategy use, what motivated them to learn English, and what their beliefs and attitudes were. By drawing on the perspectives of learners of varying proficiency levels at different universities, the present study delineated patterns of convergence and variation in the manifestation of these variables in the EFL context in China. Pedagogically, these insights and understandings might be of paramount importance to English language educators in China as they move toward learner-centered language teaching.

Lastly, the present study was among the few that used a large scale survey and in-depth interviews to explore and validate the factor structures of three important learner variables and the relationships among these variables and English language proficiency in the EFL context in China. Results of this study thus illustrated the strengths of using mixed methods to investigate learner variables, hereby contributing to methodological knowledge in second language research.

Defining Key Terms

In order to discuss and answer the aforementioned questions, the following terms were used:

EFL: Abbreviation for "English as a Foreign Language".

Foreign language: "A language which is not the native language of large numbers of people in a particular country or region, is not used as a medium of instruction in schools, and is not widely used as a medium of communication in government, media, etc. Foreign languages are typically taught as school subjects for the purpose of communicating with foreigners or for reading printed materials in the language"(Richards & Schmidt, 2002, p. 206).

ESL: Abbreviation for "English as a Second Language".

Second language: A second language is "a language other than the mother tongue, learned in an environment in which that language is the dominant language (e.g., English in the USA, French in France, for immigrants or minority learners), or where the language is an international language of commerce and industry (e.g., English in Korea or Hungary, German in Poland or Russia)" (Kramsch, 2008, p. 4).

Integrative orientation: This orientation connotes a positive attitude toward the second language group and the desire to interact and identify with the second language community.

Instrumental orientation: This orientation relates to the potential practicality of second language proficiency, such as employment, future education, and international travel.

Intrinsic motivation: This type of motivation refers to "doing something because it is inherently interesting or enjoyable" (Deci & Ryan, 2000, p. 55).

Extrinsic motivation: This type of motivation refers to doing something because it leads to an outcome that is separable from the learning itself (Deci, 1971, 1975; Deci & Ryan, 2000; Vansteenkiste, Lens, & Deci, 2006).

Language learning strategies: Strategies are "the thoughts and actions that learners use to accomplish a learning goal" (Chamot, 2004, p. 14, as cited in Oxford, forthcoming). Strategies help learners plan, acquire, store, retrieve, and use information (Oxford, 1990; Weinstein and Mayer, 1986, as cited in Oxford, forthcoming). Oxford (1990) categorizes language learning strategies into six major categories: (a) *memory strategies*; (b) *cognitive strategies*; (c) *compensation strategies*; (d) *metacognitive strategies*; (e) *affective strategies*; and (f) *social strategies*. I present definitions of these subcategories below. Oxford (forthcoming) defines a two-tier system of strategies and tactics. Strategies are broad and general, oriented toward an aim or a goal, whereas tactics are "very specific, oriented toward fulfilling a person's particular learning need within a given sociocultural setting" (p. 20). For example, one strategy that the learner will likely employ in a listening task is paying attention, which might be further instantiated as

using the tactic of listening for specific information in a conversation, such as *who*, *what*, *when*, and *where* (Oxford, forthcoming). See Chapter 2 for a detailed explanation of this two-tier system.

Memory strategies: Memory strategies help learners store and retrieve information. Examples are *creating mental linkages between new words and images* and *making associations between what is known and what is new*.

Cognitive strategies: Cognitive strategies facilitate the understanding and production of a new language. For instance, *English language learners practice the sounds of English* or *they infer the meaning of a new word by segmenting it into roots, prefixes, and suffixes*. These are examples of cognitive strategies.

Compensation strategies: Compensation strategies are used by learners to bridge large knowledge gap and use the language. Examples include *using circumlocution to express meanings* and *making guesses on the basis of contextual clues*.

Metacognitive strategies: Learners use metacognitive strategies to coordinate the learning process. For instance, *they make plans of what they will do to learn a new langua*ge or *they regularly evaluate their own learning effectiveness*.

Affective strategies: Affective strategies help learners to regulate their emotions, motivations, and attitudes toward language learning. Examples include *anxiety reduction* and *self-encouragement*.

Social strategies: Social strategies involve learner interaction with others. For instance, l*earners may form study groups to learn a new language* or *they may seek help from native speakers*.

SILL: Abbreviation for the *Strategy Inventory for Language Learning* (Oxford, 1990). It is designed to assess frequency of strategy use by asking learners to circle their response to a strategy item, i.e., a statement describing a specific strategy. Responses indicate how true they think the statement is in describing their learning. Responses are measured on a five-point Likert scale ranging from "never or almost never true of me" to "always or almost always true of me".

BALLI: Abbreviation for the *Beliefs about Language Learning Inventory* (Horwitz, 1988). It was developed to assess learner opinions on a variety of issues and controversies related to language learning. Learners circle their response on a five-point Likert scale ranging from "strongly agree" to "strongly disagree".

MET: Abbreviation for *The Matriculation English Test*. The test is administered annually by the *State Education Committee* in China to determine high school graduates' legitimacy for enrolling in college and university programs (Chen & Qi, 2006).

CET: Abbreviation for *The College English Test*. The tests are administered in two levels by the *State Education Committee* in China to test college and university non-English majors' English language proficiency, Band Four, and Band Six. Band Four measures intermediate-level English language proficiency. Band Six measures high-intermediate level English language proficiency (Jin & Yang, 2006).

GTEM: Abbreviation for *The Graded Test for English Majors*. The test is administered by the *English Language Education Committee* in China to test four-year English majors' English language proficiency. It is administered in two grades, Grade Four and Grade Eight. Grade Four is administered to second-year English majors to

measure intermediate-level English language proficiency. Grade Eight is administered to fourth-year English majors to measure advanced-level English language proficiency.

Statistical significance: "The difference between the hypothesized population parameter and the corresponding sample statistic is said to be statistically significant when the probability that the difference occurred by chance is less than the significance level (α level) (Hinkel, Wiersma, & Jurs, 1998, p. 621).

Correlation coefficient: "An index of the relationships between two variables" (Hinkel, Wiersma, & Jurs, 1998, p. 617).

Nondirectional or *two-tailed test*: "Test in which the region of rejection is located in both tails of the sampling distribution" (Hinkel, Wiersma, & Jurs, 1998, p. 619).

Type I error: "Rejecting a null hypothesis when in fact it is true" (Hinkel, Wiersma, & Jurs, 1998, p. 622).

Type II error: "Retaining a null hypothesis when in fact it is false" (Hinkel, Wiersma, & Jurs, 1998, p. 622).

Overall Research Design

The present study was a cross-sectional, mixed-method inquiry (Green, 2001). It employs a self-report questionnaire to assess learners' strategy use, attitudes, motivations, and beliefs about language learning. Self-report questionnaire represents a long-standing tradition in second and foreign language research (e.g. Cohen & Scott, 1996; Macaro, 2001; Mackey & Gass, 2005; Oxford, 1996, forthcoming). Studies using self-report questionnaires have yielded valuable findings concerning the above-mentioned learner variables (e.g. Hsiao & Oxford, 2002; Oxford & Nyikos, 1989; Park, 1995; Schmidt & Watanabe, 2001; Yang, 1999). The present study followed this tradition and employed

the *Language Learning Questionnaire* (Yin, 2005) to solicit quantitative data and analyze them statistically.

Additionally, the present study employed qualitative interviews as a vital complement to the use of self-report questionnaires. The interviews offered an in-depth view of how the aforementioned variables manifested in individual learners. The combined use of self-report questionnaires and qualitative interviews generated a thorough understanding of how learners developed their knowledge about the use of language learning strategies, what their attitudes and motivational orientations were, and what beliefs they held about learning English as a foreign language in China.

The use of mixed methods in the present study incorporated the strengths of both research traditions to generate deeper and broader understanding of the above-mentioned learner variables, hereby contributing to the body of knowledge pertaining to these variables in the EFL context in China.

Limitations

Several limitations should be considered in estimating the reliability and validity of the present study. One limitation is that generalizations only can be made to sophomores and juniors in China. The sample consisted mostly of sophomores and juniors and all 18 students nominated for interview were either sophomores or juniors at the time the interviews were conducted. This limits the extent to which findings of this study can be generalized to students at other grade levels, such as freshmen, seniors, or graduate students.

A further limitation of this study concerned the gender of the nine students who were chosen for in-depth qualitative analyses. Seven of these students were female. This limits

the extent to which interview results are generalizeable to males. Moreover, although classroom teachers were given specific criteria for nominating interviewees, the nomination procedure did not preclude the possibility of the interview subsample being biased by the perspectives of the teachers.

Finally, the present study was cross-sectional. Inferences concerning how the students' prior learning attitudes, beliefs, and use of learning strategies developed longitudinally were derived primarily on the basis of student recalls. The extent to which the students could recall their prior learning depends primarily on their memory of prior learning. Further, only one thirty-minute interview was conducted with each student. Thus, limitations exist in terms of the detail in which student interviews revealed the longitudinal trajectories of how the variables manifested in each learner.

Organization of the Chapters

This study aimed to explore and validate the factor structure of the three learner variables affecting the learning of English as a foreign language in China: (a) strategy use; (b) attitudes and motivations; and (c) learner beliefs. It also identified the relationships among these variables and English language proficiency. It additionally sought to identify how these variables manifested in individual learners. This chapter described the impetus for this study, briefly described the EFL context in China, and outlined the study in terms of: (a) the statement of the problem; (b) the purposes of the study; (c) research questions; (d) the significance of this study; (e) defining key terms; (f) the overall research design; (g) limitations; and (h) the organization of the chapters.

Chapter 2 reviews theories and empirical research on strategy use in the following areas: (a) definitions, classifications, and features of language learning strategies; (b)

strategy use in relation to gender; (c) strategy use in relation to academic major; (d) strategy use in relation to attitudes and motivations; and (e) strategy use in relation to learner beliefs. These are summarized and discussed toward the end of the chapter.

Chapter 3 delineates the methodology employed in the present study. It components include: (a) an overview of the design; (b) the setting; (c) participants; (d) instrumentation; (e) data collection procedures; and (f) data analysis procedures.

Chapter 4 presents the results of quantitative analyses in the following order: (a) descriptive statistics; (b) structure of students' strategy use; (c) structure of students' attitudes and motivation; (d) structure of students' beliefs about language learning; (e) effect of gender and academic major on strategy use, attitudes, motivations, and learner beliefs; and (f) relationships among motivations, learner beliefs, strategy use, and English language proficiency. These are presented in the order in which the quantitative research questions are listed.

Chapter 5 presents major themes that emerged in the student interviews. These include: (a) Learning Prior to Being Admitted to the Universities; (b) How is English Learned? Episodes and Anecdotes; (c) The Genesis of Second Language Motivation; (d) Mutability versus Consistency in Language Learning Attitudes; and (e) What does Learning English Mean and What Contributes to Success/Failure?

Chapter 6 integrates and discusses quantitative and qualitative findings. This chapter also offers implications for future educational practice and research.

Summary of Introduction

This chapter presented an overview of the present study that unfolded in the EFL context in China. In this context, English has increasingly become a language that

facilitates China's participation in the international arena, the number of English language learners is growing at an unprecedented speed, and the learning environment is often times described as input-poor and acquisition-poor. In such a context, understanding the three learner variables investigated in this study — strategy use, attitudes and motivation, and beliefs about language learning — has the potential to enhance learning and facilitate the implementation of learner-centered pedagogy.

The present study, therefore, was undertaken to: (a) explore and validate the factor structure of the three important learner variables; (b) examine group differences in these variables that related to gender and academic major; (c) understand the relationships among these variables and English language proficiency; and (d) reveal manifestations of these variables in individual learners.

Chapter 2: Review of Relevant Literature

This chapter reviews theory and research on second language learning strategies. It presents an overview of the field and outlines major theoretical contributions. It also reviews empirical studies that explored the relationship between strategy use and four key learner variables: (a) gender; (b) academic major; (c) attitudes and motivation; and (d) learner beliefs. These are summarized and discussed toward the end of this chapter.

The Beginning of Strategy Research

Second language strategy research dates back to the year 1975 (Grenfell & Macaro, 2007; Oxford, forthcoming). As language educators moved toward more learner-centered and communicatively-oriented language teaching, understanding how learners learn and what influences their learning has become as important as determining what is to be learned. This shift in focus inspired a line of research that focused on behaviors or mental activities that distinguished between successful and less successful learners. Research on "the good language learner", for instance, attempted to identify mental processes, actions, motivation, and personality features of successful language learners (Naiman, Fröhlich, Stern, & Todesco, 1978; Rubin, 1975; Stern, 1975). Rubin (1975) described the good language learner as (a) making use of inferencing willingly and accurately; (b) having a strong and uninhibited drive to communicate; (c) attending to form and meaning; (e) practicing often; and (f) monitoring his/her own speech and the speech of others. Stern (1975) similarly characterized the good language learner as making use of strategies such as inferencing, practicing, attending to meaning and form, self-monitoring, and using the language in real communication. These observations of the strategies employed by the

good language learner were later recognized as early examples of strategy research (Grenfell & Macaro, 2007), which focused on identifying a collection of mental steps or behaviors that facilitated the successful learning of a new language (e.g., Bialystok, 1981; Rubin, 1975, 1981; Stern, 1975, 1978). Other aspects of theory building also caught much attention. These included (a) defining and classifying strategies, and (b) identifying the features of language learning strategies.

Definitions, Classifications, and Features of Language Learning Strategies

This section reviews major models of language learning strategies presented by leading theorists in the field, focusing on definitions, classifications, and features. The section also summarizes and discusses these major theoretical contributions.

Definitions and Classifications of Language Learning Strategies

Since 1975, various theorists have contributed to the definition of language learning strategies (Grenfell & Macaro, 2007; Oxford, forthcoming). Different models have been proposed to categorize and create a hierarchy of strategies on the basis of how they relate to the learner and the task and how they are employed in the learning process (Oxford, forthcoming). This section reviews major models that have emerged in the field thus far. These include: (a) Rubin's classification of direct and indirect strategies; (b) Oxford's six-category strategy model; (c) O'Malley and Chamot's four-category strategy taxonomy; (d) Cohen's distinction between learning and use strategies; and (e) Oxford's new two-tier system of strategies and tactics (Table 1).

Rubin's Classification of Direct and Indirect Strategies

Rubin (1975) defines strategies as "the techniques and devices which a learner may use to acquire knowledge" (p. 43). In her research, Rubin (1981) notices a distinction between processes which contribute directly to learning and processes which contribute indirectly to learning, and henceforth classifies strategies as direct strategies and indirect strategies.

Drawing on the notion of learning as "the process by which storage and retrieval of information is achieved", Rubin (1981) defines cognitive strategies as the "specific actions which contribute directly to the learning process" (p. 118). The six subcategories of cognitive strategies are: (a) clarification or verification; (b) monitoring; (c) memorization; (d) guessing or inductive inferencing; (e) deductive reasoning; and (f) practice.

In a more detailed explanation of cognitive processes, she describes guessing/inductive inferencing and deductive inferencing as two kinds of inferencing that language learner generally use. She states that in inductive reasoning, meanings are derived on the basis of "some hunches from a wide range of possible sources of meaning for a particular circumstance" (p. 119), while in deductive reasoning, learners look for general rules on the basis of their knowledge about language(s) or on the basis of generalizations for many inductive observations. Monitoring refers to conscious or unconscious observations of errors as well as observations of how the message is received and interpreted by the addressee. Memorization is described as an important part of language learning and involves the use of strategies such as note-taking, pronouncing

Table 1: Main Categories, Definitions, or Subcategories of Strategies/Tactics

Theorists	Main Categories	Definitions or Subcategories	Examples
Rubin (1981)	direct processes	clarification/verification monitoring memorization inductive/deductive inferencing practice	
	indirect processes	creating opportunities for practice employing production tricks	circumlocution
Oxford (1990)	cognitive strategies	facilitating the understanding and production of new language	practicing
	metacognitive strategies	regulating the learning process	planning
	social strategies	involving social interaction	seeking help
	affective strategies	regulating the emotional aspects	using self-talk
	memory strategies	storing and retrieving information	mental imaging
	compensation strategies	bridging knowledge gap	making guesses
O'Malley & Chamot (1990)	cognitive strategies	directly manipulating incoming information in ways that enhance learning	rehearsing, grouping
	metacognitive strategies	involving high-order executive skills that entail planning, monitoring, or evaluation	planning, monitoring
	social/affective strategies	involving interpersonal interaction or ideational control over affect	cooperating, using self-talk
Cohen (1998)	learning strategies	identifying the material to be learned distinguishing the material from other materials grouping making repeated contact with learning material committing the material to memory	
	use strategies	retrieval strategies rehearsal strategies cover strategies communication strategies	mental imaging practicing producing simple language negative transfer
Oxford (forth-coming)	metacognitive strategies & tactics	managing the learning process	paying attention, planning
	cognitive strategies & tactics	helping construct understanding, knowledge, and skills	using the senses to understand and remember
	affective strategies & tactices	helping manage emotion and motivation	generating motivation
	sociocultural-interactive strategies & tactics	facilitating learner interaction and collaboration	interacting collaborating seeking help

out loud, and building associations to enhance memory knowledge about language(s) or to form generalizations upon which to base inductive observations.

Indirect processes in language learning, on the other hand, include two subcategories (a) creation of opportunities for practice, and (b) production tricks that relate to communication focus, drive, and motivation (Rubin, 1981). Examples of the former include initiating conversations, questioning and answering, and creating practicing opportunities with native speakers. Examples of the latter include circumlocution, paraphrasing, repetition, and using gestures.

Oxford's 1990 Six-Category Model of Language Learning Strategies

Oxford (1990) defines language learning strategies as "specific actions taken by the leaner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations" (p. 8). Her strategy taxonomy includes six categories: (a) *memory strategies*; (b) *cognitive strategies*; (c) *metacognitive strategies*; (d) *compensation strategies*; (e) *social strategies*; and (f) *affective strategies*.

Memory strategies help learners store and retrieve new information. Specific examples include remembering new words by creating mental linkages and making associations between what is known and what is new. *Cognitive strategies* facilitate the understanding and production of new language. English language learners, for instance, may practice the sounds of English or they could infer the meaning of a new English word by segmenting it into known roots, prefixes, and suffixes. *Compensation strategies* allow learners to bridge over large knowledge gaps to make meaning. Examples include using circumlocution and making guesses.

Metacognitive strategies, *social strategies*, and *affective strategies*, on the other hand, help regulate the learning process and learners' emotional responses. *Metacognitive strategies* are used by the learner to coordinate the learning process, such as planning and evaluating their own learning. *Affective strategies* help the learner to regulate their emotions, motivations, and attitudes. Examples include anxiety reduction and self-encouragement. *Social strategies* facilitate learning through learner interaction with others. Learners, for instance, may form study groups to learn a new language or seek help from proficient users of that language.

O'Malley and Chamot's Four-Category Strategy Taxonomy

O'Malley and Chamot (1990) define language learning strategies as "the special thoughts or behaviors that individuals use to help them comprehend, learn, or retain new information" (p. 1). They further state that learning strategies have "learning facilitation as a goal and are intentional on the part of the learner" (Weinstein & Mayer, 1986, as cited in O'Malley & Chamot, 1990, p. 43). Learning strategies are used for the purpose of affecting learners' motivational or affective state, or the way in which they select, acquire, organize, or integrate new knowledge (O'Malley & Chamot, 1990).

Important distinctions exist among learning strategies, communication strategies, and production strategies (Faerch & Kasper, 1984; O'Malley & Chamot, 1990; Tarone, 1981). Research on learning strategies has language acquisition as its focus, while research on production and communication strategies focuses more on language use. Citing Tarone (1981), O'Malley and Chamot (1990) describe learning strategies as "attempts to develop linguistic and sociolinguistic competence in the target language" (p. 43). Production strategies are different from learning strategies in that the purpose of

using production strategies is to achieve communication goals. The use of these strategies thus reflects "an interest in using the language system efficiently and clearly without excessive effort" (p. 43). Prefabricated patterns and discourse planning are examples of production strategies. Communication strategies, in contrast, are "an adaptation to the failure to realize a language production goal" (p. 43) and therefore are particularly important when interlocutors involved in a conversation do not share linguistic structures and sociolinguistic rules. Examples of communication strategies are approximations and circumlocution.

In defining subsets of language learning strategies, O'Malley and Chamot (1990) propose three categories: (a) *metacognitive strategies*; (b) *cognitive strategies*; and (c) *social/affective strategies*. *Metacognitive strategies* are "higher order executive skills that may entail planning for, monitoring, or evaluating the success of a learning activity" (Brown, Bransford, Ferrara, & Campione, 1983, as cited in O'Malley & Chamot, 1990, p. 44). These include processes such as selective attention, planning, monitoring, and self-evaluation. *Cognitive strategies* involve direct manipulation of incoming information in ways that enhance learning. Typical examples are rehearsal, grouping and classifying words, summarizing, deduction, imagery, transfer, and elaboration. *Social/affective strategies* involve "either interaction with another person or ideational control over affect" (p. 45). In listening comprehension tasks, for instance, such strategies include cooperation, questioning for clarification, and self-talk. These strategies are mental processes learners engage in when learning a new language.

Cohen's Distinction between Learning and Use Strategies

Cohen (1998) broadly defines second language learner strategies as encompassing both second language learning and second language use strategies. In his terms, language learning and language use strategies are "those processes which are consciously selected by learners and which may result in action taken to enhance the learning or use of a second or foreign language, through the storage, retention, recall, and application of information about that language" (p. 7).

In a recent survey using the *International Project on Language Learning Strategies* (IPOLLS) *Language Learner Strategy Questionnaire* (Cohen, 2004), Cohen (2007) proposes to define language learner strategies as conscious mental activity that must contain not only an action but a goal (or an intention) and a learning situation. He further states that whereas a mental action might be subconscious, an action with a goal/intention and related to a learning situation can only be conscious.

In Cohen's (1998) model, language learning strategies include those used for "identifying the material that needs to be learned, distinguishing it from other material if needed, grouping it for easier learning, having repeated contact with the material, and formally committing the material to memory when it does not seem to be acquired naturally" (p. 5). For example, the strategies for learning the subjunctive in Spanish as a foreign language could include grouping together the list of verbs that take a subjunctive and memorizing them. The specific strategies for memorizing this group might involve the use of a keyword mnemonic.

Language use strategies include four subsets: (a) *retrieval strategies*; (b) *rehearsal strategies*; (c) *cover strategies*; and (d) *communication strategies*. *Retrieval strategies* are

used to activate language material from storage through memory searching strategies such as mental linkages or sound association. *Rehearsal strategies* are used for practicing the target language structures and include both language learning and language use strategies. *Cover strategies* involve creating the impression that learners have control over the material when they do not. Examples of them are simplification, i.e., producing simplified utterances, and complexification, i.e., saying something by means of an elaborate and complex circumlocution, both of which are used to bridge knowledge gaps in the target language. *Communication strategies* focus on approaches to conveying meaningful and informative messages to the listener or reader. Intralingual strategies are such examples. These include overgeneralizing a grammar rule or vocabulary meaning from one context to another where it does not apply, and negative transfer, i.e., applying the patterns of a native or another language in the target language where those patterns do not apply.

Oxford's New Two-Tier System of Strategies and Tactics

Oxford (forthcoming) defines a two-tier system of strategies and tactics. In this system, strategies are distinguished from tactics in that strategies are broad and general, oriented toward an aim or a goal, whereas tactics are "very specific, oriented to fulfilling a person's particular learning need within a given sociocultural setting" (p. 20). While validating the definition that "strategies are the thoughts and actions that learners use to accomplish a learning goal" (Chamot, 2004, p. 14, as cited in Oxford, forthcoming), and the definition that strategies help learners plan, acquire, store, retrieve, and use information (Oxford, 1990; Weinstein and Mayer, 1986, as cited in Oxford, forthcoming), Oxford (forthcoming) states that tactics are goal-oriented actions at a more specific level

than strategies and that each strategy has associated tactics. She further states that "a tactic is the way the learner manifests the strategies for a particular learning task or for attaining specific long-term goals in a given L2 learning situation or sociocultural environment" (p. 20).

The 19 strategies Oxford describes are clustered into four categories:

Metacognitive strategies: Paying Attention, Planning, Finding and Using Resources, Organizing, Monitoring, and Evaluating. These strategies are used for helping the learner manage the second language learning process. They "serve as the learner's internal 'Guiding Hands' for learner self-regulation" and are important in regular classroom settings as well as in a more independent learning situation (p. 3).

Cognitive strategies: Using the Senses to Understand and Remember, Activating Knowledge, Conceptualizing with Details, Conceptualizing Broadly, Reasoning, and Going Beyond the Immediate Data. The purpose of these strategies is to help the learner construct his or her own second language understanding, knowledge, and skills. They help the learner retain new information in long-term memory and automatize it so that it becomes *fluent*. These strategies are thus compared to "construction assistants" (p. 9).

Affective strategies: Building Positive Emotions, Generating Motivation, and Generating Volition[1]. These strategies are used to help learners manage their emotion and motivation and are compared to 'inner sparks', i.e., they help ignite learning and give it a blaze of ongoing energy (p. 18).

Sociocultural-interactive strategies: Interacting/Collaborating, Seeking Help, Overcoming Limitations in Spoken Interaction, and Dealing with Culture and Identity.

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[1] *Volition* "helps the learner stay on track and persevere throughout the task, course, or program, despite all difficulties" (Dörnyei, 2005, as cited in Oxford, forthcoming, p. 22).

The aim of these strategies is to "help learners interact and collaborate with others, seek help, continue social interaction when knowledge gaps arise, and deal with sociocultural identity issues" and are thus compared to "community creators" (p. 24).

Each strategy has associated tactics. For example, one strategy that the learner will likely employ in a listening task is Paying Attention, which might be further instantiated by using the tactic of listening for specific information in a conversation, such as *who*, *what*, *when*, and *where*.

This new two-tier system of strategies and tactics represents a possible advance in theory building in the strategy field. By drawing on a well-known distinction between strategies and tactics and establishing a small core of nineteen strategies organized into four major categories, this new system addresses the issue of abstractness and size, i.e., strategies are of varying sizes and varying levels of abstractness, and streamlines thinking about strategies (Oxford, forthcoming). Informed use of the strategies and tactics in this new system supports autonomy, self-regulated learning, and self-management, promotes self-efficacy, and enhances success in language learning (Oxford, forthcoming).

Features of Language Learning Strategies

The other central theme in the field concerns what features define language learning strategies (e.g., Oxford, 1990, forthcoming). Since its inception, much controversy has risen in this regard (Cohen, 1998, 2007; Macaro, 2006; Oxford, forthcoming). Macaro (2006), for instance, summarizes the controversy as three dilemmas: (a) "size-abstractness dilemma" (Stevick, 1990, p. 144); (b) "outside-inside problem" (Stevick, 1990, p. 144); and (c) "semantic-equivalence dilemma" (Stevick, 1990, p. 324). The "size-abstractness dilemma" concerns the concept that the phenomena referred to as

strategies are of varying sizes and of different levels of abstractness: some are larger than others and some are more abstract than others. The "inside-outside problem" concerns a possible lack of relationship between overt actions and the mental constructs to which they are attributed. The "semantic-equivalence dilemma" relates to the difficulty of the interchangeable use of words such as *strategy*, *operation*, *routine*, *process*, *procedure*, *action*, *tactic*, *technique*, *plan*, and *step* in the language learning strategies literature (Macaro, 2006). Cohen (2007) notes the same and states that the field "is still lacking consensus on a unified theory, with agreement by learner strategy experts on some concepts and definitions and not on others" (p. 3). Oxford (forthcoming), however, acknowledges the co-existence of multiple theories in the strategy field and states that "there will never be a single, universally accepted theory of second language learning strategies". She further states that "there is value in judiciously developing and honoring at least some diverse theoretical views" (p. 14). Notwithstanding the controversy, the field has reached consensus concerning specific features that define language learning strategies. These are: (a) consciousness; (b) size/strategy clustering; and (c) goal orientation.

Consciousness

Consciousness has been defined as a feature of language learning strategies (Cohen, 1998, 2007; Macaro, 2006; Oxford, forthcoming). Cohen (1998), for instance, states that consciousness is the element that "distinguishes strategies from those processes that are not strategic" (p. 4). Drawing on Schmidt (1994), he describes strategies as falling either within the focal attention of the learner or within peripheral attention. Learners therefore are more or less able to identify the strategies they use. Consciousness relates closely to

the metacognitive component in any given strategy (Cohen, 2007). This component manifests itself as learners attend to tasks, analyze the situation and task, plan for a course of action, monitor the execution of the plan, and evaluate the effectiveness of the whole process (Cohen, 2007). Similarly, Macaro (2006) states that "whereas a mental action might be subconscious, an action undertaken with a goal and evaluated against a learning situation [i.e. a strategy] can only be conscious" (p. 237, as cited in Oxford, forthcoming).

Size/Strategy Clustering

Strategies are of varying sizes (Cohen, 1998; Macaro, 2006). A given strategy usually encompasses relevant subordinate strategies (Macaro, 2006) or tactics (Oxford, forthcoming). Strategies are usually used in combination with other strategies concurrently or sequentially, thus forming *chains* (Oxford, 2001, as cited in Oxford, forthcoming) or *clusters* (Cohen, 2007; Macaro, 2006). Orchestration of clusters of strategies requires the use of metacognitive strategies to regulate conscious cognitive activities (Schraw & Moshman, 1995, as cited in Macaro, 2006). Such regulation entails mental activities such as monitoring and evaluating the use of cognitive strategies (Macaro, 2006). Expanding on this notion, Oxford (forthcoming) states that "metacognitive strategies are included in strategy clusters to regulate conscious cognitive, affective, and sociocultural-interactive activity, all of which contribute to effective L2 learning" (p. 26). In order for a strategy cluster or strategy chain to be effective, all strategies within it must be well orchestrated and coherent (Macaro, 2006; Oxford, forthcoming).

Goal Orientation

Macaro (2006) states that "a key feature of a strategy should be the explicitness of its goal orientation" (p. 328). Goal orientation of a given strategy can be situated from more to less-oriented (Cohen, 2007). Goals function as motivators for human action in that they are the purposes that direct a process (Cohen, 2007; Macaro, 2006). Purposes for using a given strategy or strategy clusters vary, ranging from the more specific ones, such as meeting course requirements, to the more general or broad ones that may include: (a) enhancing learning; (b) performing specific tasks; (c) solving specific problems; (d) making learning easier, faster, and more enjoyable; and (e) compensating for a deficit in learning (Cohen, 2007; Macaro, 2006). Learners may or may not be able to articulate their goals for deploying a particular strategy (Cohen, 2007; Macaro, 2006).

Summary and Discussion of Definitions, Classifications, and Features of Language Learning Strategies

This section reviewed major theoretical contributions to strategy research described in terms of (a) definitions and classifications, and (b) features. On the basis of this review, it is evident that the earlier frameworks converge to the extent that they invariably reflect an emphasis on the role that mental processes such as inferencing and rehearsal play in the learning process. This emphasis paralleled the growing influence of cognitive psychology and information-processing research (e.g., Anderson, 1976, 1980, 1982, 1983, 1985), which examines the procedures by which people acquire, store, and use knowledge to solve problems (Newell & Simon, 1972). The cognitive component as articulated in these major models spoke to this influence and focused on deriving

strategic mental steps taken by the learner to aid the processing of linguistic elements in working memory and to facilitate retaining these elements in long-term memory.

The theoretical frameworks additionally emphasize the role that metacognition and social interaction/communication play in the learning of a new language. For instance, in Rubin's (1981) model, direct strategies include strategies learners used to facilitate communication and interaction, e.g., clarification, and verification, and examples of metacognitive strategies, e.g., monitoring. Metacognitive strategies and social/sociocultural-interactive strategies are two of the main categories in Oxford's 1990 model, her new two-tier system, and O'Malley and Chamot's four-category strategy taxonomy. Communication strategies are a major category in Cohen's system of language use strategies. These frameworks are thus marked by overlapping conceptualizations of what facilitates learning and what thoughts or actions constitute learner strategicnesess.

A closer look at these models, nevertheless, reveals these frameworks as distinct from each other. Differences exist among the models in terms of how strategies are labeled and categorized. Rubin (1981), for instance, categorizes them into direct and indirect processes, a distinction that appears to be value-laden and, as one might possibly argue, judgmental, since one might infer that indirect strategies stand as less useful when compared with direct strategies if they do not contribute directly to learning. Rubin further labels monitoring as a cognitive process, whereas in O'Malley and Chamot's (1990) model and Oxford's (1990, forthcoming) model, it is defined as a metacognitive strategy.

O'Malley and Chamot (1990) collapse social strategies and affective strategies into one category, whereas in Oxford's 1990 model, they are two distinct strategy categories.

Affective strategies and tactics and sociocultural-interactive strategies and tactics stand as distinct categories in the Oxford (forthcoming) system. As social/sociocultural-interactive strategies are primarily geared toward facilitating interpersonal communication and dealing with sociocultural and identity issues, whereas affective strategies "serve to regulate emotions, attitude, and motivation" (Richards & Renandya, 2002, p. 121), one might argue that it is reasonable to label them as two distinct groups of strategies, since this acknowledges the differential roles that these two types of strategies play in the learning process.

Argument has also been made against the distinction drawn between language learning and language use strategies (Tarone, 1981, 1983, as cited in Oxford, forthcoming). Oxford (forthcoming) summarizes Tarone's (1981, 1983) critique of the proposed split between language learning and language use (Cohen, 1998; O'Malley & Chamot, 1990) as follows: (a) it is difficult to gauge the learner's purpose; (b) the learner's purpose is often multiple; and (c) learning occurs even when the intention/purpose is communication. Tarone also observed that communication strategies such as paraphrasing, borrowing, and using avoidance can be used for learning purposes because they keep learners involved in a conversation, and thus offer more opportunity to learn (Oxford, forthcoming). One might also argue that learners' ultimate goal for learning a language is to use it, as the Chinese proverb states: Apply/Use what we have learned. Thus, if viewed from the learner's perspective, the learning versus use dichotomy appears to be irrelevant.

Divergent opinions have been expressed concerning the co-existence of multiple theories in second language strategy research. Dörnyei voiced pronounced concern over

the fact that the strategy research field lacks a universally accepted theory (Dörnyei, 2005, as cited in Oxford, forthcoming). Efforts have been made to unify the field by reaching a universal conceptualization of language learning strategies (e.g., Cohen, 2007; Oxford & Cohen, 1992). As noted before, Oxford (forthcoming) states that "it is unlikely that there will ever be a single, universally accepted theory of L2 learning strategies" (p. 14). Oxford further states that "there is value in judiciously developing and honoring at least some diverse theoretical views" (p. 15). Chamot (2004) similarly states that different sets of learning strategies and hence different or modified classification system can coexist for researchers. She further states that the choice and modification depends, to a large extent, on the learning context as shaped by the educational/cultural values of the society in which learners are studying a new language, and learning goals which are often times divergent and multiple.

Strategy Use in Relation to Key Learner Variables

Strategy research has generated ample findings that support the link between learners' strategy use and other important learner variables such as attitudes, motivation, and learner beliefs. The following section examines the relationship between strategy use and four key learner variables: (a) gender; (b) academic major; (c) attitudes and motivation; and (d) learner beliefs. All four variables have been found to significantly relate to learners' strategy use.

Strategy Use in Relation to Gender

Significant gender differences in strategy use were reported in the use of strategy categories, i.e., specific types of strategies, and the use of skill-specific strategies (Bacon,

1992; Ehrman & Oxford, 1988; Green & Oxford, 1995; Hong-Nam & Leavell, 2006; Osanai, 2000; Oxford & Nyikos, 1989; Young & Oxford, 2001). Inconsistent findings were also reported. Several studies reported non-significant gender differences in overall strategy use and/or the use of strategy categories (e.g., Griffiths, 2003; Nisbet, 2002; Yin, 2004).

Gender Differences in Overall Strategy Use and the Use of Strategy Categories

Several studies reported that females used strategy categories significantly more often than males (Ehrman & Oxford, 1988; Green & Oxford, 1995; Hong-Nam & Leavell, 2006; Osanai, 2000; Oxford & Nyikos, 1989; Wen & Johnson, 1997).

Oxford and Nyikos (1989) employed the 121-item *SILL* to survey 1,200 English-speaking university students learning five foreign languages in a major university in the midwestern U.S. Using factor analysis, the study identified five strategy categories: (a) *formal rule-related practice strategies*, such as using structural knowledge, analyzing similarities between languages, forming and revising rules, and analyzing words; (b) *functional practice strategies*, such as watching foreign language movies, and initiating foreign language conversations; (c) *resourceful, independent strategies*, including independent manipulation of foreign language material, and metacognitive strategies; (d) *general study strategies*, such as studying hard, and ignoring distractions; and (e) *conversational input elicitation strategies*, such as requesting slower speech and asking for pronunciation correction.

In this study, females, compared with males, reported more frequent use of (a) *formal rule-related processing strategies*; (b) *standard academic study strategies*; and (c) *conversational input elicitation strategies*. The authors gave possible reasons for these

results. These possibilities were that females displayed strong social orientation and the need for social approval, which translated into a strong desire for better grades and scores in university settings (Oxford & Nyikos, 1989; Oxford, Nyikos, & Ehrman, 1988).

In another study, Ehrman and Oxford (1989) surveyed a mixed sample of 78 foreign language students, foreign language instructors, and professional language trainers in the Foreign Service Institute (FSI). Factor analysis performed on their responses to the *SILL* yielded ten strategy factors. These were (a) *general learning strategies for reading and study*, e.g., previewing lessons, and arranging the study environment; (b) *authentic language use*, e.g., initiating conversations in the new language; (c) *searching for and communicating meaning*, e.g., guessing and circumlocution; (d) *independent strategies*, e.g., reading aloud to oneself and using a tape recorder; (e) *memory strategies*, e.g., using rhyme or repetition and making associations; (f) social strategies, e.g., asking for help and asking for correction; (g) *affective strategies*, e.g., overcoming anxiety and frustration; (h) *self-management*, e.g., planning for future language tasks, and setting goals; (i) *visualization strategies*, e.g., mental imaging and drawing pictures of new words; (j) *formal model-building*, e.g., analyzing one's errors and looking for patterns. This study generated strong evidence for gender differences in strategy use: females used "general strategies, authentic language use, searching for and communicating meaning, and self-management strategies" significantly more often than males (p. 259).

Green and Oxford (1995) also examined gender differences in strategy use. This *SILL* study investigated strategy use among 374 students of Prebasic, Basic, and Intermediate English at the University of Puerto Rico at Mayagüez. The purpose of the study was to identify patterns of variation in strategy use by course level and gender.

ANOVA results indicated that females showed significantly greater overall strategy use as compared to males. Further, females reported using four strategy categories significantly more frequently than males: *memory strategies*, *metacognitive strategies*, *affective strategies*, and *social strategies*. These results indicated that "gender difference trends in strategy use are quite pronounced within and across cultures", and that "this means that woman and men are using different approaches to language learning" (p. 291).

In the People's Republic of China, Wen and Johnson (1997) investigated strategy use among 242 second-year English majors from five tertiary institutions in China using a self-constructed questionnaire. In this study, female students reported more frequent use of *form-focused strategies* and *tolerating-ambiguity strategies*, i.e., strategies used to cope with situations where meaning was not immediately available, than male students. In addition, female students in the study reported valuing more the importance of self-management, i.e., planning, goal-setting, and self-evaluation, and demonstrated greater prior English language proficiency as measured by the MET than male students.

Also in the People's Republic of China, Gu (2002) examined gender differences in the use of vocabulary-learning strategies among 648 non-English majors in the Beijing Normal University in China. The study used a 91-item vocabulary learning questionnaire, which was further categorized into 20 categories: two categories of *metacognitive strategies* and 18 categories of *cognitive strategies*. Results of the study indicated that significant gender differences existed in the use of both categories of *metacognitive strategies* and ten categories of *cognitive strategies*. Females reported significantly more frequent use of *metacognitive strategies* such as selective attention and self-initiation than males. Further, females reported more frequent use of *cognitive vocabulary-learning*

strategies that included: (a) the use of wider context in building inferences; (b) dictionary strategies, i.e., comprehension-oriented dictionary strategies, extended dictionary strategies, and looking-up strategies; (c) note-taking strategies, i.e., meaning- and usage-oriented note-taking strategies; (d) rehearsal strategies that include using word lists and oral repetition; (e) contextual encoding of new words; and (f) activation strategies. Significant gender differences also existed in two strategy belief categories: (a) the belief that words should be picked up in context, and (b) the belief that words should be studied and put to use, with females reporting significantly stronger beliefs in them than males.

Using the *SILL*, Osanai (2000) investigated the strategies used by 147 ESL students at five medium and large size universities in southeastern United States. This study found no significant gender differences in overall strategy use. Yet in the use of strategy categories, females reported using *social* and *affective strategies* significantly more often than males (Osanai, 2000). These findings echoed the results of the 2004 study of 340 university students' strategy use in China (Yin, 2004). This study found no significant gender differences in the students' overall strategy use and the use of six strategy categories in the *SILL*. These inconsistencies might be attributable to the influence of contextual factors, i.e., strategy use seems to be contingent upon sociocultural milieu that interacts with learner variables to account for the variation in patterns of strategy use.

Similar results were reported in a more recent study that investigated the strategy use of 55 ESL students with diverse cultural and linguistic background enrolled in a college Intensive English Program (IEP) (Hong-Nam & Leavell, 2006). The study used the *SILL* to examine the relationship between strategy use and second language proficiency and differences in strategy use attributable to gender and nationality. In this study, no

significant gender differences were found in students' overall strategy use. This is consistent with the findings concerning students' overall strategy use reported in the previous studies (e.g., Osanai, 2000; Yin, 2004). Significant gender differences were found in the use of two strategy categories: *affective strategies* and *social strategies*. Relative to males, females reported significantly more frequent use of these two strategy categories. This result matched the result concerning gender differences in the use of specific types of strategies reported in the Osanai (2000) study.

Gender Differences in the Use of Skill-Specific Strategies

Studies of gender differences in the use of skill-specific strategies revealed the complexity of group differences in strategy use. In listening, Bacon (1992) conducted introspective and retrospective interviews with 50 students enrolled in a Spanish course at a large midwestern university. Gender differences in foreign language listening was reflected in the levels of comprehension, the types and incidence of strategies used, and affective responses to listening tasks. Women and men responded differently to passage difficulty: women reported less use of monitoring strategies when they heard the difficult passage first; men reported using far more bottom-up strategies and greater first language reliance when they heard the difficult passage first. Compared with men, women were more consistent in reporting much lower first language reliance. In terms of affective responses, women expressed the most negative feelings after hearing the difficult passage, whereas men's responses appeared to be more consistent and less affected by the passages' comprehensibility. Gender differences were also evident in the level of confidence that the students expressed, with men expressing far more confidence than women.

In reading, Young and Oxford (2001) examined gender differences in using reading strategies to process native-language (NL) and foreign-language (FL) texts. Participants were 49 Spanish learners from a large southern university in the U.S. Reading strategies were assessed using think-aloud protocols reflecting two distinct processes: a decoding process and a meaning-getting process. The study found no gender differences in the use of global and local reading strategies and in learners' performance on reading recall tasks. Significant gender differences were reported in the use of individual strategies. Females reported more frequent use of monitoring strategies for processing FL Spanish edited cultural passage and more frequent use of problem-solving vocabulary strategies for processing FL Spanish authentic passage than males.

While in most of the studies reviewed in this section gender differences manifested as females reporting greater strategy use (e.g., Green & Oxford, 1995; Hong-Nam & Leavell, 2006; Oxford & Nyikos, 1989; Wen & Johnson, 1997), gender differences in the opposite direction were found in a study of 384 EFL learners at a Thai university (Phakiti, 2003). Following the completion of a multiple-choice reading test, the participants in this study responded to a self-report questionnaire that was designed to assess their use of *cognitive* and *metacognitive strategies* for the completion of the reading test. Results of the study indicated that males reported significantly greater use of *metacognitive strategies* than females. No significant gender differences were found in the use of *cognitive strategies* and in their performance on the reading test.

These studies indicated that gender differences in strategy use existed in overall strategy use and the use of specific types of strategies and skill-specific strategies. Variation in patterns of gender differences suggested that contextual influences might

also affect strategy use. As Oxford, Nyikos, and Ehrman (1988) noted, although females were more oriented toward social interaction and were prone to use more functional strategies, traditional academic settings and requirements might inhibit them from using such strategies. Phakiti (2003) observed that when examining gender differences, researchers "distill possible context-related factors to explain gender differences" and that gender differences are both psychological and social (p. 679).

Strategy Use in Relation to Academic Major/Career Choice

Significant differences in strategy use by academic major were found among university students in the EFL context in China (Gu, 2002), in Hong Kong (Peacock & Ho, 2003), and in the U.S. (Oxford & Nyikos, 1989). They were also found among relatively sophisticated adults at FSI in the U.S. (Ehrman & Oxford, 1989). Results of these studies suggested that academic major/career choice significantly affected learners' strategy choice as well as frequency of strategy use.

The Effect of Academic Major on Strategy Use

Three survey studies reported the effect of academic major on university students' strategy use (Gu, 2002; Oxford & Nyikos, 1989; Peacock & Ho, 2003). As was noted, Oxford and Nyikos (1989) used the longer, 121-item version of the *SILL*. Peacock and Ho (2003) used the 50-item ESL/EFL *SILL*. Gu (2002) employed a vocabulary learning questionnaire that contained 91 vocabulary learning behaviors. The results of the comparisons are summarized below.

Comparing Art Majors and Science Majors

In his study of 648 second-year non-English majors, Gu (2002) compared the art students with the science students at Beijing Normal University. His arts majors were: (a) Chinese; (b) economics; (c) education; (d) history; (e) philosophy; and (f) psychology. His science majors were: (a) astronomy; (b) biology; (c) chemistry; (d) mathematics; and (e) physics. The study found significant differences between the art and the science students in the use of three vocabulary learning strategies: (a) meaning-oriented note-taking strategies; (b) usage-oriented note-taking strategies; and (c) using word-structure as an encoding strategy. Significant differences by academic major also existed in two categories of beliefs about vocabulary learning (a) the belief that words should be memorized, and (b) the belief that words should be picked up in context. The results of the study suggested that the art majors, in comparison with the science students, believed less in memorization of words. They also reported stronger beliefs in picking up words in context. In the use of vocabulary learning strategies, the art students used both meaning- and usage-oriented note-taking strategies significantly more often compared with the science majors. Science students, in contrast, used significantly more often the strategy of analyzing word structure to learn words.

An inconsistency occurred with regard to the art students. While these students did report a stronger belief about the natural acquisition of words in context compared with the science students, they did not report significantly more frequent use of the strategies that reflected this belief, e.g., contextual guessing and contextual encoding of words. Gu (2002) suggested that this inconsistency was attributable to characteristics of the learning environment in China: this context lacked English materials and was “input-poor” (p. 47).

Overall, this study suggested that academic major was not as strong a factor as gender in affecting student choice of vocabulary learning strategies. The author further stated that the fact that academic major seemed to be less potent a factor when compared with gender might be related to the EFL context in China. The lack of language input in this context severely limited the types of strategies that students could use; learners therefore might "develop their understanding of foreign language learning largely independent of their academic majors" (p. 48). It was also possible that the students involved in this study, regardless of their academic major, had not developed the variety of strategies that was needed in order to demonstrate differences in a wider range of strategy categories (Gu, 2002).

Comparing Humanities/Arts Majors, Technical Majors, and Business Majors

A stronger relationship between academic major and strategy use was reported in the study of 1,200 university students in the midwestern U.S. (Oxford & Nyikos, 1989). This study compared a group combining the social science majors, the education majors, and the humanities majors, with a group majoring in technical fields, such as engineering, computer science, or physical sciences, and a group of business majors in the university. Significant differences by academic major were found in two strategy categories: (a) *resourceful, independent strategies*, including independent manipulation of foreign language material and metacognitive strategies, and (b) *functional practice strategies* such as watching foreign language movies and initiating foreign language conversations. Compared with technical majors and business majors, humanities/social science/education majors used *resourceful, independent strategies* significantly more often. These students also used *functional practice strategies* significantly more often

than technical majors, but not business majors. Humanities/social science/education majors in this study were interpreted as identifying more with the need to engage in extracurricular, communicative activities and autonomous, independent study, reflecting stronger metacognitive awareness.

These findings were described as "displaying the language learning goal of developing communicative competence" of the humanities/social science/education majors, which likely reflected career and motivational orientation (p. 296). It concluded that career orientation as reflected by the students' choice of academic majors probably had a strong impact on strategy choice.

Comparing Strategy Use Across Eight Disciplines

In a recent *SILL* study, Peacock and Ho (2003) studied the differences in strategy use among 1,006 students in eight disciplines attending the City University of Hong Kong. This study drew comparisons among eight different majors: (a) building and construction; (b) business; (c) computing; (d) engineering; (e) English; (f) math; (g) primary education; and (h) science. Discipline-related differences were reflected in (a) overall strategy use; (b) use of strategy categories; and (c) individual strategies.

In terms of overall strategy use, English majors reported the highest frequency of strategy use, followed by primary education, then business, math, science, engineering, and building and construction students. Differences in the categories of strategies used were also found among the students. The English majors, for instance, reported much higher use of *cognitive*, *metacognitive*, and *social strategies* compared with the students from other disciplines. The computer science students, in contrast, reported a much lower use of *metacognitive strategies*. Differences in the use of individual strategies were

reported by English majors who used 26 strategies in the *SILL* at a higher or much higher frequency than the students from other disciplines. Among those were strategies such as "frequent review", "practicing pronunciation", and "watching TV shows spoken in English or English movies".

The Effects of Career Choice on Strategy Use

Ehrman and Oxford (1989) compared the frequency in using strategy categories among 30 FSI students, 26 FSI language instructors, and 22 professional language trainers with graduate degrees in linguistics or equivalent experience. Significant differences in strategy use by career choice were found among the three groups. Professional language trainers reported more frequent use of four strategy categories: (a) *authentic language use*, e.g., seeking native speakers with whom to talk, initiating conversations in the new language, and reading authentic natural texts; (b) *searching for and communicating meaning*, e.g., guessing, using text markers to aid comprehension, and circumlocution; (c) *formal model building*, e.g., constructing and testing hypothesis about the language, analyzing errors, applying and revising grammar rules, and looking for patterns in the new language; and (d) *affective strategies*, e.g., overcoming fear, frustration, and anxiety. The teachers, when compared with the students, reported more frequent use of authentic language use strategies. The students reported less use of all strategy categories when compared with the other two groups.

These findings suggested that career choice was significantly related to strategy use. It was inferred further that although this study did not measure motivation, these differences might relate to integrative and instrumental motivation as reflected in the career choice (Ehrman & Oxford, 1989).

Strategy Use in Relation to Motivations

The term *motivation* comes from the Latin verb *movere*, which means to move (Pintrich, 2003). Motivation theories endeavor to "answer questions about what gets individuals moving (energization) and toward what activities or tasks" (direction; Pintrich & Schunk, 2002, as cited in Pintrich, 2003, p. 669). In second language learning, motivation provides "the primary impetus to initiate L2 learning and later the driving force to sustain the long and often tedious learning process" (Dörnyei, 2005, p. 65). Further, "all the other factors involved in second language acquisition presuppose motivation to some extent" (Dörnyei, 2005, p. 65).

Second language motivation is a "dynamic, ever-changing process" (Dörnyei, 2005, p. 66). It has been conceptualized as a multi-faceted construct (e.g., Csizer & Dörnyei, 2005; Dörnyei, 2003; Gardner, 1985; Noels, Pelletier, Clement, & Vallerand, 2003; Oxford & Shearin, 1994; Schmidt & Watanabe, 2001). Its prominent social dimension relates to "issues such as multiculturalism, language globalization, language contact, and power relations between different enthnolinguistic groups (Dörnyei, 2003, p. 4).

The initial impetus in second language motivation research stemmed from the work of Wallace Lambert, Robert Gardner, and their associates (Dörnyei, 2005). Gardner's social psychological model of second language motivation conceptualizes motivation as embodied in and reflected by: (a) integrativeness, which encompasses integrative orientation, interest in a second language, and attitudes toward the second language community; (b) attitudes toward the learning situation represented by evaluation of the second language teacher, and evaluation of the second language course; (c) desire to learn the second language; (e) motivational intensity, i.e., effort; and (f) attitudes toward

learning the second language (Gardner, 1985). This model distinguishes between two motivational orientations: integrative versus instrumental orientation, a distinction highly acclaimed among second language researchers and practitioners (Dörnyei, 2005). Integrative orientation reflects a positive attitude toward the second language group and the desire to interact and identify with the second language community. Instrumental orientation relates to the potential practicality of second language proficiency, such as employment and international travel. Critiques of this model argued that it did not necessarily address the foreign language learning situation where the language being learned was not used as a medium for communication (Dörnyei, 1994; Oxford & Shearin, 1994).

Also highly influential in second language motivation research is the self-determination theory (SDT; Deci & Ryan, 1985). This theory "distinguishes between different types of motivation based on the different reasons or goals that give rise to an action" (Deci & Ryan, 2000). The most basic distinction is between *intrinsic motivation* and *extrinsic motivation* (Deci & Ryan, 1985, 2000). The former refers to "doing something because it is inherently interesting or enjoyable" (Deci & Ryan, 2000, p. 55), while the latter refers to doing something because it leads to an outcome that is separable from the learning itself (Deci 1971, 1975; Deci & Ryan, 2000; Vansteenkiste, Lens, & Deci, 2006). Over three decades of research has indicated that the quality of experience and performance can be very different depending on whether one is behaving for intrinsic or extrinsic reasons (Deci & Ryan, 2000).

Motivation and the Use of Strategy Categories

Studies exploring the link between motivation and strategy use supported the argument that motivation was significantly related to strategy use (MacIntyre & Noels, 1996; Oxford & Nyikos, 1989; Oxford, Oh, Ito, & Sumrall, 1993; Schmidt & Watanabe, 2001; Yin, 2004). The results of these studies indicated that motivation was correlated with the use of specific strategies and overall strategy use.

In their study, Oxford and Nyikos (1989) found that the factor scores of four of the five strategy use factors, i.e., *formal and functional practice strategies*, *general study strategies*, and *interaction-oriented strategies*, were significantly affected by self-perceptions of motivation. On the basis of these results, the authors concluded that "the degree of expressed motivation was the most powerful influence on strategy choice" (Oxford & Nyikos, 1989, p. 294). Oxford and Nyikos (1989) further stated that the relationship between strategy use and motivational intensity might be reciprocal and cyclic, i.e., highly motivated learners tended to use a wide variety of strategies, and frequent use of a wide variety of strategies could contribute to enhanced language learning, which in turn increased motivation, engendering greater motivational intensity.

In a study that investigated high school students' strategy use in learning Japanese as a foreign language, Oxford, Park-Oh, Ito and Sumrall (1993) reexamined the aforementioned relationship between motivation and strategy use. The results indicated that increased strategy use was correlated with greater intensity of *instrumental/general motivation* and *integrative/personal motivation*. Further, both motivation and strategy use were significant predictors of Japanese language achievement, with motivation being the single best predictor.

Schmidt and Watanabe (2001) examined motivation, strategy use, and pedagogical preferences of 2,089 learners of five different languages at the University of Hawai'i. As noted in Chapter 1, the study used a 47-item motivation scale that purported to the measure 13 motivation constructs. Results of the common factor analysis, when five factors were specified, generated the following five motivation factors: (a) *value*, which loaded on items measuring intrinsic motivation, instrumental orientation, integrative motivation, task value, and interest in foreign languages and cultures; (b) *expectancy*, which loaded on items measuring expectancy, anxiety, and aptitude; (c) *motivation strength*, (d) *competitiveness*, (e) *heritage*, and (f) *cooperativeness*. The four strategy factors identified in this study were (a) *study skills strategies*, e.g., planning and reviewing; (b) *cognitive strategies*, e.g., guessing, looking for patterns, and comparing languages; (c) *coping strategies*, e.g., finding gaps and trying to keep up; and (d) *social strategies*, e.g., working with others and asking others' help.

Correlation analyses indicated that the overall strategy use was significantly correlated with the overall motivation and with three motivation factors across and within all five target language groups: (a) *value*; (b) *motivational strength*; and (c) *cooperativeness*. In the use of strategy categories, *cognitive strategies* were significantly correlated with (a) *value*; (b) *motivational strength*; (c) *expectancy*; (d) *competitiveness*; and (e) *cooperativeness*; *study skills strategies* were significantly correlated with (a) *motivational strength*, and (b) *value*; *coping strategies* were significantly correlated with (a) *motivational strength*, and (b) *cooperativeness*. Overall, motivation factors did not affect all strategy categories evenly. *Motivational strength* was the strongest predictor of strategy use, followed by *value*, and *cooperativeness*. Strategy categories "most affected

by motivation" were *cognitive strategies*, followed by *study skills* and *coping strategies* (p. 344). The use of *social strategies* appears to be "largely unaffected by most aspects of motivation" (p. 344), with *cooperativeness* being the exception. In all language groups, *social strategies* were significantly correlated with *cooperativeness*.

In her study of 340 university students' strategy use in China, Yin (2004) found that the two types of motivational orientations, interest-in-English and interest-in-target-culture, significantly affected the overall strategy use and the use of *cognitive strategies*, *metacognitive strategies*, and *affective strategies*. Interactions between motivational orientation and academic major significantly affected the use of *memory strategies*, *social strategies*, *affective strategies*, and overall strategy use. These findings provided additional evidence supporting the link between motivational orientations and strategy use.

MacIntyre's Social Psychological Model of Strategy Use

MacIntyre and Noels (1996) explored the link between Gardner's motivational model and MacIntyre's strategy use model (1994) and examined specific motivational factors that correlated with the use of six categories of learning strategies in Oxford's 1990 model. The MacIntyre model hypothesized that strategy use was dependent upon three general factors: (a) knowledge of the strategies, i.e., "the observation that strategies are tactics or plans that are employed in an attempt to aid language learning"; (b) having a reason to use it, i.e., "an expectation that a strategy will be successful in helping to learn the language"; and (c) not having a reason not to use it, i.e., nothing exists that inhibits the use of the strategy (MacIntyre & Noels, 1996, p. 374).

In the study, MacIntyre and Noels (1996) operationalized "reason to use the strategy" as perceived effectiveness of strategy use, and "reason not to use the strategy" as difficulty of strategy use and strategy use anxiety. Results of the study supported the argument that motivation was strongly associated with strategy use. Correlation analyses indicated that motivation and integrativeness correlated positively with strategy knowledge. Motivation, integrativeness, and attitude toward the learning situation (ALS) correlated positively with strategy effectiveness and negatively with difficulty of strategy use. All four variables in Gardner's motivation model were significantly correlated with overall strategy use. In the use of strategy categories, motivation correlated significantly with five of the six strategy categories: (a) *memory strategies*; (b) *cognitive strategies*; (c) *metacognitive strategies*; (d) *compensation strategies*; and (d) *social strategies*. Integrativeness, ALS, and language anxiety correlated with the use of three strategy categories: (a) *cognitive strategies*; (b) *metacognitive strategies*; and (c) *social strategies*. While refraining from making causal statements concerning the relationship between motivation and strategy use, MacIntyre and Noels (1996) tendered two possible links between the two learner variables: (a) highly motivated students might be more likely to make the effort needed for using language learning strategies, and (b) students who were fully aware of strategies, considered them to be more effective, and experienced less difficulty in using them, might become more highly motivated to learn the language.

Strategy Use in Relation to Learner Beliefs

Since the mid 1980s, learner beliefs have become a topic of research interest and have received an increasing amount of attention (Barcelos, 2003). Learner beliefs refer to "beliefs about the nature of language and language learning" (Barcelos, 2003, p. 8). Some

definitions of learner beliefs emphasize the social and cultural dimension of beliefs, suggesting that learner beliefs have a social dimension in addition to the cognitive dimension (Barcelos, 2003). Cortazzi and Jin (1996), for instance, define learner beliefs as "the cultural aspect of teaching and learning; what people believe about 'normal' and 'good' learning activities and processes, where such beliefs have a cultural origin" (p. 230).

The most widely used questionnaire for investigating learner beliefs is the *BALLI* (Barcelos, 2003). The *BALLI* was developed in the 1980s and was used to investigate beliefs about language learning among foreign language learners in the U.S. (Horwitz, 1988; Kern, 1995; Oh, 1996), learners of English as a foreign language in Korea (Park, 1995; Truitt, 1995) and Taiwan (Yang, 1992, 1999), Turkish and Turkish-Cypriot pre-university learners in North Cyprus (Kunt, 1997), and, most recently, English and French learners in Lebanon (Diab, 2006). Detailed description of this instrument is presented in Chapter 3.

Learner beliefs about language learning influence their use of language learning strategies (Abraham & Vann, 1987; Horwitz, 1999; Riley, 1997; Yang, 1992, 1999). Abraham and Vann (1987), for instance, state that learners have "a *philosophy* of how language is learned", and that this philosophy "guides the *approach* they take in language learning situations, which in turn is manifested in observable (and unobservable) *strategies* used in learning and communication" (p. 96). Riley (1997) also claims that learner beliefs will directly impact learners' attitude, motivation or strategy. Yang (1999) states that the relationship between strategy use and beliefs about language learning might be cyclical, i.e., "it is possible that learner beliefs led to their use of learning

strategies, or that learners' use of learning strategies shaped their beliefs about language learning" (p. 531).

Beliefs and the Use of Strategy Categories

Several studies specifically explored the relationship between learner beliefs and strategy use (Brown, 2006; Graham, 2006; Park, 1995; Yang, 1992, 1999). Two of these studies used the *BALLI* and the *SILL* (Park, 1995; Yang, 1992, 1999). Yang (1992, 1999) investigated beliefs and strategy use of 505 EFL students attending six private and public universities in Taiwan. Using principle component analysis and Varimax rotation, the study identified four beliefs factors: (a) *self-efficacy and expectation about learning English*; (b) *perceived value and nature of learning spoken English*; (c) *beliefs about foreign language aptitude*; and (d) *beliefs about formal structural studies*, i.e., the importance of studying grammar, vocabulary, translation, and using memorization to learn English. The use of the same statistical procedure identified six strategy factors: (a) *functional practice strategies*, e.g., strategies students employed to use English, such as reading, watching TV, writing notes, and making summaries; (b) *cognitive-memory strategies*, e.g., building associations and mental imaging; (c) *metacognitive strategies*, e.g., planning, setting clear goals, and reviewing; (d) *formal oral-practice strategies*, e.g., practicing the sound and talking to native English speakers; (e) *social strategies*, e.g., seeking help from English speakers and asking for repetition; and (f) *compensation strategies*, e.g., gesturing and inferencing.

Canonical correlation analysis was employed in this study to identify the relationship between learner belief factors and strategy use factors. Canonical correlation analysis is a multivariate analytic method that indicates the degree of relationship between two sets of

variables (Yang, 1999). Results of the analysis indicated that significant canonical correlation existed between learners' self-efficacy and the use of all six strategy factors, especially *functional practice strategies*. This suggested that learners with strong self-confidence reported using a variety of strategies, *functional practice strategies* in particular. The study additionally found that a significant canonical correlation existed between *learner beliefs about the value and nature of spoken English* and the use of *formal oral-practice strategies*. These results were consistent with Wenden's findings that suggested learner beliefs were logically related to strategy use (Wenden, 1986, as cited in Yang, 1999).

Park (1995) investigated Korean university students' strategy use, belief system, and their relationship with second language proficiency. Participants were 332 EFL learners attending two universities in Korea. In this study, factor analysis with Varimax rotation was employed to identify learner beliefs and strategy use factors. Results of the study partially overlapped with the Yang study. The four beliefs factors identified in this study were: (a) *motivational beliefs and beliefs about formal English*, i.e., desires students held for learning English such as learning English to get a job or to make American friends, and beliefs about the importance of learning codes or rule in English; (b) *self-efficacy and beliefs about social interaction*, i.e., beliefs in one's ability to learn English well and emotions learners experienced in interacting with other people; (c) *beliefs about spoken English*; and (d) *beliefs about foreign language aptitude*, i.e., beliefs concerning the existence of special abilities for learning a foreign language and the difficulty of learning a foreign language. These four belief factors were similar to or the same as those reported in the Yang study. The four strategy use factors identified in this study were: (a)

independent and interactive practice strategies, i.e., strategies that students used to practice English independently or interactively; (b) *metacognitive strategies*, e.g., planning and self-evaluation; (c) *communication-affective strategies*, e.g., paraphrasing, gesturing, self-encouragement, and noticing anxiety; and (d) *memory strategies*, e.g., mental imaging and contextualizing the usage of a new word in a sentence.

Correlation analyses indicated that motivational beliefs and beliefs about formal English were significantly correlated with three strategy factors: (a) *independent and interactive practice strategies*; (b) *metacognitive strategies*; and (c) *communication-affective strategies*. *Self-efficacy* and *beliefs about social interaction* were also significantly correlated with three strategy use factors: (a) *independent and interactive strategies*; (b) *metacognitive strategies*; and (c) *memory strategies*. *Beliefs about learning spoken English* was significantly correlated with *communication strategies* and *beliefs about foreign language aptitude* were significantly correlated with *independent and interactive practice strategies*. These results suggested that while beliefs and strategy use were correlated with each other, the nature of the relationship was shaped by specific types of beliefs and learning strategies.

Locus of Learning/Self-Efficacy Beliefs and Awareness of Strategies or Actual Strategy Use

Recent studies using qualitative research methods such as interviews and narrative journals revealed details about the relationship between two particular types of learner beliefs: (a) *self-efficacy beliefs*, and (b) *beliefs about locus of learning*, and awareness of strategies or actual strategy use (Brown, 2006; Graham, 2006).

Graham (2006) interviewed 28 intermediate and advanced French learners aged 16-18 in England to study the impact of French learners' language learning beliefs. Intermediate students had been studying French for approximately six years and were in the last year of compulsory schooling. Advanced students had been learning French for seven to eight years. Interviews from ten of the students who clearly stated positive or negative *self-efficacy beliefs*, i.e., beliefs in one's ability to accomplish a task, were chosen for in-depth qualitative analyses. Results indicated that two out of the five students with negative *self-efficacy beliefs* attributed their lack of success in a certain language skill area to low ability. None of them described poor strategy use as the main reason for their lack of success. This absence of strategy attribution "might indicate a reluctance to accept responsibility for one's own lack of success, or a sense of mystification as to how to improve one's language learning" (Graham, 2004, p. 187, as cited in Graham, 2006). These comments, in contrast, were absent from the transcripts of the five students who expressed positive self-efficacy beliefs. Further, three of these students displayed the awareness "that not using strategies effectively can hinder success" (Graham, 2006, p. 302). Two of the students, in particular, described in some detail about what was problematic with their current strategy use. This suggested that they were aware of the link between strategy use and learning outcomes.

Brown (2006) studied the relationship between locus of learning, affective strategy use, and learning success among 22 students enrolled in a university Individualized Instruction program. The 22 Russian learners were considered to be self-instructed since they were working without the general control of a teacher (Dickinson, 1987, as cited in Brown, 2006). Locus of learning was defined as "a confluence of beliefs about the nature

of learning and the roles and responsibilities of instructors and students in the learning process" (p. 647). A distinction was drawn between internal locus of learning as attributed to the learner him- or herself, or external locus of learning as attributed to factors outside of the learner's control. Students with an internal locus of learning believed that learning occurs within the individual learner, and that the individual constructs knowledge on his or her own, possibly with the facilitation of an instructor. Those with an external locus of control, on the other hand, believed that learning occurs as a result of a transfer of knowledge from an expert to the individual learner (Brown, 2006).

Using multiple sources of data that include a demographic questionnaire, student interview, instructor interview, and narrative journals, the study found no patterns of relationships between locus of learning and the need for external benchmarks to gauge progress. Students with an internal locus and those with an external locus reported a relative isolation from a learning group and experienced ambiguity and lack of motivation. Distinct approaches were adopted by the successful and less successful learners to cope with negative emotions arising from uncertainty and threatened self-efficacy as caused by the lack of benchmarks. The successful learners reported using strategies such as self-encouragement, i.e., saying positive things to oneself, and self-motivation, i.e., "providing an impetus to keep going by reminding oneself of reasons for or advantages of continuing with the course" (White, 2003, p. 117, as cited in Brown, 2006). The less successful learners, however, reported no use of such strategies and no use of *affective strategies* at all. The study concluded that "learners' beliefs about the roles and responsibilities in language learning can have a significant impact on their

ability to succeed", especially in a self-access learning environment where the instructor's role is reduced, and that the use of affective strategies to handle affective changes "not only affect the participants' learning experience, but may indeed influence learning outcomes" (Brown, 2006, p. 651).

Summary and Discussion of Strategy Use in Relation to Key Learner Variables

The studies reviewed in this section suggested that the four key learner variables, (a) gender; (b) academic major; (c) attitudes and motivations; and (d) learner beliefs, were significantly related to learners' strategy use. Gender significantly affected the use of strategy categories, and the use of skill-specific strategies. Relative to males, females reported more frequent use of strategy categories, and the use of skill-specific strategies. Academic major also significantly affected learners' use of strategy categories. Relative to the science majors, for instance, the art majors reported significantly more frequent use of meaning- and usage-oriented note-taking strategies (Gu, 2002). Compared to the technical majors, the humanities/social science/education majors reported significantly more frequent use of *functional, authentic communication strategies* (Oxford & Nyikos, 1989).

There appeared to be a strong relationship between motivation and the choice and frequency of strategy use, as motivation was significantly correlated with overall strategy use (MacIntyre & Noels, 1996) and the use of strategy categories (MacIntyre & Noels, 1996; Schmidt & Watanabe, 2001). Motivation, in conjunction with strategy use, significantly predicted language achievement (Oxford et al, 1993). Learner beliefs were also significantly related to the use of strategy categories (Park, 1995; Yang, 1999), with self-efficacy beliefs having a powerful influence (Yang, 1999). Learners' beliefs about

the use of specific types of strategies were correlated with the use of that type of strategies (Park, 1995), suggesting that beliefs were logically related to strategy use (Wenden, 1986; Yang, 1999).

Patterns of relationships between these learner variables and strategy use, however, appeared to vary in each study and thus appeared to be conditioned by the context in which learners were situated. Gender differences in overall strategy use, for instance, were reported in some studies (e.g., Green & Oxford, 1995) and not in others (e.g., Osanai, 2000). The effect of academic major on strategy use was reported as strong in some studies (e.g., Ehrman & Oxford, 1989), but was described as less potent when compared with gender (e.g., Gu, 2002). It is, therefore, reasonable to argue that while evidence gleaned from this review supports the link between the four key learner variables and strategy use, their impact on learners' strategy use is mediated by the sociocultural context in which the learners are situated.

Judicious caution needs to be exercised in interpreting the magnitude of mean differences in strategy use as related to gender and academic major. Most mean differences were reported in raw scores in these studies, and were thus *raw effect sizes*. Due to differences in variability and in the measurement scale, direct comparison of these mean differences is difficult to make. An important tool for determining and comparing the importance of these mean differences is the *standardized effect size*, which provides a scale-free index of these mean differences. It is thus recommended that future studies of the effect of key learner variables such as gender and academic major on strategy use report *standardized effect size* along with the results of statistical tests, as it indicates the strength of the relationship (e.g., Norris & Ortega, 2000).

Caution should be taken against interpreting the correlation between strategy use and motivation or learner beliefs as any indication of causal relationship. Significant correlations reported in the studies explain to a certain extent the strength of the relationship between strategy use and motivational variables. However, these do not indicate the extent to which changes in, for instance, the amount of *self-efficacy beliefs* (e.g., Yang, 1999) or *motivational intensity* (e.g. Schmidt & Watanabe, 2001), caused the changes in the use of specific types of strategies or the use of language learning strategies in general. The fact that two variables are correlated does not necessarily mean that there is a causal relationship between them. Therefore, when interpreting significant correlations between strategy use and other learner variables, one should refrain from positing any causal claims as indicated by the use of words such as "influence" and "cause". Statistical techniques that justify causal inferences, i.e., structural equation modeling, are commendable for future strategy research.

Summary of Review of Relevant Literature

This chapter reviewed theories and empirical studies in the strategy research field. It presented an overview of major theoretical contributions to the field in terms of definitions, classifications, and features of strategies. It then reviewed major empirical studies exploring the relationship between strategy use and (a) gender; (b) academic major; (c) attitudes and motivation; and (d) learner beliefs.

Strategy research is thriving with a rich array of theoretical contributions and a plethora of empirical evidence supporting the relationship between the four key learner variables and strategy use. This research has generated ample findings regarding how learners learn and what might influence their learning. The impact of this research thus

becomes potentially profound and far-reaching in the changing terrain of second language education. The present study is based on this review of the above-mentioned empirical studies. Chapter 3 presents the methodology employed in the present study.

Chapter 3: Methodology

This chapter describes the methodology used in the present study. It presents an overview of the design, and describes the setting, the participants, two types of instrumentation employed, and data collection and data analysis procedures. These are summarized toward the end of this chapter.

Restatement of Research Questions

For the convenience of readers, this chapter reiterates the research questions below:

1.a. What factor structure underlay *Part D: Language Learning Strategy Use Scale* (Appendix 3)?

1.b. How did study participants learn English prior to being admitted to university?

1.c. What general strategies did study participants use to learn English?

1.d. How did study participants develop their knowledge about the use of language learning strategies?

2.a. What factor structure underlay *Part B: Language Learning Attitude and Motivation Scale* (Appendix 3)?

2.b. What motivated study participants to learn English?

2.c. What were study participants' attitudes toward learning English?

3.a. What factor structure underlay *Part C: Beliefs about Language Learning Scale* (Appendix 3)?

3.b. What beliefs did study participants hold about learning English?

4. Did gender affect (a) latent strategy use factors, (b) latent attitude and motivation factors, and (c) latent belief factors, and if so, in what ways? Did academic

major affect these latent factors, and if so, in what ways? Was there an interaction between gender and academic major, and if so, in what ways?

5. How did latent strategy use factors, latent motivation factors, and latent belief factors relate to each other and to English language proficiency?

Overview of the Design

The present study was designed to be a mixed-methods inquiry. In social science studies, mixed methodologies acknowledge the fact that "because social phenomena are so complex and social problems so intractable, all of our methodological tools are needed for understanding and for action" (Greene, 2001, p. 252). This method also argues that different methods are essentially interdependent in all of our claims to know. Greene (2001, pp. 252-253) summarizes its possible purposes as follows. Note that not all purposes are present in every mixed-methods study.

1. *Triangulation*: Mixing methods for this purpose seeks convergence, corroboration, and correspondence of results across the different methods.
2. *Complementarity*: Mixed methods as used for this purpose measure overlapping, but distinct facets of the phenomena under investigation.
3. *Development*: For this purpose, different methods are used sequentially in order to use the results of one method to help develop the other method or inform its implementation.
4. *Expansion*: For this purpose, different methods are used for different inquiry components in order to extend the breadth and range of the inquiry.
5. *Initiation*: For this purpose, mixed methods intentionally seek the discovery of paradox and contradiction, and new perspectives or frameworks via the recasting of

questions or results from one method with questions or results from the other method.

To be specific, the present study was designed to be a *coordinated mixed-method inquiry*. *Coordinated designs* seek more comprehensive and insightful understanding by harmonizing data or results from different methods that retain their individual, separate identities (Greene, 2001, p. 255). In *coordinated mixed-method designs*, different methods are typically planned and implemented as discrete, separate activities. Interaction between the different methods and their findings typically occur when the overall inferences are drawn, rather than at data compilation or analysis stages. *Coordinated mixed-method designs* suffice the specific purposes of triangulation, complementarity, and expansion. In this study, as explained under data analysis procedures, mixed methods were employed specifically for *triangulation* and *complementarity*.

Setting

The study unfolded in six universities in four cities in the People's Republic of China. For this study, the universities were numbered I through VI (Table 2). What follows are a brief description of the six universities and the rationale for choosing them in this study.

University I is a national comprehensive university located in eastern China. The university features strong foreign language education programs and holds prospective students' performance on the MET as one of the most important admission criteria. Further, English language education is valued as an important component of all undergraduate programs in this university given the fact that a significant portion of

graduates from this university are recruited by multinational corporations located in the major cities on the eastern coast. These companies often require their candidates to have strong communicative skills in English. University I draws students from across the country.

Universities II and III are located in an eastern inland province. University II is a national engineering university that draws, from across the country, high school graduates with strong academic preparation in mathematics and physics. Most of its programs are engineering programs. University III is a provincial teachers' university in eastern China. This university prepares secondary school and high school teachers. Most of the students in this university are education majors from the same eastern inland province.

Table 2: Summary of the Six Universities by University Type, Location, and Sample Representativeness

Universities	University Type	Location	Sample Representativeness
I	National Comprehensive	Eastern Coast	National
II	National Engineering	Eastern Inland	National
III	Provincial Normal	Eastern Inland	Eastern
IV	Provincial Engineering	Southweast China	Southwestern Provinces
V	National Medical: Western Medicine	Eastern China	National
VI	National Medical: Chinese Medicine	Eastern China	National

University IV is a provincial engineering university located in a southwestern province. Although students in this university come from across the country, a large percentage of them are from southwestern provinces. The university, therefore, represents the learners from southwestern China.

Universities V and VI are national medical universities located in eastern China. University V features training in western medicine whereas University VI specializes in the training of traditional Chinese medicine. Both universities are prestigious medical universities in China and attract, from across the country, high school graduates who aspire to become medical professionals.

Participants

In this multi-site, mixed-methods inquiry, the participants completing the *Language Learning Questionnaire* (Yin, 2005) were 1,201 undergraduate students drawn from intact classes in the six universities (Appendix 3).

They were predominantly juniors and seniors drawn from the following academic majors: (a) humanities; (b) sciences; (c) engineering; and (d) medicine. Juniors and seniors were sampled since they had already taken the CET-4 or the GTEM-4 in their third year in the university and were thus able to report their scores on the two tests. Students in China are very well aware of their university standardized test scores. Students were assured that all data were completely confidential, so they had no reason to indicate higher scores than they earned. Spot checks with some of their teachers showed that the scores students reported were accurate. Thus, social desirability response bias regarding these scores, or any other aspect of data collection, did not appear to operate.

CET-4 and GTEM-4 were both proficiency measures. As noted in Chapter 1, non-English majors were required to take CET-4; English majors were required to take GTEM-4. English language proficiency was an important criterion variable in the present study. It was thus important to obtain information on the students' performance on the two tests in order to address the research questions raised in the study. The test scores

were additionally used as one of the criteria to determine students' proficiency level. The CET-4 certification system awarded a pass to candidates who earned a score of 60 or above but below 85, and a distinction to candidates who earned a score of 85 or above (Jin & Yang, 2006). Thus, for CET-4 takers, a score of 85 or above indicated high-proficiency. A score in-between 60 and 85 was an indication of medium-proficiency. A score of less than 60 suggested low-proficiency. For GMET-4 takers, a score of 80 or above indicated high-proficiency; a score in-between 60 and 80 was an indication of medium-proficiency; and a score of less than 60 indicated low-proficiency.

During the research field trip around China, the researcher interviewed 18 students at four of the six universities in the overall investigation. The students were nominated by their classroom teachers on the basis of teacher rating as well as their performance on the two national standardized English tests. The teachers had been asked to nominate students specifically representing the three proficiency levels. Three out of the four universities were able to comply with the request to nominate students based on specified proficiency levels.

The remaining university, although able to nominate four freshman students to be interviewed, was unable to specify nominees' proficiency levels, because the standardized English tests had not yet been taken by the time the interviews occurred. Interviews with the four freshmen nominated by that university were nevertheless conducted, but these four interviews were excluded from the analyses since their proficiency level was unknown.

From the remaining 14 interviews that were conducted, a subsample of nine was selected to receive full-scale qualitative analysis and reporting. It was decided to focus in-

depth on a subsample of nine rather than providing a more superficial analysis of all 14. This subsample was chosen to ensure clear representation occurred in the subsample according to (a) proficiency level and (b) university type. Specifically, subsample selection was made so that each university was represented by three interviews and so that each of the three proficiency levels, i.e., (a) high proficiency, (b) intermediate proficiency, and (c) low proficiency, was well represented. Of the nine interviewees, three were high proficiency students, four were intermediate proficiency students, and two were low proficiency students. Minor discrepancies occurred when both teacher rating and the aforementioned performance-based criterion were used to validate the students' proficiency level. One student from university IV was nominated as a high proficiency student. His CET score, however, was 78. This meant that using the aforementioned performance-based criteria, he was an intermediate-proficiency student. Another student from university III was nominated as a low-proficiency student. Her CET-4 score, however, was 68.This meant that she was a medium proficiency student if the above-mentioned criteria were employed. To address this discrepancy, a third, researcher-specified criterion was employed to determine the proficiency level of these two students. This criterion rated a student as a high proficiency student if his/her score ranked above 90% in the university sample, and as a low proficiency student if his/her test score ranked below 25%. Using this criterion, one teacher rating for the high proficiency student was accepted. The student who was rated as low-proficient students was re-rated as medium proficiency student. This resulted in the above-mentioned subsample.

Table 3: Characteristics of the Subsample of Students Chosen for Full Qualitative Analysis and Reporting

Name	**University Number**	**University Type**	**Academic Major**	**Status at University**	**School Level of First English Study**	**Proficiency Level**
Xin Wang	I	National Comprehensive	English	Junior	Elementary	High
Yu Wei			English	Junior	Secondary	Medium
Hua Zhang			English	Junior	Secondary	Low
Xia Zhao	III	Provincial Normal	Computer Science	Junior	Elementary	High
Lin Lin			Chemistry	Junior	Secondary	Medium
Jie Bin			Education	Junior	Secondary	Medium
Yuan Yao	IV	Provincial Engineering	Engineering	Junior	Secondary	High
Xi Zhou			Engineering	Sophomore	Secondary	Medium
Yun Pan			Engineering	Sophomore	Secondary	Low

Instrumentation

Two types of instruments were administered in this study (a) a written quantitative questionnaire, and (b) qualitative interviews.

Table 4: Research Questions Answered by Each Type of Instrumentation

Quantitative Instrumentation	Qualitative Instrumentation
1.a. What factor structure underlay *Part D: Language Learning Strategy Use Scale* (Appendix 3)? 2.a. What factor structure underlay *Part B: Language Learning Attitude and Motivation Scale* (Appendix 3)? 3.a. What factor structure underlay *Part C: Beliefs about Language Learning Scale* (Appendix 3)? 4. Did gender affect (a) latent strategy use factors, (b) latent attitude and motivation factors, and (d) latent belief factors, and if so, in what ways? Did academic major affect these latent factors, and if so, in what ways? Was there an interaction between gender and academic major, and if so, in what ways? 5. How did latent strategy use factors, latent motivation factors, and latent belief factors relate to each other and to English language proficiency?	1.b. How did study participants learn English prior to being admitted to university? 1.c. What general strategies did study participants use to learn English? 1.d. How did study participants develop their knowledge about the use of language learning strategies? 2.b. What motivated study participants to learn English? 2.c. What were study participants' attitudes toward learning English? 3.b. What beliefs did study participants hold about learning English?

Quantitative Instrumentation

Quantitative instrumentation in the study involved primarily the *Language Learning Questionnaire* (Appendix 3; Yin, 2005). The questionnaire consisted of four parts:

- *Part A: Learner Background*;
- *Part B: Language Learning Attitude and Motivation Scale*;
- *Part C: Beliefs about Language Learning Scale*; and
- *Part D: Language Learning Strategy Use Scale.*

Part A: Learner Background

Part A: Learner Background consisted of completion items used to elicit demographic data. Main fields in this part were (a) age, (b) gender, (c) name of the school or college, (d) major, and (e) prior learning (Appendix 3). Among them, gender and major were two variables hypothesized to influence learner attitudes and motivation, learner beliefs, and learners' use of language learning strategies.

Included in the background questionnaire were also fields where the students self-reported their performance on two English proficiency tests: (a) CET-4, and (b) GTEM-4. As was described before, their test performance was an indication of their English proficiency, which was an important criterion variable. The study estimated relationships between learner variables and language proficiency. The identification of a strong relationship would strengthen the validity and importance of the learner variables.

Part B: Language Learning Attitudes and Motivation Scale

Part B: *Language Learning Attitude and Motivation* was adapted from one of the three scales in the questionnaire that was used to study the relationships among motivation, strategy use and pedagogical preferences among 2,089 learners of five

foreign languages at the University of Hawai'i (Schmidt &Watanabe, 2001). As noted in chapters 1 and 2, the original motivation scale contained 47 items that loaded on 13 factors. These factors represented 13 constructs in students' foreign language learning motivation: (a) *intrinsic motivation*; (b) *language requirement*; (c) *instrumental orientation*; (d) *heritage language*; (e) *integrative orientation*; (f) *interest in foreign languages and cultures*; (g) *task value*; (h) *expectancy*; (i) *anxiety in language learning*; (j) *language aptitude*; (k) *competitiveness*; (l) *cooperativeness*; and (m) *motivational strength* (Schmidt & Watanabe, 2001). Construct validation of this scale consisted in the fact that item selection and preliminary categories were based on relevant theories and the results of a study using a pilot version of the scale that generated a similar group of motivation factors (Schmidt & Watanabe, 2001). Coefficient alpha for the 13 factors ranged from .92 to .88 (Schmidt & Watanabe, 2001).

The selection and adaptation of the 47-item motivation scale for the present study were based on the students' responses to an open-ended question in the pilot study (Yin, 2004): Other than the reasons listed above for learning English, what reasons do you have for learning English? The reasons listed included (a) interest in English, (b) interest in the culture, (c) having friends who speak the language, (d) university requirement, and (e) needing it for future career. Four factors in the original 13 factors considered irrelevant for or unimportant to the EFL context in China were not employed. These were (a) *heritage language*, (b) *task value*, (c) *cooperativeness*, and (d) *language aptitude*. *Heritage language* was not employed because no students in China learned English as a heritage language. *Cooperativeness* and *task value* were not included because they were not considered important and direct reasons for learning English. The *language aptitude*

factor was represented in a different way in *Part C: Beliefs about Language Learning Scale* and therefore was not employed. The remaining 35 items were examined carefully to ensure that all redundant and irrelevant items were removed. In addition, seven items were written up to represent the most commonly reported reasons for learning English identified in the pilot study. Four items describing learner attitude toward teacher guidance were also included. This resulted in a total of 32 items in the *Part B: Language Learning Attitude and Motivation Scale* (Appendix 3).

The students responded to items 3, 4, 5, 29, 30, and 32 using a 5-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5) as follows:

1) Strongly disagree
2) Disagree
3) Neither agree nor disagree
4) Agree
5) Strongly agree

The remaining items used a 5-point Likert scale ranging from *never or almost never true of me* (1) to *always or almost always true of me* (5) as follows:

1) Never or almost never true of me
2) Generally not true of me
3) Somewhat true of me
4) Generally true of me
5) Almost or almost always true of me

<u>Part C: Beliefs about Language Learning Scale</u>

Part C: Beliefs about Language Learning was adapted from the *BALLI*. The *BALLI* was developed in the 1980s to survey learners' opinions about language learning (Horwitz, 1988). It contained 34 items assessing learners' beliefs in five major areas: (a) *language learning difficulty*; (b) *foreign language aptitude*; (c) *the nature of learning*; (d) *learning and communication strategies*; and (e) *learner motivation and expectations*. The items resulted from free-recall protocols of foreign language and ESL teachers of different cultural backgrounds, student focus groups, and additional beliefs supplied by teacher educators from a variety of cultural groups (Horwitz, 1988). The inventory was used in various studies of foreign language learners in America and of EFL learners in Asian countries, such as Korea, Taiwan, and Turkey (Horwitz, 1999).

Reliability and validity values of the *BALLI* were reported in a study of 550 university students in Taiwan. The Chinese *BALLI* used in the study had a Cronbach alpha of .69 (Yang, 1999). Using principal component analysis, the study identified four factors: (a) *self-efficacy and expectation about learning English*; (b) *perceived value and nature of learning spoken English*; (c) *beliefs about foreign language aptitude*; and (d) *beliefs about formal structural studies* (Yang, 1999). Cronbach alpha for the four factors ranged from .52 to .71 (Yang, 1999).

The original *BALLI* was developed for the purpose of surveying learners of all foreign languages. For this reason, several items were revised to specifically address the EFL context in China. The original *BALLI* items that overlapped with the items in *Part B: Language Learning Attitude and Motivation Scale* and those that overlapped with the items in *Part D: Language Learning Strategy Use Scale* were removed. This resulted in a total of 25 items in *Part C: Beliefs about Language Learning Scale* (Appendix 3).

The students in the present study responded to item 1, *difficulty of learning English*, using a 5-point Likert scale ranging from *not difficult at all* (1) to *very difficult* (5) as follows:

1) Not difficult at all
2) Not difficult
3) Neither difficult nor easy
4) Difficult
5) Very difficult

They responded to item 10, "If someone spent an hour a day learning a language, how long will it take him/her to become fluent?" using a 5-point scale as follows:

1) One year 2) Two years 3) Three years 4) Four years 5) Never

They responded to the remaining items using a 5-point Likert scale ranging from *strongly disagree* (1) to *strongly agree* (5) as follows:

1) Strongly disagree
2) Disagree
3) Neither agree nor disagree
4) Agree
5) Strongly agree

Part D: Language Learning Strategy Use Scale

Part D: Language Learning Strategy Use Scale was adapted from the *Strategy Inventory for Language Learning* (SILL), Version 7.0 (Oxford, 1990). The *SILL* was designed as a self-report instrument for measuring the frequency of using language learning strategies (Oxford & Burry-Stock, 1995). The 50-item *SILL* ESL/EFL Version

was designed to gather information about how learners learn English as a second or foreign language. Its development was in response to the fact that previously reported instruments for measuring strategy use did not explore reliability and validity issues, and did not systematically represent the wide variety of strategies considered important to language learning (Oxford, 1996b). The instrument was usable in the classroom, where its goal was "chiefly to reveal the relationship between strategy use and language performance" (Oxford& Burry-Stock, 1995, p. 6). In addition, it has been used as the basis of several dozen dissertations and other studies around the world, such as Griffiths (2003), Lan and Oxford (2004), and Yang (1999).

The *SILL* EFL/ESL Version was "the only language learning strategy questionnaire that had been extensively checked for reliability and validated in multiple ways" (Oxford, 1996b; Oxford & Burry-Stock, 1995). In general, reliability of the *SILL* ESL/EFL Version was reported to be high, as was indicated by Cronbach alpha of the whole scale that ranged from .91 to .94 (Oxford, 1996b; Oxford & Burry-Stock, 1995). Evidence supporting the ESL/EFL *SILL*'s construct validity consisted mainly in its usefulness in identifying differences in learners' strategy that related to gender, motivational orientations, learner beliefs, and cultural backgrounds, with the relationships related to theory-based expectations. Differentiated frequency in using different strategy categories as well as overall strategy use by key learner variables were found in various major studies designed to validate the relationship between strategy use and the variables mentioned above (e.g., Green & Oxford, 1995). Significant gender differences in social strategy use, as an example, were found in several studies (Green & Oxford, 1995;

Nyikos & Oxford, 1993; Oxford et al, 1993), reflecting females' frequent social orientation, which has been noted both in theory and in empirical research.

Hsiao and Oxford (2002) tested 15 strategy classification models, each reflecting a somewhat different theory of language learning strategies. Based on Hsiao's confirmatory factor analysis involving 517 university-level English language learners, the researchers found that Oxford's six-factor system as embodied in the *SILL* (and compared with two other well known L2 strategy taxonomies) was the most consistent with students' actual patterns of reported strategy use.

For the present study, adaptations of the *SILL* ESL/EFL Version were based on the *SILL* results from the pilot study and the students' responses to these two open-ended questions in the pilot study (a) Other than the strategies listed in the *SILL*, do you use any strategies that you think are helpful in learning English, and (b) Of all the *SILL* items, which ones do you think do not match the EFL context in China (Yin, 2004)? Pilot study item analyses indicated that the following strategies were reported to be used at a low frequency rate: (a) "Write down my feelings in a language learning diary"; (b) "Use flashcards to remember new words"; (c) "Physically act out new English words"; (d) "Ask for help from English speakers"; (e) "Use rhymes to remember new words"; and (f) "Look for people I can talk to in English". The participants in the pilot study commented that the two strategies, "Ask for help from English speakers" and "Look for people that I can talk to in English", did not reflect the EFL context in China because (a) not many native-speakers are present in the China, and (b) learners do not look for someone they could talk to in English. The other four of these items reflected strategies that were not just uncommon but also relatively unknown in China. Items (a), (c), (e), and (f), therefore,

were removed from the present study. Item (b) was revised as: “Use vocabulary books and/or electronic dictionaries to remember new words”. Item (d) was revised as: “Ask for help from my English teacher or my friends.” Adaptations of the original *SILL* items were summarized in Table 5.

Four strategies related to Internet-based learning were included since they were reported to be commonly used in the pilot study. These were (a) I find English reading materials on the Internet, (b) I use the Internet chatrooms or messengers to chat in English, (c) I write emails in English, and (d) I listen to Internet news spoken in English or download English songs from the Internet. Additional items that were created to replace the items removed. These included (a) I listen to radio programs in English and English songs, (b) I tell myself that there is always more to learn when learning English, and (c) I go to an English corner or English salon and talk with others in English there. This resulted in a total of 50 items in *Part D: Language Learning Strategy Use Scale* (Appendix 3).

All items used a five-point Likert scale ranging from *never or almost never true of me* (1) to *always or almost always true of me* (5) as follows:

1) Never or almost never true of me
2) Generally not true of me
3) Somewhat true of me
4) Generally true of me
5) Almost or almost always true of me

Table 5: Changes Made in Low-Frequency Pilot Study Items for the Purposes of the Present Study

Low-Frequency Items (Strategies) in the Pilot Study	**Reasons that Pilot-Study Students Gave for Not Using Each of the Low Frequency Items**	**How This Item Was Treated in the Revised *SILL* for the Present Study**
"I remember a new English word be by making a mental picture of a situation in which the word might be used."	Not stated.	Removed.
"I use rhymes to remember new English words."	Not stated.	Removed.
"I use flashcards to remember new words."	Not stated.	Revised as: "I use vocabulary books and/or electronic dictionaries to remember new English words."
"I physically act out new English words."	Not stated.	Removed.
"I remember new English words or phrases by remembering their location on the page, or the board, or on a street sign."	Not stated.	Revised as: "I remember new English words or phrases by remembering the context in which they appear, such as in an article in the textbook, a news report, or on a street sign."
"I practice the sounds of English."	Not stated.	Removed.
"I use the English words I know in different ways."	Not stated.	Removed.
"I start conversations in English."	This is little known in China.	Removed.
"I watch English language TV shows spoken in English or go to movies spoken in English."	Not stated.	Revised as: "I watch movies spoken in English or TV programs spoken in English, such as cartoons and news reports."
"I read for pleasure in English."	Not stated.	Revised as: "I read newspapers, magazines, and books in English."
"I write notes, messages, letters, or reports in English."	Not stated.	I write diaries or short stories in English.
"I first skim an English passage (read over the passage quickly) then go back and read carefully."	Not stated.	Removed.

Table 4: Changes Made in Low-Frequency Pilot Study Items for the Purposes of the Present Study (Continued)

Low-Frequency Items (Strategies) in the Pilot Study	**Reasons that Pilot-Study Students Gave for Not Using Each of the Low Frequency Items**	**How This Item Was Treated in the Revised *SILL* for the Present Study**
"I look for words in my own language that are similar to new words in English."	Not stated.	Removed.
"I try to find patterns in English."	Not stated.	Removed.
"I find the meaning of an English word by dividing it into parts that I understand."	Not stated.	Revised as: "I find the meaning of an English word by dividing it into parts that I understand, such as roots, prefixes, and suffixes."
"I pay attention when someone is speaking in English."	Not stated.	Removed.
"Look for people I can talk to in English".	Few fluent speakers of English are available for most Chinese students.	Removed.
"Write down my feelings in a language learning diary"	This strategy is little known in China.	Removed.
"I ask English speakers to correct me when I talk."	This strategy is little known in China.	Revised as: "I ask my English teacher or fluent speakers of English to correct me when I talk."
"I ask for help from English speakers."	This strategy is little known is China.	Revised as: "I ask for help from my English teachers or my friends."
"I ask questions in English."	Not stated.	Removed.

Qualitative Instrumentation

Qualitative instrumentation in this study involved semi-structured interviews with 18 participants at four of the six universities. They represented three proficiency levels (a) high proficiency, (b) intermediate proficiency, and (c) low proficiency. Of the 14 interviewees who had taken CET-4 or GTEM-4, three were high proficiency students, seven were medium proficiency students, and four were low proficiency students. The remaining four students were freshmen and had not taken the standardized English tests when they were interviewed. All interviews were guided by an interview protocol (Appendix 4). Results of the interviews addressed research questions1.b, 1.c, 1.d, 2.b, 2.c, and 3.b.

Data Collection Procedures

Data were collected using the *Language Learning Questionnaire* (Yin, 2005) and the interviews at the six universities. Access was gained through the researcher's contacts at the universities. With this assistance, entry into the classrooms was negotiated with the classroom teachers, who, in turn, informed their students of the present study. One briefing was held with the classroom teachers to inform them of the purposes and design of the study and the data collection procedures. A uniform procedure was used at all six universities to collect questionnaire data. This was described in "Collecting Quantitative Data". The procedure used at four of the six universities consisted of two phases (a) collection of quantitative data, and (b) collection of qualitative data, with the former proceeding the latter.

Collecting Quantitative Data

The *Language Learning Questionnaire* (Yin, 2005) was used to collect quantitative data. Prior to administering the questionnaires, the consent forms were issued to the participants (Appendix 1). The questionnaire and the consent forms were translated into Chinese and then back-translated into English to ensure translation accuracy. Back translation was done by Xiaomei Qiao, formerly a lecturer at a university in China and currently a doctoral student of Second Language Acquisition and Teaching at a university in the U.S.

The Chinese consent forms were issued and collected first. All participants signed the form on a voluntary basis. The instructions for administering and completing the questionnaire were issued to the classroom teachers and their students (Appendix 2). The teachers briefly described the purposes and design of the questionnaire and explained to their students how they should respond to it. The administration and completion of the questionnaires occurred during regular class times in some of the classrooms, where the questionnaires were collected in class. In other classrooms, they were issued to the students in class and were completed after class. They were then collected approximately one to two weeks later.

Collecting Qualitative Data

Semi-structured interviews were arranged with a total of 18 at four universities. They were nominated by their classroom teachers on the basis of their performance on CET-4 or GTEM-4. Each interview lasted for 20-30 minutes. As was described under "Qualitative Instrumentation", of the 14 interviewees who had taken CET-4 or GTEM-4, three were high proficiency students, seven were medium proficiency students, and four

were low proficiency students. The remaining four students were freshmen and had not taken the standardized English tests when they were interviewed. Their proficiency level was thus unknown. Prior to the interview, the Chinese consent forms were issued to the students. They signed the form on a voluntary basis. All interviews were guided by the same interview protocol (Appendix 4). They were conducted in Chinese and tape-recorded. Open-ended questions as listed in the interview protocol were raised during the interviews to create room for serendipitous findings.

All interviews conducted in Chinese were analyzed in Chinese. Results of the analyses were translated into English. Translation of the interviews was again reviewed by Xiaomei Qiao. In cases where discrepancy arose regarding the wording of the translation, Xiaomei Qiao and the researcher conversed with each other until a consensus was reached.

Data Analysis Procedures

In this mixed-methods study, quantitative data and qualitative data were analyzed separately and then synthesized at the stage when overall inferences were drawn.

Analysis of Quantitative Data

Questionnaire data collected from the six universities were coded and analyzed in SPSS. Statistical procedures were chosen to address research questions 1.a, 2.a, 3.a, 4, and 5.

Factor analyses were performed to address research questions 1.a, 2.a, and 3.a. Factor analysis is a statistical procedure for "investigating linkages between sets of observed and latent variables" by examining "the covariation among a set of observed

variables in order to gather information on their underlying latent constructs" (Byrne, 1994, p. 5). The two basic types of factor analyses are exploratory factor analysis and confirmatory factor analysis (Byrne, 1994). Exploratory factor analysis is used in "the situation where links between the observed and latent variables are unknown or uncertain" to determine how observed variables, or items, relate to their latent underlying factors (Byrne, 1994, p. 5). The relations are represented as factor loadings (Byrne, 1994, p. 5). Confirmatory factor analysis, on the other hand, is used to test the hypothesis "that a particular linkage between the observed variables and their underlying factors does in fact exist" (Byrne, 1994, p. 5). In this analysis, a linkage pattern is postulated *a priori* and tested statistically (Byrne, 1994).

Factor analyses were performed in two steps. Prior to performing the analyses, the sample of 1,201 students was randomly split into two subsamples using SPSS (a) an exploratory subsample of 612 students, and (b) a confirmatory subsample of 589 students. In step one, and using the exploratory subsample, exploratory factor analyses were performed separately on the three scales to explore the factor structure underlying them. Specifically, Principal Axis Factoring was chosen to perform the analyses. This method defines factors as hypothetical constructs generated from commonly shared variance and thereby separates commonly shared variance from measurement errors (Gorsuch, 1983). The number of factors to be retained was determined by examining the scree plot, i.e., plot of the eigenvalues of extracted factors arranged in a descending order, to identify distinct breaks in the slope of the plot (Cattell, 1966). Two oblique rotation methods available in SPSS, Direct Oblimin and Promax rotation, were chosen to rotate the factors. Oblique rotation assumes that factors are not independent of each other. This was

employed instead of orthogonal rotation methods such as Varimax given the fact that, in this study, the factors underlying the three scales were hypothesized to correlate with each other.

In step two, and using the confirmatory subsample, confirmatory factor analyses were performed using the statistical package EQS 6 (Bentler, 2004) to validate the factor structures identified in step one. The factorial validity of the theoretical constructs of interest in this study, learner attitudes, motivations, learner beliefs, and learner strategy use, was assessed by modeling and fitting the linkages between the factors and factor indicators identified in the exploratory factor analysis to the confirmatory subsample. Model fit was assessed using the Robust procedure as recommended by Satorra and Bentler (1994).This method guards against problems associated with analyses of nonnormal data (Satorra & Bentler, 1994). Specifically, model fit was determined by applying the second set of Hu and Bentler (1999) joint criteria. The joint criteria examined the value of two fit indices, Standardized Root Mean Square Residual (SRMR) and Root Mean Square Error of Approximation (RMSEA). Model fit was considered acceptable if SRMR$\leq$ 0.09, and RMSEA$\leq$.06, as recommended (Hu & Bentler, 1999). Whenever such a fit occurred, an acceptable model thus validated the factor structures identified in the exploratory factor analyses.

To address research question 4, and to determine whether gender differences and differences by academic major existed in the latent strategy use constructs, attitude and motivation constructs, and learner beliefs constructs, another statistical modeling procedure, latent means analysis, was performed separately on the three sets of constructs validated in the confirmatory factor analyses. Latent means analysis justifies inferences

about population mean differences at the latent level (Hancock, 2001). The analyses were performed using EQS 6 (Bentler, 2004). They involved primarily model comparisons. Three types of models were compared: a model assuming the existence of the interaction effect of gender and academic major on the latent constructs, a model assuming the non-existence of the interaction effect, and a model assuming the simple gender or academic major effect only. The no-interaction model was a subset of the interaction model and, therefore, was considered nested under the interaction model. The chi-square difference test, i.e., the difference between the chi-square values of the two nested models and its significance, was used to test the statistical significance of the decrease in overall fit. The model chi-square value and the model Akaika Information Criterion (AIC) value were used to compare either the interaction model or the no-interaction model with the simple gender and academic major effect model, since they were nonnested models. AIC is generally used to select among competing nonnested models estimated with the same data (Byrne, 1994).

Finally, to address research question 5 and to model the relationships among motivations, learner beliefs, learner strategy use, and English language proficiency, latent variable path analysis was performed using EQS 6 (Bentler, 2004) to determine whether the *a priori* hypothesized set of relationships existed among the latent constructs. Latent variable path analysis tests theoretical causal relations among latent variables that have observed variables as their indicators. Model fit was again assessed using the second set of Hu and Bentler (1999) joint criteria. Structural paths significant at a probability value of .05 in the model were examined closely since these represented significant causal relationships among the factors and the proficiency measure.

Analysis of Qualitative Data

Interviews were transcribed in Chinese and were carefully organized, filed, and labeled by three types of codes: (a) universities/academic major; (b) proficiency level; and (c) themes. Analyses of interview data were guided by research questions 1.b, 1.c, 1.d, 2.b, 2.c, and 3.b.

Interview transcriptions were reviewed first to derive an overall sense of the data. Initial findings were jotted down in the form of memos or reflective notes. Attention was focused on "hearing what the interviewees say" (Creswell, 1998, p. 144). This allowed for discerning major themes, dimensions, or categories of information that emerged from the data. This procedure was comparable to *open coding* in grounded theory studies (Strauss & Corbin, 1990). Further, by reading, classifying, and interpreting the data, subthemes were established and represented by segments of data. As in *axial coding*, interconnections among the themes and subthemes were also explored. Finally, in representing the data, explanatory interpretations were developed and well supported by data.

Synthesizing Quantitative and Qualitative Data

In this mixed-methods study, the juxtaposition of quantitative and qualitative methodologies served two purposes (a) *triangulation*, and (b) *complementarity*. This was achieved at the stage when inferences were drawn.

For the purpose of *triangulation*, factor analyses were performed to identify three sets of latent constructs: (a) strategy use constructs; (b) attitude and motivation constructs; and (c) learner beliefs constructs. Analyses of the interview data provided a detailed view of how these constructs were instantiated in the individual language learners. Latent

variable path analysis identified the relationships among strategy use, motivations, learner beliefs, and English language proficiency. Analyses of qualitative data additionally revealed how, specifically, the relationships among the three sets of latent constructs as identified in latent variable path analysis embodied in the individual learners.

Analyses of the interview data granted additional insights into the learner variables investigated in this study. The interview results complemented the results of the quantitative analyses and generated a fine-grained view of how learners from different universities and at different proficiency levels conceptualized language learning, what motivated their learning, what their language learning attitudes were, and how their cognition of strategy use developed over time. This fulfilled the purpose of "*complementarity*".

Summary of Methodology

This chapter described the methodology used in the present study. The present study was designed to be a mixed-methods inquiry. It unfolded in the six universities in three different regions in China, involving a total of 1,201 university students. Two types of instrumentation were employed to collect data: quantitative instrumentation and qualitative instrumentation. The quantitative data were collected using the *Language Learning Questionnaire* (Appendix 3; Yin, 2005). Descriptions of the questionnaire and the four parts in it, *Part A: Learner Background*; *Part B: Language Learning Attitudes and Motivation Scale*; *Part C: Beliefs about Language Learning Scale*; and *Part D: Language Learning Strategy Use Scale*, were presented in detail in this chapter, focusing on issues of reliability and validity of the instruments that they were adapted from and the

methods used to make the adaptations. The qualitative interviews were conducted using the interview protocol (Appendix 4). Detailed descriptions of the data collection and data analysis procedures were also presented, with attention focused on making transparent the analyses of the questionnaire data.

Chapter 4: Quantitative Results

The purpose of the present study was to explore the relationships among attitudes, motivations, learner beliefs, strategy use, and English language proficiency among Chinese EFL learners. Both quantitative and qualitative data were generated to explore and validate the factor structure of the three learner variables, to identify the effect of gender and academic major on the latent factors, and to ascertain the relationships among them and English language proficiency. Results of the quantitative analyses are reported in this chapter in six sections. Descriptive statistics are reported first. The remaining sections address the five research questions. Qualitative results will be presented in Chapter 5, and in Chapter 6, results from the quantitative and qualitative analyses will be integrated and interpreted.

Descriptive Statistics

Quantitative data collection spanned six months, starting in December, 2005, and concluding in May, 2006. A total of 1,201 students from six universities responded to the *Language Learning Questionnaire* (Yin, 2005). Self-report data regarding the following demographic variables: (a) gender; (b) age; (c) grade; and (d) the schools or colleges that they attended were gathered using *Part A: Learner Background* (Appendix 3). These were reported in Table 6 and Table 7. Of the 1,201 students, 50.291% were male, and 49.709% were female. Of the 1,196 students who reported their university grade level, 18.980% were sophomores, 76.505% were juniors, and 4.515% were seniors. Of the 1,177 students who reported

Table 6: Participants' Gender, Grade, and Birth Year in the Six-University Sample

		Univ. I		Univ. II		Univ. III		Univ. IV		Univ. V		Univ. VI		Total	
Variable	Category	Freq.	%	Freq.	%	Freq	%	Freq	%	Freq.	%	Freq.	%	Freq.	%
Gender (n=1201)	Male	40	13.468	6	9.375	146	44.109	92	71.317	203	77.481	117	99.153	604	50.291
	Female	257	86.532	58	90.625	185	55.891	37	28.682	59	22.519	1	0.8475	597	49.709
Total		297	100	64	100	331	100	129	100	262	100	118	100	1201	100
Grade (n=1196)	Sophomore	-	-	13	20.313	-	-	10	7.752	134	51.145	70	59.322	227	18.980
	Junior	294	100	29	45.313	329	100	119	92.248	96	36.641	48	40.678	915	76.505
	Senior	-	-	22	34.375	-	-	-	-	32	12.214	-	-	54	4.515
Total		294	100	64	100	329	100	129	100	262	100	118	100	1196	100
Birth Year	1981	-	-	-	-	1	0.315	2	1.550	3	1.181	-	-	6	0.5098
(n=1177)	1982	-	-	1	1.563	12	3.785	6	4.651	23	9.055	-	-	42	3.568
	1983	13	4.407	11	17.188	36	11.356	4	3.100	38	14.961	4	3.390	106	9.006
	1984	112	37.966	28	43.750	95	29.968	50	38.760	80	31.496	16	13.556	381	32.370
	1985	152	51.525	13	20.313	116	36.593	53	41.085	65	25.591	49	41.525	448	38.063
	1986	12	4.068	11	17.188	45	14.196	13	10.078	40	15.748	39	33.051	160	13.594
	1987	5	1.695	-	-	11	3.470	1	0.775	5	1.969	8	6.780	30	2.549
	1988	1	0.339	-	-	1	0.315	-	-	-	-	2	1.695	4	0.398
Total		295	25.064	64	5.438	317	26.932	129	10.960	254	21.580	118	10.025	1177	100

Table 7: Participants' Academic Majors and Schools/Colleges in the Six-University Sample

Academic Majors (n=1189)	Humanities		Sciences		Medicine		Engineering		% of the sample
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	
Social studies	48	10.960	_	_	_	_	_	_	4.037
Economics & business admin	48	10.960		_	_	_	_	_	4.037
Biology	_	_	57	28.358	_	_	_	_	4.794
Chemistry & material science	_	_	45	22.388	_	_	_	_	3.785
Physics	_	_	47	23.383	_	_	_	_	3.953
Math & computer science	_	_	51	25.373	_	_	_	_	
Land resources	_	_	_	_	_	_	156	41.600	13.120
Mechanical engineering	_	_	_	_	_	_	103	27.467	8.663
Electrical engineering	_	_	_	_	_	_	117	31.200	9.840
Clinical medicine	_	_	_	_	129	73.143	_	_	10.849
Acupuncture	18	4.111	_	_	46	26.286	_	_	5.383
English	137	31.279	_	_	_	_	_	_	11.522
Law	71	16.210	_	_	_	_	_	_	5.971
Intl. economics & business admin.	82	18.721	_	_	_	_	_	_	6.897
Education	34	7.763	_	_	_	_	_	_	2.860
Total	438	36.838	201	16.905	175	14.718	375	31.539	100

their year of birth, approximately 84% of the students were between the ages 21 and 23. Of the four academic majors, 36.838% were humanities students, 16.905% were science students, 14.718% were medical students, and 31.539% were engineering students (Table 7).

Structure of the Students' Strategy Use

This section reports the results of the exploratory and confirmatory factor analyses performed on *Part D: Language Learning Strategy Use Scale (*Appendix 3). It describes and interprets the dimensions underlying this scale as well as the relationships among these dimensions as indicated by inter-factor correlations.

Development of a Four-factor Strategy Use Model (Exploratory Factor Analysis)

The first research question was comprised of four segments that concerned the structure of the students' strategy use, their prior learning, the general strategies that they used to learn English, and development of strategy knowledge. Research question 1.a stated: What factor structure underlay *Part D: Language Learning Strategy Use Scale* (Appendix 3)? To address this question, Principal Axis Factoring with Promax rotation was performed on the exploratory subsample using SPSS. An absolute value of .40 was used to determine which factor loaded on which items. All factor loadings with an absolute value less than .40 were suppressed. The analysis yielded four strategy use factors that loaded on 24 items (Table 8). The four factors cumulatively accounted for 38.655% of the total variance. Cronbach alpha for the 24-item scale was .855.

Seven strategy use items loaded on the first factor. The factor loadings in this subscale ranged from 0.416 to 0.785. These seven items described seven strategies that the students employed to regulate their own learning, such as planning, setting goals, reflecting on progress, and seeking ways to become a better learner. This factor, therefore, was named *metacognitive strategy use*. Cronbach alpha for this seven-item subscale was .797.

Table 8: Strategy Use Component Loadings and the Reliabilities of the Subscales Based on Results of the Exploratory Factor Analysis

	Component			
Strategy Item	1	2	3	4
6. review English lessons often	.576			
9. watch movies or TV programs in English		.539		
10. read newspapers, magazines, and books in English		.415		
11. write diaries/short articles in English		.474		
12. listen to radio programs spoken in English and English songs		.587		
14. try not to translate word for word			.427	
16. make guesses to understand unfamiliar English words			.630	
17. use gestures to compensate for vocabulary gap when talking in English				.426
19. read English without looking up every new word			.600	
21. circumlocution			.611	
24. find out how to be a better learner of English	.616			
25. plan schedule so as to have enough time to study English	.785			
26. look for opportunities to read in English	.646			
27. have clear goals for improving English skills	.641			
28. think about progress in learning English	.580			
32. encourage oneself	.416			
36. ask English teacher/fluent speakers of English to correct one's spoken English				.411
37. practice English with other students				.712
38. ask for help from others				.568
39. practice spoken English at an English corner or an English saloon				.554
47. read English reading materials on the Internet		.665		
48. use Internet chatrooms or messengers to chat in English		.712		
49. write emails in English		.709		
50. listen to Internet news spoken in English or English songs downloaded from the Internet		.700		
Reliability (alpha)	.797	.827	.631	.645

Eight strategy use items loaded on the second factor. Factor loadings ranged from .415 to .712. These items described the ways in which the students engaged in self-directed language practice, such as watching TV programs in English and reading English books and newspapers. Four of these items described them as making use of Internet-based learning materials and tools to practice English, such as listening to Internet news. This factor, therefore, was named *self-directed practicing strategy use*. Cronbach alpha for this eight-item subscale was .827.

Four strategy use items loaded on the third factor. The factor loadings in this subscale ranged in value from .427 to .611. All four items related to vocabulary learning. Three of the items described the strategies that the students employed to compensate for a vocabulary gap, such as circumlocution. This factor, therefore, was named *compensatory vocabulary-learning strategy use*. Cronbach alpha for this four-item subscale was .631.

Five strategy use items loaded on the fourth factor. The factor loadings in this subscale ranged from .411 to .712. These items described the strategies that the students employed to engage in social interaction, such as practicing English with others. This factor, therefore, was named *social interactional strategy use*. Cronbach alpha for this five-item subscale was .645.

Validation of the Four-factor Strategy Use Model (Confirmatory Factor Analysis)

Following the exploratory factor analysis, a confirmatory factor analysis was performed on the confirmatory subsample to validate the four-factor strategy use model and the relationships between the factors and their indicators. All four factors were allowed to covary with each other. This analysis was performed in EQS 6 (Bentler, 2004). Model fit was assessed using the second set of the joint criteria recommended by

Hu and Bentler (1999). As noted in Chapter 3, this criteria state that for a model fit to be considered acceptable, it needs to meet both criteria (a) SRMR≤ .09, and (b) RMSEA≤.06. Applying this joint criteria, the fit of the four-factor strategy use model was considered acceptable (Table 9: SRMR = .056; Robust RMSEA = .051).

Table 9: Fit Indices of the Four-factor Strategy Use Model in the Confirmatory Factor Analysis

Model	Satorra-Bentler χ^2 (*df*) χ^2	Robust *CFI* *CFI*	*SRMR*	Robust *RMSEA* *RMSEA*
Four-Factor	611.6003 (246)	.887	0.056	0.051
Strategy Use	727.323	.880		.058

Figure 1 visually displays the item to factor assignment as well as the standardized path values in the confirmatory factor analysis. In this figure, the factor indicators were represented by the items inside the rectangles, and the factors were represented by their names inside the ovals. The items functioned as the indicators of the latent factors that they loaded on. Associated with each item was an error term (E). Values next to the standardized paths between an indicator and its factor represented item loadings in the confirmatory factor analysis. In this figure, the loadings on factor one, *metacognitive strategy use* ranged in value from .502 to .759. The loadings for factor two, *self-directed practicing strategy use*, ranged in value from .546 to .685. The loadings for factor three, *compensatory vocabulary-learning strategy use* ranged in value from .322 to .624. The loadings for factor four, *social interactional strategy use*, ranged in value from .438 to .712. The criterion of suppressing factor loadings whose absolute value was less than .40 did not apply to the confirmatory factor analysis given that the purpose of the confirmatory factor analysis was to determine whether the factor structure identified in the exploratory factor analysis fit a different subsample. Therefore, in this analysis, factor

loadings whose absolute value was less than .40 were retained. In confirmatory factor analyses, the standardized paths connecting the latent factors represent the correlations among the factors (Byrne, 1994). Table 10 displays inter-factor correlations as well as their significance level. In this case, the null hypothesis that the correlation coefficient was zero was tested against a nondirectional alternative (two-tailed test) that the correlation coefficient was different than zero. The level of significance was set at .05. Correlations coefficients significant at a probability value of .05 are marked with an asterisk in Table 10.

As the table indicates, all four strategy use factors were significantly correlated with each other. *Social interactional strategy use* was strongly correlated with *metacogntive strategy use* and *compensatory vocabulary-learning strategy use* at .616 and .623. *Metacognitive strategy use* was strongly correlated with *self-directed practicing strategy use* at .632. Further, *compensatory vocabulary-learning strategy* use was significantly correlated with *metacognitive strategy use* and *self-directed practicing strategy use* at .469 and .418. The only weak correlation was between *social interactional strategy use* and *compensatory vocabulary-learning strategy use*, which as .245. These results suggested that, rather than standing independent of each other, strategy use factors were correlated with each other at a medium to strong level. These correlations are reasonable, given that oblique rotation assumes that factors are correlated with each other.

Figure 1: Items Loadings and Error Terms of the Four-Factor Strategy Use Model in the Confirmatory Factor Analysis

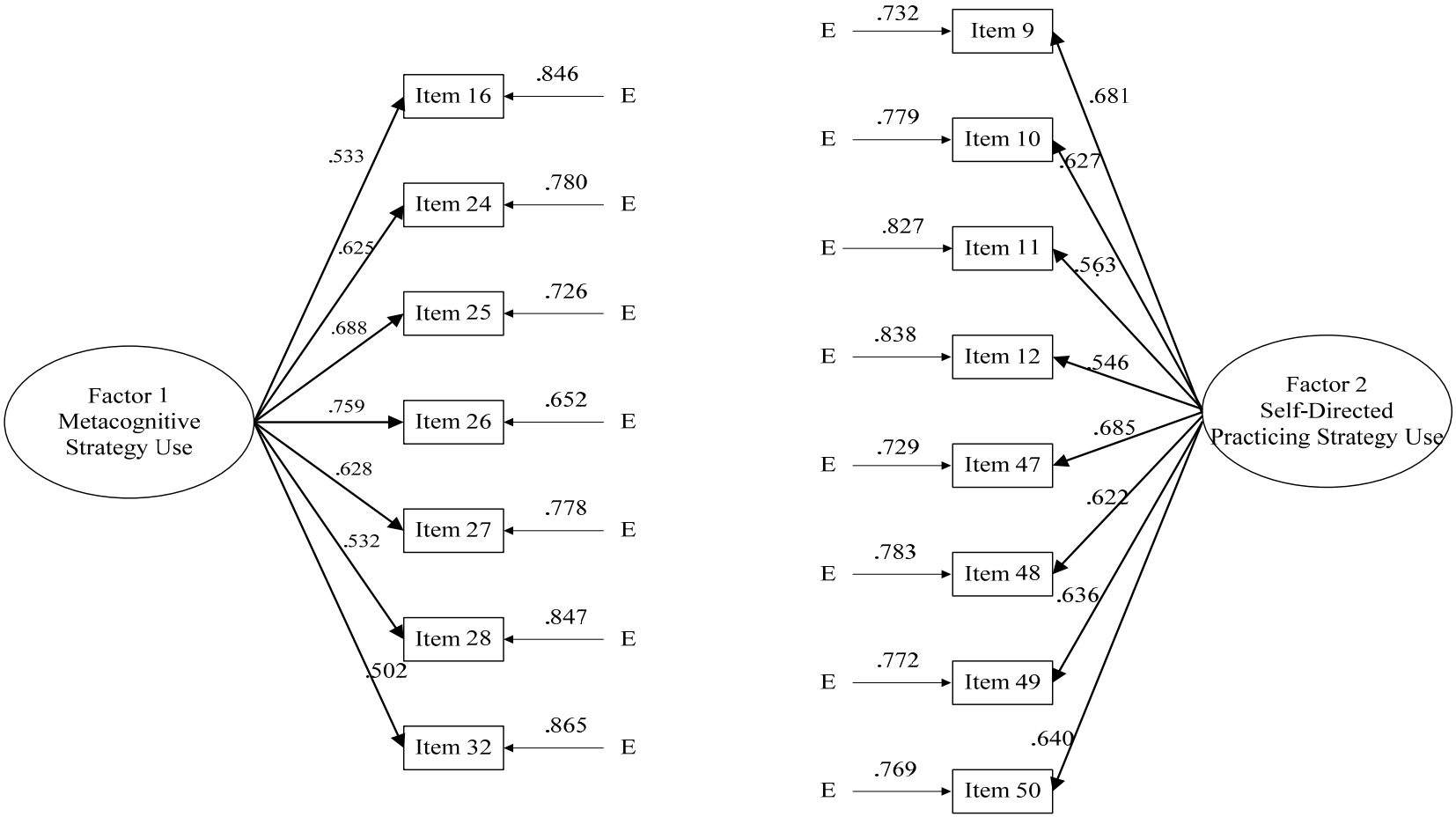


Figure 1: Items Loadings and Error Terms of the Four-Factor Strategy Use Model (Continued)

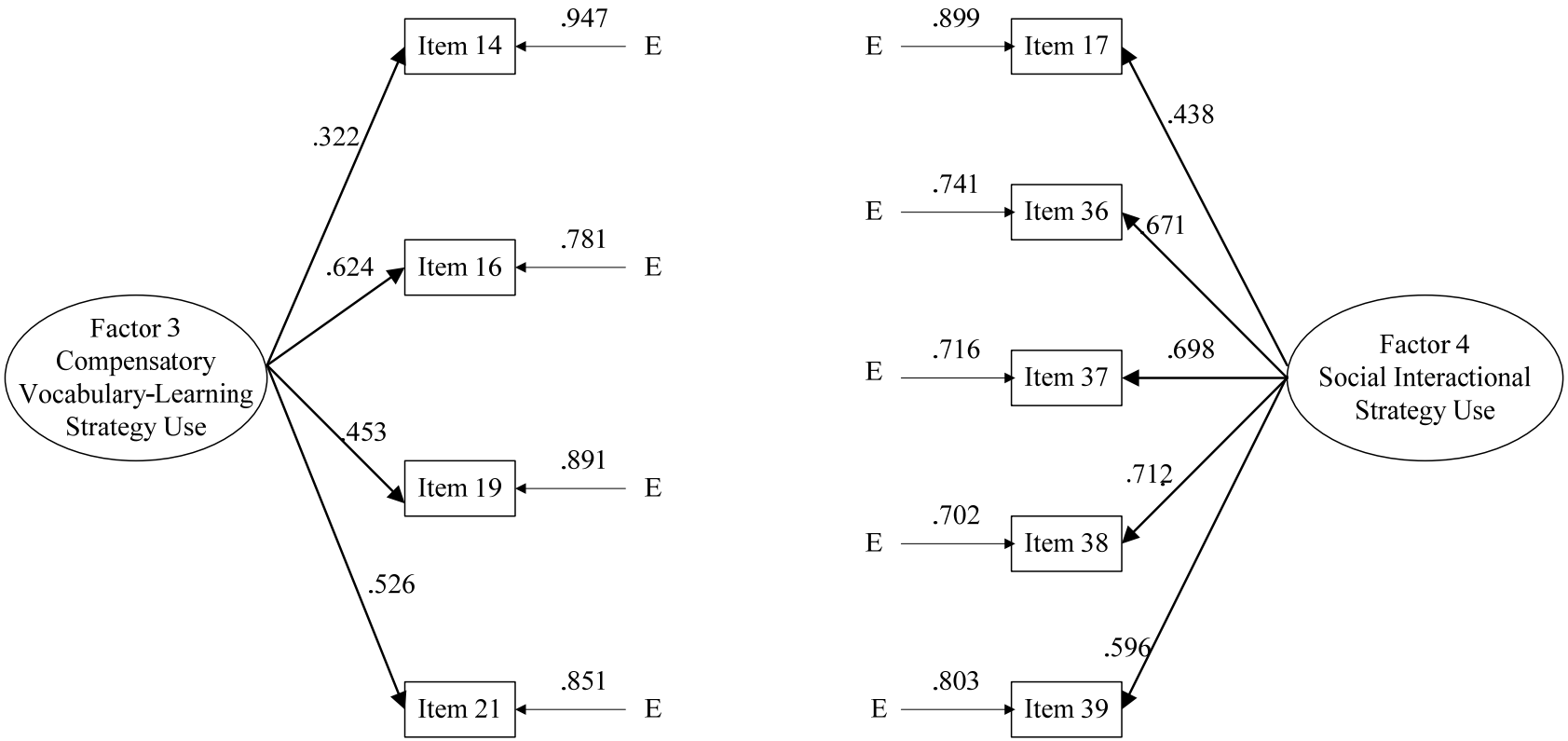


Table 10: Correlations among the Four Strategy Use Factors in the Confirmatory Factor Analysis

Factor	1	2	3	4
1. Metacognitve strategy use	---			
2.Self-directed practicing strategy use	.632*	---		
3. Compensatory vocabulary-learning strategy use	.469*	.418*	---	
4.Social interactional strategy use	.616*	.623*	.245*	---

*p<.05

Structure of Students' Attitudes and Motivations

This section reports the results of the exploratory and confirmatory factor analyses performed on *Part B: Language Learning Attitudes and Motivation Scale* (Appendix 3). It describes and interprets the dimensions underlying this scale as well as the relationships among these dimensions as indicated by inter-factor correlations.

Development of a Six-factor Attitude and Motivation Model (Exploratory Factor Analysis)

Research question 2.a stated: What factor structure underlay *Part B: Language Learning Attitudes and Motivation Scale* (Appendix 3? To address this question, Principal Axis Factoring with direct oblimin rotation was performed on the exploratory subsample. An absolute value of .40 was used to determine which factor loaded on which items. The loadings with an absolute value less than .40 were suppressed. The analysis generated six attitude and motivation factors that loaded on

Table 11: Attitude and Motivation Component Loadings and Reliabilities of the Subscales based on Results of the Exploratory Factor Analysis

	Component					
Attitude and Motivation Items	1	2	3	4	5	6
4. lift social status	-.602					
5. bring financial benefits	-.727					
7. understand English-speaking films, videos, TV or radio programs		.846				
8. understand English pop music		.783				
9. read books, newspapers, or magazines in English		.665				
10.learn English mainly to satisfy the university language requirement			.635			
11. really enjoy learning English			-.531			
12. learn English even if it is not a required course			-.625			
14. really don't like learning English			.693			
15. getting a good grade in this class being the most important thing			.422			
17. competing with other students gives the strength to learn better				.440		
19. frequently think over what one has learnt in one's English class				.549		
21. truly put best efforts into learning English				.572		
23. believe oneself to receive excellent grades on English tests				.489		
24. worry about the ability to learn English well					.501	
25. get nervous and confused when speaking in class					.769	
26.feel that the other students speak English better					.685	
27. never feel quite sure of oneself when speaking English in class					.891	
28. do not worry about making mistakes when speaking in front of this class					-.447	
29.English instructor's guidance being important for oneself to improve English						-.541
30. English instructor being a role model						-.626
31. figure out ones' own way to learn English rather than following teacher advice						.481
Reliability (alpha)	.656	.828	.767	.617	.524	.118

a total of 22 items (Table 11), accounting for 53.483% of the total variance. Cronbach alpha for the 22-item scale was .594.

Items 4 and 5 loaded on the first factor. They described the social and financial benefits associated with learning English. Factor loadings were negative at -.602 and -.727. This factor, therefore, was named *lack of orientation toward social and financial benefits*. Cronbach alpha for this two-item subscale was .656.

Items 7, 8, and 9 loaded on the second factor. Factor loadings were .665, .783, and .846. These items described the immediate pragmatic purposes of learning English, such as watching TV programs in English and reading English books. This factor, therefore, was named *orientation toward immediate language use*. Cronbach alpha for this three-item subscale was .828.

Five items loaded on the third factor. Two of the items, items 11 and 12, described the students' desire to learn English and the enjoyment of learning English. These two items were negatively correlated with factor three at -.531 and -.625. Items 10 and 15 described learning as regulated or motivated by an external force, such as the university language requirement or grades. Item 14 described the students as not liking to learn English. These three items were correlated positively with factor three at .635, .422, and .693. This factor, therefore, was named *lack of intrinsic motivation*. Cronbach alpha for this five-item subscale was .767.

Items 17, 19, 21, and 23 loaded positively on the fourth factor. Factors loading ranged in value from 0.440 to 0.572. This factor described the students' orientation toward competition and the belief that they could achieve good grades on English tests.

This factor, therefore, was named *orientation toward competition and academic self-efficacy*. Cronbach alpha for this four-item subscale was .617.

Items 24, 25, 26, 27, and 28 loaded on the fifth factor. Factor loadings ranged in value from -.447 to .891. Items 24, 25, 26, and 27 were correlated positively with this factor at .501, .769, .685, and .891. These items described the students as feeling unsure and nervous when speaking English in the language classroom. Item 28 described the students as feeling confident about their oral language competence and was negatively correlated with this factor at -.447. This factor, therefore, was named *language use anxiety*. Cronbach alpha for this five-item subscale was .524.

Items 29, 30, and 31 loaded on the sixth factor. The factor loadings were -.626, -.541, and .481. Items 29 and 30 loaded negatively on this factor. Item 29 described the teachers as role models. Item 30 described the value that the students placed on teacher guidance. Item 31 loaded positively on this factor. This item described the students as partially discounting their instructors' advice and following their own advice. This factor, therefore, was named *self-as-guide*. Cronbach alpha for this three-item subscale was .118.

Validation of the Six-factor Attitude and Motivation Model (Confirmatory Factor Analysis)

Following the exploratory factor analysis, a confirmatory factor analysis was performed on the confirmatory subsample to validate the six-factor structure. Items were assigned to factors on the basis of the results of the exploratory factor analysis. All six factors were allowed to covary. In addition, three pairs of error terms were allowed to covary: error terms of items 15 and 10; error terms of items 17 and 15; and error terms of items 24 and 14 (Figure 2). The inclusion of these error to error covariances was justified

as follows. Item 15 described learning as motivated by grades. It was very likely that the students with such an orientation learned English for the purpose of satisfying the university language requirement (Item 10). The error terms for these two items, therefore, were allowed to covary. Item 17 described the students' learning as motivated by peer competition. It was very likely that the students with this orientation were also motivated by grades, since grades were used to differentiate among the students' ability. Thus, the error term of item 15 was also allowed to covary with the error term of item 17. Item 14 stated, "I really don't like learning English". Item 24 stated, " I am worried about my ability to learn English well". The students who did not like learning English were probably also worried about their ability to learn English well. The error terms of these two items, therefore, were allowed to covary.

The analysis was performed in EQS 6 (Bentler, 2004). Fitness of the model was assessed and considered acceptable applying the second set of the Hu and Bentler (1999) joint criteria: RMSEA≤0.6 and SRMR≤0.9 (Table 12).

Table 12: Fit Indices of the Six-Factor Attitude and Motivation Model in the Confirmatory Factor Analysis

Model	Satorra Bentler χ^2 (*df*) χ^2	Robust *CFI* *CFI*	*SRMR*	Robust *RMSEA* *RMSEA*
Six-Factor	522.9127 (191)	.904	0.070	.055
	591.838	.903		0.060

Figure 2 visually displays the item to factor assignment as well as the standardized path values in the confirmatory factor analysis. Three factors were renamed in this figure. In the exploratory factor analysis, items 4 and 5 loaded negatively on factor one. In this figure, these two items loaded positively on it at .795 to .638. Therefore, factor one which was originally named *lack of orientation toward social and financial benefits* in the exploratory factor analysis was renamed *orientation toward social and financial benefits*

in the confirmatory factor analysis. Similarly, three of the five items that loaded on factor three, items 10, 14, and 15, were originally positively correlated with factor three in the exploratory factor analysis. In the confirmatory factor analysis, they loaded negatively on the factor. Items 11 and 12 were originally negatively correlated with factor three in the exploratory factor analysis. In the confirmatory factor analysis, they were correlated positively with this factor. Therefore, factor three which was originally named *lack of intrinsic motivation* in the exploratory factor analysis, was renamed i*ntrinsic motivation* in the confirmatory factor analysis. Factor six was renamed as *teacher-as-guide* in the confirmatory factor analysis. This factor was renamed because it correlated positively with items 29 and 30, and negatively with item 31 in this analysis, whereas in the exploratory factor analysis, the signs of the factor loadings were the opposite.

The loadings for factor two, *orientation toward immediate language use*, were .730, .759, and .858. The loadings for factor four, o*rientation toward competition and academic self-efficacy*, ranged in value from .191 to .614. The loadings for factor five, *language use anxiety*, ranged in value from -.482 to .896. The loadings for factor six, *teacher-as-guide*, ranged in value from -.189 to .814. As noted previously, the criterion of suppressing factor loadings whose absolute value was less than .40 did not apply to the confirmatory factor analysis given that the purpose of the confirmatory factor analysis was to determine whether the factor structure identified in the exploratory factor analysis fit a different subsample. Therefore, in this analysis, factor loadings whose absolute value was less than .40 were retained.

Figure 2: Item Loadings, Error Terms, and Error Covariance of the Six-Factor Attitude and Motivation Model in the Confirmatory Factor Analysis

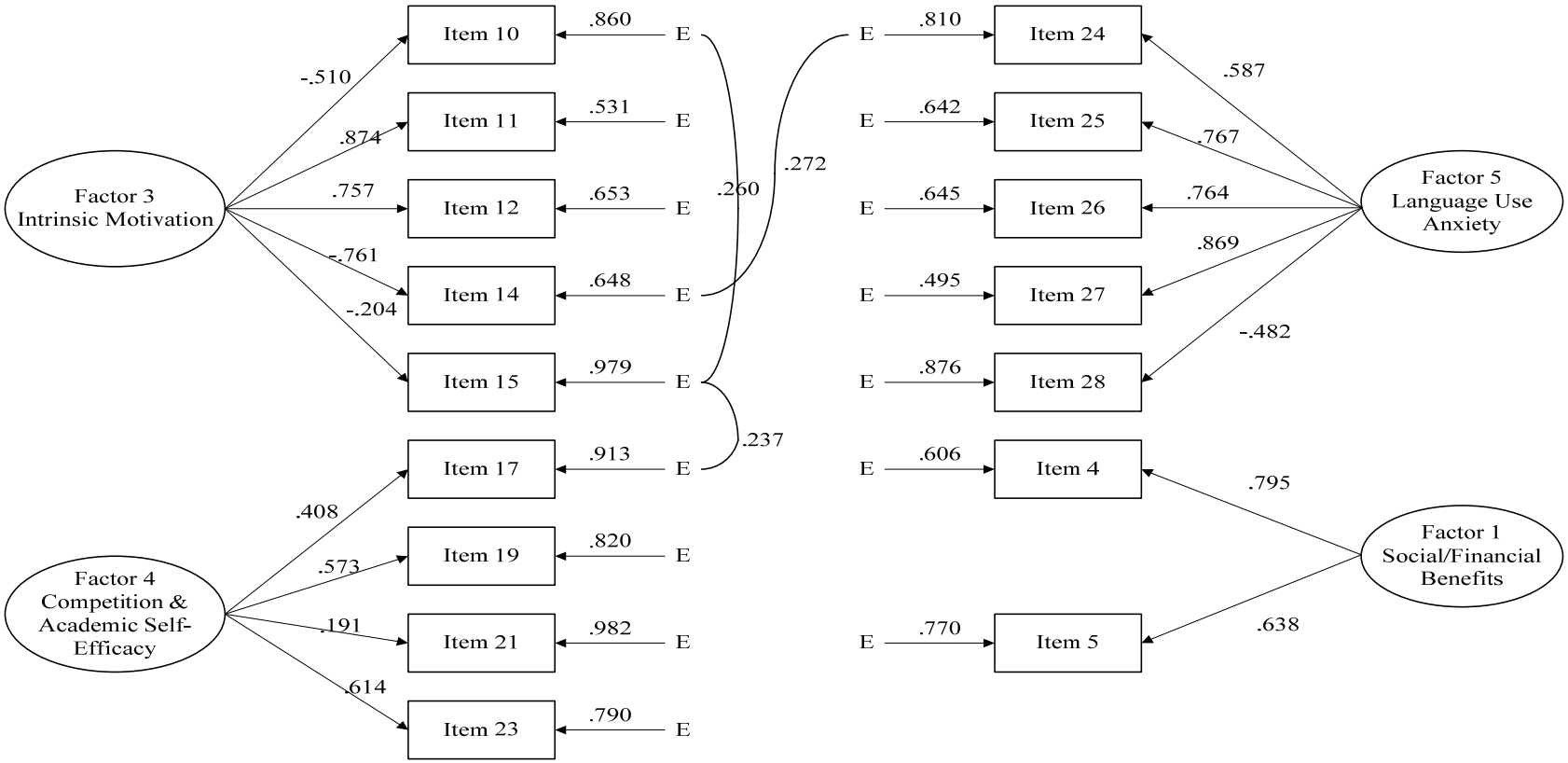
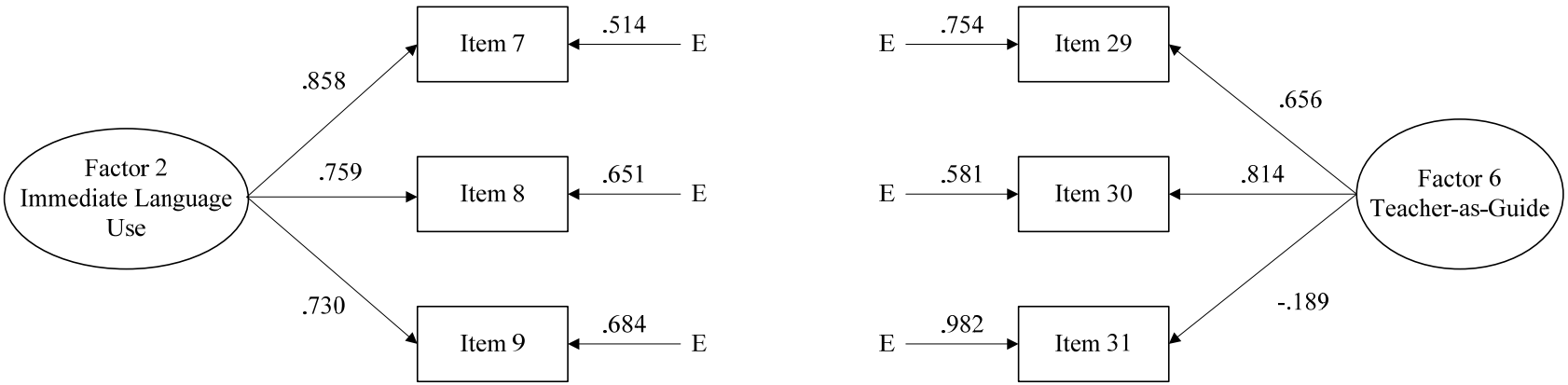


Figure 2: Item Loadings, Error Terms, and Error Covariance of the Six-Factor Attitude and Motivation Model in the Confirmatory Factor Analysis (Continued)



As noted previously, in confirmatory factor analysis, the standardized paths connecting the factors represent the correlations among the factors. The correlations among the six attitude and motivation factors were presented in Table 13. Again in this case, the null hypothesis that the correlation coefficient was zero was tested against a nondirectional alternative that the correlation coefficient was different than zero. The level of significant was set at .05. Correlation coefficients significant at this probability value are marked with an asterisk in Table 13.

Table 13: Correlations among the Six Attitude and Motivation Factors in the Confirmatory Factor Analysis

Factor	1	2	3	4	5	6
1. Social & financial benefits	---					
2. Immediate language use	.371*	---				
3. Intrinsic motivation	.327*	.556*	---			
4. Competition and academic self-efficacy	.385*	.447*	.739*	---		
5. Language use anxiety	.008	-.104*	-.421*	-.399*	---	
6. Teacher-as-guide	.115*	.151*	.239*	.430*	.068	---

*p<.05

As the table indicates, *intrinsic motivation* was positively and strongly correlated with *orientation toward immediate language use* at .556, and with *orientation toward competition and academic self-efficacy* at .739. This suggested that the strong interrelatedness existed among the three factors. *Intrinsic motivation* was also positively correlated with *orientation toward social and financial benefits*, and *teacher-as-guide*. Further, *orientation toward competition and academic self-efficacy* was positively correlated with *orientation toward social and financial benefits*, *orientation toward immediate language use*, and *teacher-as-guide* at a medium level. *Orientation toward*

social and financial benefits was also positively correlated with *orientation toward immediate language use*.

As was expected, *language use anxiety* was negatively correlated with three factors at weak to medium level. Its correlations with *intrinsic motivation* and o*rientation toward competition and academic self-efficacy* were negative at -.421, and -.399. It was also weakly correlated with *orientation toward immediate language use* at -.104. Its correlations with *orientation toward social and financial benefits* and *teacher-as-guide* were non-significant.

The sixth factor, *teacher-as-guide*, was weakly correlated with *orientation toward social and financial benefits*, and *orientation toward immediate language use*, and non-significantly with *language use anxiety*, although its correlation with *orientation toward competition and academic self-efficacy* was positive at .430. This suggested that while the motivational orientations were significantly and positively correlated with each other at a medium to high level, overall, the correlations between *language use anxiety* and other factors were negative or non-significant, and the correlations between *teacher-as-guide* and other factors, *orientation toward competition and academic self-efficacy* excluded, were all weak.

Structure of the Students' Beliefs about Language Learning

This section reports the results of the exploratory and confirmatory factor analyses performed on *Part C: Beliefs about Language Learning Scale* (Appendix 3). It describes and interprets the dimensions underlying this scale as well as the relationships among these dimensions as indicated by inter-factor correlations.

Development of a Three-factor Learner Belief Model (Exploratory Factor Analysis)

Research Question 3.a stated: "What factor structure underlay *Part C: Beliefs about Language Learning Scale* (Appendix 3)?" To address this question, Principal Axis Factoring with direct oblimin rotation was performed on the exploratory subsample. An absolute value of .40 was employed to determine which factor loaded on which items. All factor loadings with an absolute value less than .40 were suppressed. The analyses yielded three factors that loaded on a total of 11 items, accounting for 28.850% of the total variance (Table 14).

Items 8, 15, 19, 22, and 25 loaded on the first factor. Factor loadings ranged in value from .406 to .605. These items described the students' desire to speak English well and their beliefs about the importance of English and the importance of using specific strategies to learn English. This factor, therefore, was named *value beliefs about language and strategy use.* Cronbach alpha for this five-item subscale was .598.

Items 5, 7, 17, and 20 loaded on the second factor. Factor loadings ranged in value from .412 to .568. The four items described the students' beliefs about language aptitude and about the importance of learning grammar and translation. This factor, therefore, was named *value beliefs about grammar and translation*. Cronbach alpha for this four-item subscale was .389.

Items 1 and 11 loaded on the third factor. Factor loadings were -.563 and .611. Item 1 described the students' belief about the difficulty of English. Item 11 described the students' belief about their ability to learn English. This factor, therefore, was named *ability beliefs.* Cronbach alpha for this two-item subscale was .546.

Table 14: Belief Component Loadings and Reliabilities of the Subscales Based on Results of the Exploratory Factor Analysis

	Component		
Beliefs Item	1	2	3
1. difficulty of English			-.560
5. delay speaking English until you can say it correctly		.494	
7. mathematics or science people being no good at learning English		.412	
8. learn English in an English speaking country	.406		
11. have special ability for learning English			.611
15. people in China consider it important to learn English	.605		
17. importance of learning grammar		.568	
19. importance of practicing with tapes, cassettes, CDs, or DVDs	.495		
20. importance of learning how to translate from native language		.504	
22. want to learn to speak English well	.446		
25. learning involving a lot of memorization	.503		
Reliability (alpha)	.598	.389	.546

Validation of the Three-factor Learner Belief Model (Confirmatory Factor Analysis)

Following the exploratory factor analysis, confirmatory factor analysis was performed on the confirmatory subsample to validate the three-factor belief model. The analysis was run in EQS 6 (Bentler, 2004). All three factors were allowed to covary with each other. Additionally, two pairs of error variances were allowed to covary: items 11 and 7, and items 20 and 17. Item 11 described the students as believing themselves to have a special ability for learning English. Item 7 stated the opinion that science and mathematics people were no good at learning English. Both concerned the students' belief in specialized language ability or lack of this ability. Therefore, these two error terms were allowed to covary. Items 20 and 17 were belief about the importance of grammar and translation. The two error terms were allowed to covary on the ground that due to the influence of the grammar translation method, the students who valued the

importance of grammar were also likely to value the importance of translation. Applying the second set of joint criteria recommended by Hu and Bentler (1999), the fit of the three-factor model was acceptable (Table 15: SRMR≤ 0.09, and Robust RMSEA≤.06).

Figure 3 visually displays the item to factor assignment as well as the standardized path values in the confirmatory factor analysis. In this figure, the loadings for factor one, *value beliefs about language and strategy use*, ranged in value from .309 to .638. Factor two, *value beliefs about grammar and translation*, had loadings that ranged in value from .224 to .574. The loadings for factor three, *ability beliefs*, were 1.000 and .345. As noted before, the criterion of suppressing factor loadings whose absolute value was less than .40 did not apply to the confirmatory factor analysis given that the purpose of the confirmatory factor analysis was to determine whether the factor structure identified in the exploratory factor analysis fit a different subsample. Therefore, in this analysis, factor loadings whose absolute value was less than .40 were retained.

Table 15: Fit Indices of the Three-Factor Belief Model in the Confirmatory Factor Analysis

Model	Satorra-Bentler χ^2 (*df*) χ^2	Robust CFI CFI	SRMR	Robust RMSEA RMSEA
Three-Factor	72.6263 (39)	.926	0.050	.038
	97.658 (39)	.895		0.051

Based on the results of the confirmatory factor analysis, the inter-factor correlations were presented in Table 16. Again in this case, the null hypothesis that the correlation coefficient was zero was tested against a nondirectional alternative that the correlation coefficient was different than zero.The level of significance was set at .05. Correlation coefficients significant at this probability value are marked with an asterisk.

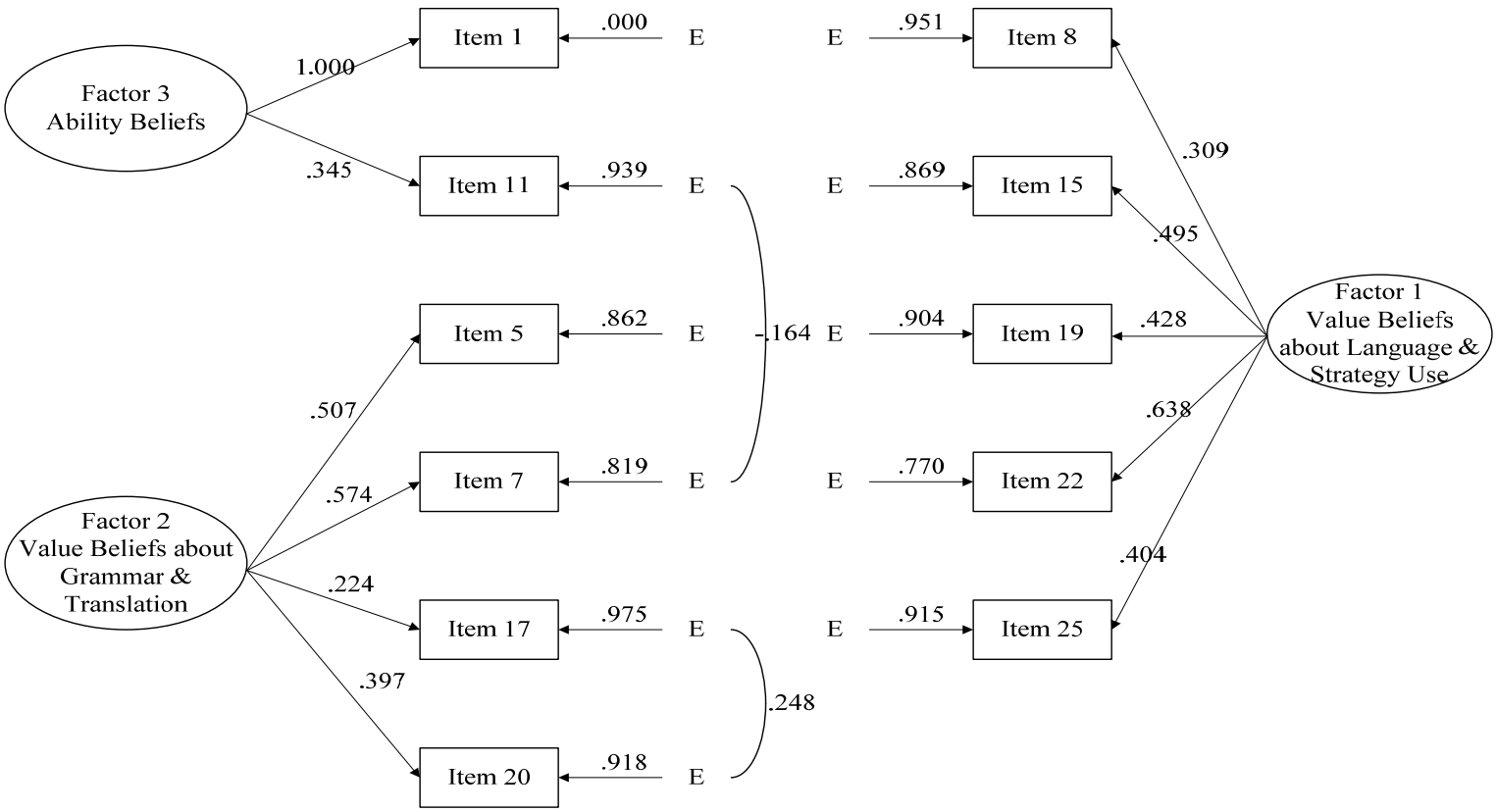
In this table, factor two, *value beliefs about grammar and translation* was significantly and negatively correlated with the other two factors, *ability beliefs*, and *value beliefs about language and strategy use*. Further, the correlation between *ability beliefs* and *value beliefs about language and strategy use* was weak and non-significant. This indicated the independence of these two factors, as well the inverse relationship between them and *value beliefs about grammar and translation*.

Table 16: Correlations among the Three Belief Factors in the Confirmatory Factor Analysis

Factor	1	2	3
1. ability beliefs	---		
2. value beliefs about grammar and translation	-.293*	---	
3. value beliefs about language and strategy use	.078	-.409*	---

*p<.05

Figure 3: Item Loadings, Error Terms, and Error Covariances of the Three-Factor Belief Model in the Confirmatory Factor Analysis



The Effect of Gender and Academic Major on Attitudes, Motivations, Learner Beliefs, and Strategy Use

Research question 4 stated: Did gender significantly affect (a) latent attitude and motivation factors, (b) latent learner belief factors, and (c) latent strategy use factors, and if so, in what ways? Did academic major significantly affect these latent factors, and if so, in what ways? Was there an interaction between gender and academic major, and if so, in what ways?

To address this question, latent means analyses were performed in EQS 6 (Bentler, 2004) to compare three models: an interaction model assuming the existence of interaction effect on the latent factors, a no-interaction model assuming the non-existence of interaction effect on the latent factors, and a main gender- or academic-major-effect model assuming the existence of gender differences or differences by academic majors. Latent means analysis is comparable to multivariate analysis of variance in that its purpose is to identify whether significant mean differences among the levels of the given factors exist in the variables of interest. In researching gender differences in the use of language learning strategies, for instance, analysis of variances has been used to determine whether, on average, females used specific categories of strategies significantly more often than males (e.g., Oxford & Nyikos, 1989). The difference between latent means analysis and multivariate analysis of variances is that while the former seeks to identify mean differences in the observed variables, such as frequency in using different categories of strategies, latent means analysis examines mean differences at the latent level, i.e., mean amount of latent factors. Thus, in latent means analysis, the dependent variables are latent factors.

Comparison of the three models relied on the chi-square difference test, the model chi-square value, and the model AIC value. As was explained Chapter 3, the chi-square difference test was employed to compare the interaction model with the no-interaction model, considering that these two were nested models, i.e., the no-interaction model was a subset of the interaction model. Significant chi-square difference suggested that the interaction model fit better than the no-interaction model. The model chi-square value and the model AIC value were used to compare the fit of either the interaction model or the no-interaction model, depending on the results of the chi-square difference test, with the main-effect model. Smaller chi-square value and smaller AIC value indicate a better model fit. Next, the fit of the better model was assessed using the second set of Hu and Bentler (1999) joint criteria. As noted in the preceding pages, the joint criteria state that for a model fit to be considered acceptable, it needs to meet both criteria (a) SRMR≤0.09, and (b) RMSEA≤0.06. Interpretation was not made if the model fit was not acceptable, even if the fit was better compared with that of the other model(s).

The latent means analyses were performed separately on the three sets of latent factors. Dummy codes were created to represent the main effect of gender, the main effect of academic major, and the interaction between gender and academic major. One dummy code was created to compare the male students with the female students. Three other dummy codes were created to compare the students of four academic majors: the medical students were compared with the other three groups combined; the humanities students were compared with the science and engineering students combined; the science students were compared with the engineering students. Significant paths from the dummy code variables to the latent factors indicated (a) significant gender differences, (b)

significant differences among the four academic majors, and (c) significant interaction effect between gender and academic major, in the mean amount of the latent factors. The same statistical procedures were employed to analyze the effect of gender and academic major in all three sets of latent factors.

The Effect of Gender and Academic Major on the Latent Attitude and Motivation Factors

Results of model comparison indicated that the interaction effect was non-significant on the attitude and motivation constructs: the chi-square difference test comparing the interaction model with the no-interaction model was non-significant (Table 17). This suggested that (a) the differences in the mean amount of latent attitude and motivation factors among the academic majors were consistent among the male students and the female students, and that (b) the differences between the male students and the female students in the mean amount of latent attitude and motivation factors were consistent across the four academic majors. Therefore, the hypothesis that the effect of gender interacted with the effect of academic major was rejected. Further, when comparing the no-interaction model with the main gender- and main academic-major-effect model, the results were obvious: the chi-square value and the model AIC value of the no-interaction model were worse. The model assuming significant main effects fit better than the no-interaction model (Table 17). Applying the second set of the Hu and Bentler (1999) joint criteria, the fit of the gender-effect model and the academic-major-effect model were both acceptable (Table 17: SRMR≤0.09; Robust RMSEA≤0.06).

Table 17: Attitudes and Motivations: Interaction Model, No-Interaction Model, Main Gender Effect Model, and Main Effect of Academic Major Model

Model	Satorra-Bentler χ^2 (*df*) χ^2	Robust AIC *AIC*	Robust *CFI* *CFI*	*SRMR*	Robust *RMSEA* *RMSEA*	$\Delta\chi^2$	Δ df	Significance
Interaction	1269.4665 (324)	621.46646	.783	.080	.071			
	1351.291	703.29122	.787		.074			
No-Interaction	1296.7140 (342)	612.71396	.781	.082	.070	23.686	18	Not Sig
	1374.977	690.97718	.785		.072			
Gender Effects	560.4939 (207)	146.49391	.901	.068	.054			
	628.594	214.59387	.900		.059			
Effects	659.8314 (242)	175.83143	.887	.066	.055			
(Academic Major)	722.699	238.69859	.887		.059			

Table 18: Mean Gender Differences in the Attitude and Motivation Factors, Belief Factors, and Strategy Use Factors

Learner Variables	Latent Constructs	Path Coefficient	Variance	Effect Size
language learning attitudes & motivation	orientation toward social & financial benefits	**.178***	.524	.246
	orientation toward immediate language use	.068	.812	-
	intrinsic motivation	**.172***	.408	.269
	orientation toward competition & academic self-efficacy	**.057***	.201	.127
	language use anxiety	-.009	.372	-
	teacher-as-guide	-.001	.375	-
learner beliefs about language learning	value beliefs about language & strategy use	**.085***	.052	.373
	ability beliefs	**.075***	.692	.090
	value beliefs about grammar & translation	**-.068***	.188	.157
language learning strategy use	metacognitive strategy use	.028	.177	-
	self-directed practicing strategy use	**.060***	.398	.095
	compensatory vocabulary-learning strategy use	.030	.088	-
	social interactional strategy use	-.011	.186	-

Note: Statistics significant at the 5% level are bolded and marked with *.

Three of the direct paths from the gender-effect dummy code variable to the latent attitudes and motivation factors were positive and statistically significant at a probability value of .05 (Table 18). The three latent factors were (a) *orientation toward social and financial benefits*, (b) *intrinsic motivation*, and (c) *orientation toward competition and academic self-efficacy*. This indicated that, on average, the mean differences between the male students and the female students in these latent factors were positive and statistically significant. The female students, on average, placed greater value on the

social and financial benefits associated with learning English, were more intrinsically motivated, were more strongly orientated toward competition, and had greater mean amount of beliefs about their ability to earn good grades. Effect sizes of the mean gender differences in the latent constructs were also calculated (Table 18). However, they were not interpreted given the lack of criteria for determining the magnitude of mean differences at the latent level.

Eight direct paths from the main academic-major-effect dummy code variables to the motivation factors were statistically significant at a probability value of .05 (Table 19). Two of these were from the dummy code variables to the *orientation toward social and financial benefits* factor and were negative and statistically significant: (a) the dummy code variable comparing the humanities students with the science and engineering students combined, and (b) the dummy code variable comparing the science students with the engineering students. This suggested that, on average, the humanities students placed greater value on the social and financial benefits of learning English compared with the science and engineering students combined, and that the science students, in turn, valued the social and financial benefits of learning English more than the engineering students.

Also statistically significant and negative were four other paths to *orientation toward immediate language use* and *intrinsic motivation*. These four paths compared the medical students to the other three groups combined and the humanities students to the science and the engineering students combined. This suggested that, on average, the medical students were more strongly oriented toward learning English for immediate language use purposes, had greater mean amount of intrinsic motivation compared with the other three groups combined. This also indicated that relative to the combined group of science

and engineering students, the humanities students, in turn, were more strongly oriented toward immediate language use and had greater mean amount of intrinsic motivation.

On the *language use anxiety* factor, the mean difference between the humanities group and the science and engineering students combined was positive and statistically significant. This suggested that, on average, the combined group of science and the engineering students had greater mean amount of language use anxiety than the humanities students.

Finally, on the *teacher-as-guide* factor, the path comparing the medical students to the other three group combined was statistically significant and negative, suggesting that, on average, the medical students valued more teacher guidance than the students of the other three academic majors. Effect sizes for the mean differences among the four groups were also calculated. Again, these were not interpreted due to the lack of criteria for estimating the magnitude of mean differences at the latent level; magnitude of effect size is relevant only to observed differences.

Table 19: Mean Differences by Academic Major in Latent Attitude and Motivation Factors, Learner Belief Factors, and Strategy Use Factors

Learner Variables	Latent Factor	Medical vs. Humanities, Science, & Engineering			Humanities vs. Science & Engineering			Science vs. Engineering		
		Path coefficient	Variance	ES	Path coefficient	variance	ES	Path coefficient	variance	ES
language learning attitudes & motivation	orientation toward social & financial benefits	-.045	.514	-	**- .101***	.514	.141	**-.166***	.514	.232
	orientation toward immediate language use	**-.078***	.792	.088	**- .084***	.792	.094	-.006	.792	-
	intrinsic motivation	**-.045***	.407	.071	**- .132***	.407	.207	-.036	.407	-
	orientation toward competition and academic self-efficacy	.007	.235	-	-.023	.235	-	-.048	.235	-
	language use anxiety	.022	.366	-	**.049***	.366	.008	-.052	.366	-
	teacher-as-guide	**-.042***	.366	.069	.016	.366	-	.033	.366	-
learner beliefs	ability beliefs	**-.079***	.215	.170	**-.061***	.215	.132	.034	.215	-
	value beliefs about grammar and translation	**.040***	.191	.092	.026	.191	-	-.042	.191	-
	value beliefs about language and strategy use	**-.029***	.049	.131	**-.033***	.049	.149	-.018	.049	-
language learning strategy use	metacognitive strategy use	-.017	.172	-	- .030	.172	-	**- .054***	.172	.130
	self-directed practicing strategy use	**-.083***	.341	.142	**-.131***	.341	.224	.017	.341	-
	compensatory vocabulary-learning strategy use	**-.029***	.075	.106	-.027	.075	-	-.035	.075	-
	social interactional strategy use	.004	.188	-	-.030	.188	-	-.049	.188	-

Note: Statistics significant at the 5% level are bolded and marked with *.

The Effect of Gender and Academic Major on Latent Belief Factors

On the belief factors, the chi-square difference test comparing the interaction model with the no-interaction model was statistically significant (Table 20). This suggested that the addition of the paths representing the interaction effect led to a significantly better model. Therefore, the interaction model was chosen to be compared with the main gender- and academic-major-effect model. Results of the model comparison suggested that the fit of the main-effect models was better. Applying the second set of the Hu and Bentler (1999) joint criteria, the model fit of the main gender-effect model and the main academic-major-effect model were both acceptable (Table 20: SRMR≤0.09; Robust RMSEA≤.06).

EQS output indicated that all three direct paths from the gender dummy code variable and the three belief factors were statistically significant at a probability value of .05. The three factors were (a) *ability beliefs,* (b) *value beliefs about language and strategy use*, and (c) *value beliefs about grammar and translation*. Coefficient values of the path to the two factors, *ability beliefs* and *value beliefs about language and strategy use* were positive (Table 18). This suggested that, on average, the female students, relative to the male students, had significantly stronger beliefs about their ability to learn English and placed significantly greater amount of value on learning English and using strategies. The coefficient value of the path to *value beliefs about grammar and translation* was negative and statistically significant. This suggested that, on average, the male students valued significantly more the importance of grammar and translation. Effect sizes of the gender differences in the mean amount of latent beliefs factors were

also calculated. These were not interpreted due to lack of criteria to determine the magnitude of the mean differences in latent constructs.

Five direct paths from the dummy code variables comparing the four academic majors to the latent belief factors were statistically significant at a probability value of .05 (Table 19). The coefficients of two of the paths to the *ability beliefs* factor were negative in value. One path was from the dummy code variable comparing the medical students with the other three groups combined. The other path was from the dummy code comparing the humanities students with the science and engineering students combined. These suggested that, on average, the medical students had significantly stronger beliefs about their ability to learn English relative to the other three groups combined, and that relative to the science and engineering students combined, the humanities students had significantly stronger beliefs about their ability to learn English.

Two other significant paths were from the same dummy code variables to the *value beliefs about language and strategy use* factor. The coefficients of both paths were negative in value. This suggested that relative to the other three groups combined, the medical students on average placed significantly greater value on the importance of English and using strategies to learn English, and that the humanities students, on average, valued significantly more importance of English and strategy use.

Table 20: Learner Beliefs: Interaction Model, No-Interaction Model, Main Gender Effect Model, and Main Effect of Academic Major Model

Model	Satorra-Bentler χ^2 (*df*) χ^2	Robust AIC *AIC*	Robust *CFI* *CFI*	*SRMR*	Robust *RMSEA* *RMSEA*	$\Delta\chi^2$	Δ df	Significance
Interaction	488.8591(116)	256.85915	.498	.112	.074			
	1006.429	774.42905	.392		.115			
No-Interaction	510.8131(125)	260.81309	.480	.113	.073	77.22	9	Significant
	1014.151	764.15061	.393		.110			
Gender Effect	93.0770 (47)	-.92295	.911	.050	.041			
	120.054	26.05398	.882		.051			
Effect	181.1994 (66)	49.19943	.788	.065	.055			
(Academic	252.789	120.78921	.748		.070			
major)								

The other significant path was from the dummy code variable comparing the medical students to the other three groups combined to the *value beliefs about grammar and translation* factor. The path coefficient was positive in value. This suggested that relative to the other three groups combined, the medical students valued less the importance of grammar and translation for learning English.

The Effect of Gender and Academic Major on Latent Strategy Use Factors

On the strategy use factors, the Chi-square difference test comparing the interaction model to the no-interaction effect model was statistically significant at a probability value of .05 (Table 21). This suggested that the fit of the interaction model was significantly better than the non-interaction model. However, when the interaction model was compared with the main gender- and academic-major-effect model, the results were obvious: model chi-square and AIC of the main effect models were better than those of the interaction model. Applying the second set of the Hu and Bentler (1999) joint criteria, fit of the gender effect model and the main academic-major-effect model was acceptable (Table 21: SRMR≤0.09; Robust RMSEA≤.06).

The only path that was significant at a probability value of .05 was from the gender dummy code variable to *self-directed practicing strategy use*. The path coefficient was positive in value (Table 18). This suggested that, on average, the female students used self-directed practicing strategies more frequently than the male students. The effect size of this difference was also calculated but was not interpreted due to the lack of criteria to determine its magnitude.

Table 21: Strategy Use: Interaction Model, No-Interaction Model, Main Gender Effect Model, and Main Effect of Academic Major Model

Model	Satorra-Bentler χ^2 (*df*) X^2	Robust AIC *AIC*	Robust *CFI* *CFI*	*SRMR*	Robust *RMSEA* *RMSEA*	$\Delta\chi^2$	Δ df	Significance
Interaction	1252.1395(407)	438.13949	.734	.083	.060			
	1758.371	944.37130	.728		.076			
No Interaction	1278.6714(419)	440.67137	.729	.084	.060	21.53	12	Significant
	1780.018	942.01778	.726		.075			
Main Effect	649.4313(266)	117.43132	.884	.056	.050			
(Gender)	762.952	230.95218	.877		.057			
Main Effect	792.6600(309)	174.65999	.849	.062	.052			
(Academic	963.638	345.63790	.846		.061			
major)								

On the effect of academic major, four direct paths from the academic major dummy code variables to three of the strategy use constructs were statistically significant (Table 19). This suggested that significant effect of academic major existed on (a) *metacognitive strategy use*, (b) *self-directed practicing strategy use*, and (c) *compensatory vocabulary-learning strategy use*.

In *metacognitive strategy use*, the path from the dummy code comparing the science students to the engineering students was statistically significant. Its coefficient was negative in value. This suggested that, on average, the science students used metacognitive strategies more frequently than the engineering students.

In *self-directed practicing strategy use*, two direct paths from two dummy code variables were statistically significant: (a) the dummy code comparing the medical students to the other three groups of students combined, and (b) the dummy code comparing the humanities students to the science and engineering students combined. Path coefficients were negative in value. This suggested that, on average, the medical students used self-directed practicing strategies more frequently than the other three groups combined, and that the humanities students, in turn, used self-directed practicing strategies more frequently than the science and engineering students combined.

Finally, in *compensatory vocabulary-learning strategy use*, the path from the dummy code variable comparing the medical student to the other three groups of students combined was statistically significant. The path coefficient was negative in value. This suggested that, on average, the medical students used compensatory vocabulary-learning strategies more frequently than the students of the other three majors. Effect sizes of the mean differences in the three strategy use factors were also calculated (Table 19). As

noted, the effect sizes were not interpreted, however, due to lack of criteria for determining the magnitude of mean differences at the latent level.

Relationships among Motivations, Learner Beliefs, Strategy Use, and English Language Proficiency

Research question 5 stated: How did latent strategy use factors, latent motivation factors, and latent beliefs factors relate to each other and to English language proficiency? To address this question, latent variable path analyses were employed to model the relationships among them. In modeling the relationships, two attitude and motivation factors were dropped from the analyses: (a) *language use anxiety*, and (b) *teacher-as-guide*, since the reliability of the *teacher-as-guide* factor was extremely low at .118, while the *language use anxiety* factor was weakly correlated with two attitudes and motivation factors. One belief factor, *value beliefs about grammar and translation*, was also dropped from the analyses, since its reliability was low at .389. The model, therefore, included four motivation factors: (a) *orientation toward social and financial benefits*; (b) *orientation toward immediate language use*; (c) *intrinsic motivation*; and (d) *orientation toward competition and academic self-efficacy*. It also included two belief factors: (a) *ability beliefs*, and (b) *value beliefs about language and strategy use*. All four strategy use factors were included in this model.

The hypothesized model assumed that *intrinsic motivation*, *orientation toward competition and academic self-efficacy*, and *ability beliefs* directly affected all four strategy use factors (Figure 4). This was in accordance with existing literature that documented that interrelatedness between behaving for intrinsic or extrinsic reasons and the quality of experience and performance (Deci & Ryan, 2000) as well as the link

between academic self-efficacy and academic performance (Bandura, 1997; Finney & Schraw, 2003). It further assumed that *orientation toward immediate language use* directly affected two strategy use factors: (a) *self-directed practicing strategy use*, and (b) *social interactional strategy use*, since this orientation was naturally linked the use of self-directed practicing strategies and social interactional strategies. Additionally, the model hypothesized that *value beliefs about language and strategy use* directly affect (a) *compensatory vocabulary-learning strategy use*, and (b) *social interactional strategy use*. The factors that were hypothesized to directly influence the students' English language proficiency were (a) *intrinsic motivation*, (b) *orientation toward competition and academic self-efficacy*, (c) *ability beliefs*, (d) *self-directed practicing strategy use*, and (e) *compensatory vocabulary-learning strategy use*. English language proficiency was measured in terms of vocabulary, grammar and structure, listening, reading, and writing (Jin & Yang, 2006). *Metacognitive strategy use* and *social interactional strategy us*e were not considered direct contributors to the students' performance on the test, considering that metacognition does not contribute directly to learning, and that the proficiency test did not measure the students' spoken language proficiency.

To assess the hypothesized structural model, a two-step process was used. At the first step, a confirmatory factor analysis model was tested. In this model, the measurement portion of the model was fitted to the confirmatory sample based on the results of research questions 1.a, 2.a, and 3.a. This portion represented the relationships between the latent factors and their indicators as identified and validated in the exploratory and confirmatory factor analyses. In this portion, items were assigned to factors in accordance with the factor structure identified and validated in the analyses.

Error covariances were also included. The fit of this confirmatory model (Table 22: SRMR≤0.09; RMSEA≤0.06) was acceptable. Model fit was further improved by using Lagrange Multiplier Test to add two error to error covariances in the strategy use scale (Table 22). The purpose of this test was to determine whether missing paths or covariances should be added (Bentler, 2004). Results indicated that the error term of item 12 and item 50 should be allowed to covary, and the error term of item 48 and item 49 should be allowed to covary. These two pairs of error terms, were therefore linked up.

At the second step, the structural portion, i.e., the hypothesized relationships among the latent factors, was fitted to the confirmatory sample. Model fit of the initial structural model was again acceptable applying the second set of the joint Hu and Bentler (1999) criteria (Table 22: SRMR≤0.09; RMSEA≤0.06). Recognizing the model generation purpose and the exploratory nature of the process, the Wald test was also performed at this stage to remove unimportant structural paths that were included in the initial structural model. The Wald test is used to remove unimportant structural paths without incurring significant loss in model fit. Results of this test indicated that eight hypothesized paths representing the relationships among the three sets of latent constructs and English language proficiency could be removed without significantly decreasing the model fit. The fit of the final structural model was acceptable and was not statistically significantly worse compared with the final confirmatory factor analysis model and the initial structural model (Table 22: SRMR≤0.09; RMSEA≤0.06).

The final structural model with standardized path coefficients is displayed in Figure 5. All structural paths were significant at the .05 level. Dotted line indicated the structural paths that were hypothesized to be significant but were removed as unimportant structural

relations following the Wald test. As is seen in Figure 4, some of the hypothesized relationships among the students' motivation, beliefs, strategy use, and English language proficiency were validated while others were not.

Table 22: Fit Indices for Assessing the Hypothesized Model of the Relations among Motivation, Beliefs, Strategy Use, and English Language Proficiency

Model	Satorra Bentler χ^2 (*df*)	Robust *CFI*	*SRMR*	Robust *RMSEA*
	X^2	*CFI*		*RMSEA*
Initial Measurement	1920.4336 (898)	.851	.060	.045
	2168.838	.844		.050
Final Measurement	1812.8897 (896)	.867	.059	.042
	2048.442	.859		.047
Initial Structural	1858.0084 (944)	.866	.059	.042
	2091.270	.858		.047
Final Structural	1868.1946 (952)	.866	.059	.042
	2103.117	.858		.047

Direct Paths from the Motivation Factors

All four motivation factors were significantly and positively related to each other. The direct paths in Figure 4 suggested that significant causal relationships existed between the motivation factors and the strategy use factors, and among the motivation factors, the strategy use factors, and English language proficiency. Two direct paths from the motivation factors were statistically significant at a probability value of .05 and had negative path coefficient values: the direct path from *orientation toward competition and academic self-efficacy* to English proficiency, and the direct path from *intrinsic*

motivation to *social interactional strategy use*. This suggested that *orientation toward competition and academic self-efficacy* negatively affected English language proficiency and that *intrinsic motivation* negatively affected the students' *social interactional strategy use*.

All other direct paths from motivation factors were statistically significant at a probability value of .05. Path coefficients were positive in value. *Orientation toward immediate language use* positively affected the use of social interactional strategies and self-directed practicing strategies. *Orientation toward competition and academic self-efficacy* positively affected the use of social interactional strategies, metacognitive strategies, and self-directed practicing strategies. Its influence on metacognitive strategies use was particularly strongly, accounting for 64.9% of its variance. *Intrinsic motivation* positively affected English proficiency, suggesting that an increase in intrinsic motivation resulted in an improvement in English language proficiency as measured by the national standardized English tests.

Direct Paths from the Belief Factors

All direct paths from belief factors were statistically significant and had positive coefficient values. *Ability beliefs* positively affected English proficiency, *self-directed practicing strategy use*, and *compensatory vocabulary-learning strategy use*. These relations implied that an improvement in the students' beliefs about their ability to learn English resulted in more frequent use of self-directed practicing strategies and vocabulary-learning strategies as well as improved performance on the national standardized proficiency tests. *Value beliefs about language and strategy use* positively influenced the students' use of compensatory vocabulary-learning strategies. This relation

was expected because the items that loaded on this factor described the specific strategies that related to vocabulary-learning, such as memorization.

Direct Paths from the Strategy Use Factors

The only strategy use factor that significantly affected the students' performance on the national standardized English tests was *compensatory vocabulary-learning strategy use*. This relation was positive, implying that more frequent use of compensatory vocabulary learning strategies resulted in an improved performance on the national standardized English proficiency tests. This factor, together with *intrinsic motivation*, *competition and academic self-efficacy*, and *ability beliefs*, accounted for 36.5% of the variance in students' English language proficiency. The other three strategy use factors, *self-directed practicing strategy use*, *metacognitive strategy use*, and *social interactional strategy use,* did not significantly influence the students' English proficiency.

Figure 4: Hypothesized Model of the Relations among Motivations, Beliefs, Strategy Use, and English Language Proficiency

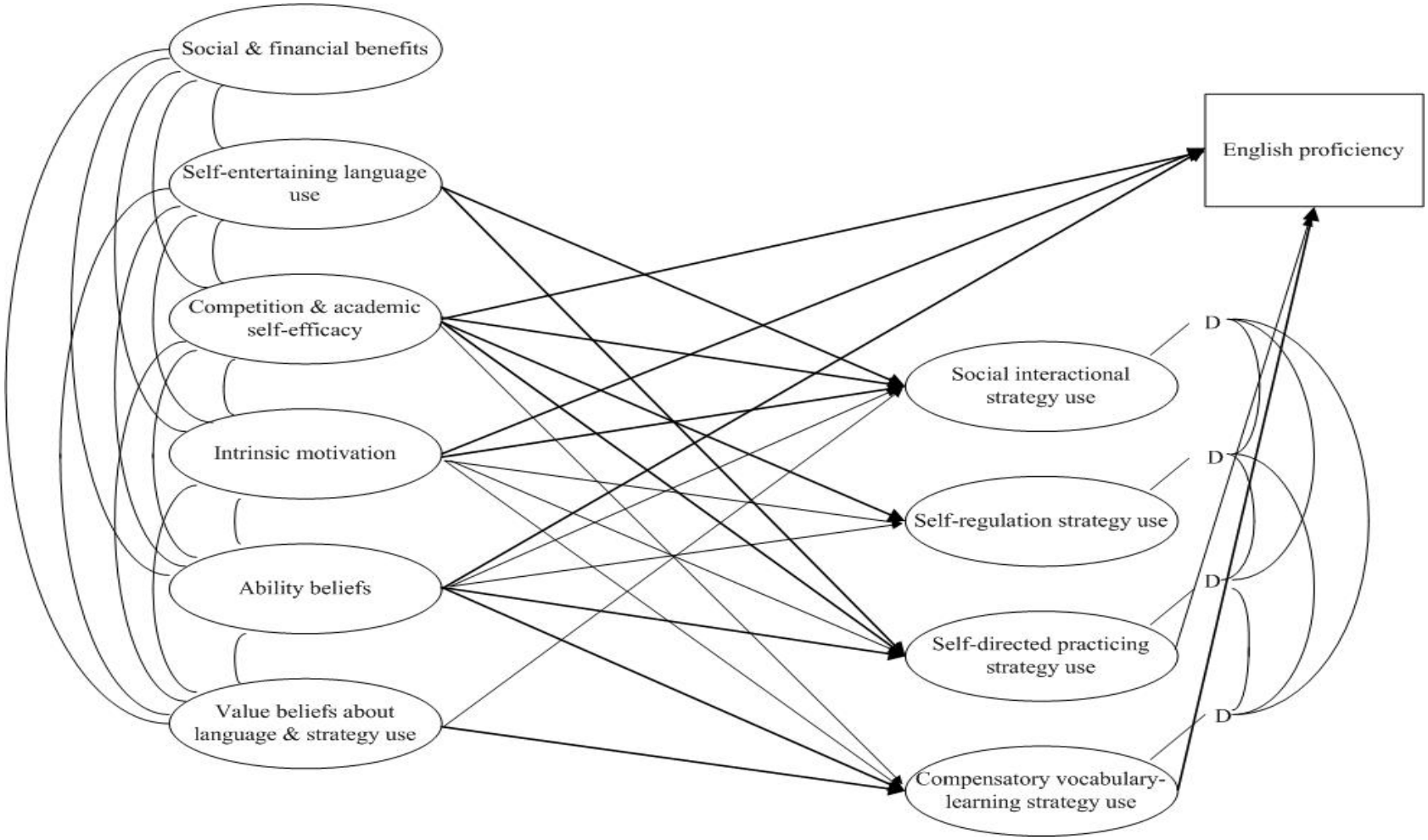
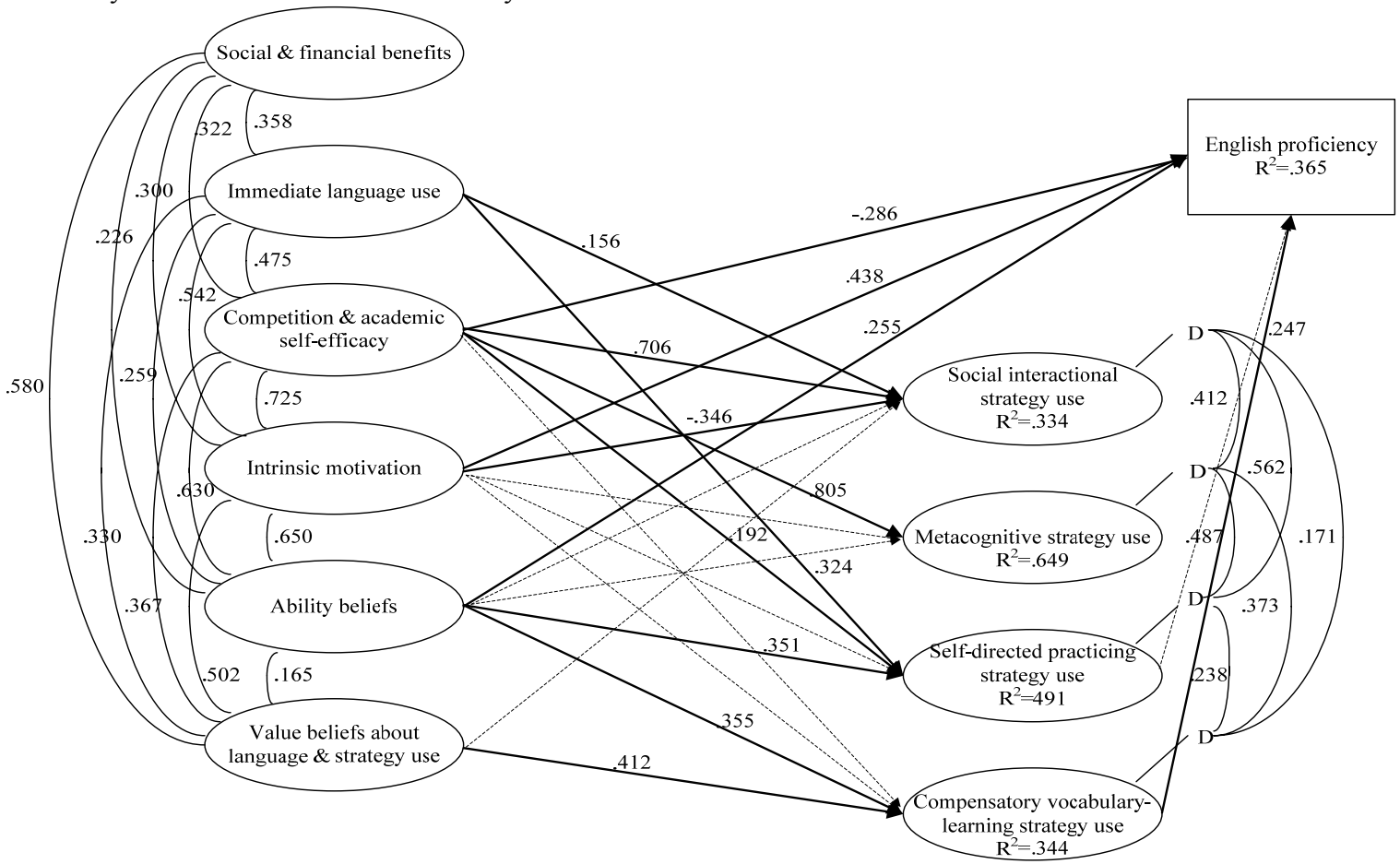


Figure 5: Standardized Structural Model of the Relations among Motivations, Beliefs, Strategy Use, and English Language Proficiency in the Latent Variable Path Analysis



Summary of Quantitative Results

This chapter presented the results of the quantitative analyses performed in the present study to (a) explore and validate the factor structure underlying the three scales measuring strategy use, attitudes and motivation, and learner beliefs, (b) to identify if gender and the four academic majors significantly affected the above-mentioned latent factors, and (c) to identify the relationships among the latent learner factors and English language proficiency among the 1,201 students involved in this study.

The analyses identified and validated a four-factor strategy use model. The four factors were (a) *metacognitive strategy use*, (b) *self-directed practicing strategy use*, (c) *compensatory vocabulary-learning strategy use*, and (d) *social interactional strategy use*. This structure underlay *Part D: Language Learning Strategy Use Scale* (Appendix 3).

The factor structure that underlay *Part B: Language Learning Attitudes and Motivation Scale* (Appendix 3) was composed of six factors. These were (a) *orientation toward social and financial benefits*, (b) *orientation toward immediate language use*, (c) *intrinsic motivation*, (d) *orientation toward competition and academic self-efficacy*, (e) *language use anxiety*, and (f) *teacher-as-guide*. This structure was validated in the confirmatory factor analysis.

A three-factor beliefs model was identified and validated on the basis of the student response to *Part C: Beliefs about Language Learning Scale* in the questionnaire (Appendix 3). These were (a) *ability beliefs*, (b) *value beliefs about grammar and translation*, and (c) *value beliefs about language and strategy use*.

Significant gender differences and differences among the four academic majors were identified in the latent means analyses. Gender differences were identified as the female

students (a) having stronger orientation toward social and financial benefits, and competition, and having greater amount of academic self-efficacy and intrinsic motivation, (b) having stronger beliefs about their language ability and valuing more the importance of language and strategy use, and (c) using more frequently self-directed practicing strategies. The male students, in contrast, valued more the importance of grammar and translation.

The effect of academic major on the three sets of latent factors was identified as follows. The medical students, in comparison with the humanities students, the sciences students, and the engineering students combined, were found to (a) have a stronger orientation toward immediate language use, (b) be more intrinsically oriented, (c) place greater value on teacher guidance, (d) display stronger belief about their ability to learn English, (e) value more the importance of English and using strategies to learn English, (f) believe less about the value of grammar and translation for learning English, and (g) use more frequently self-directed practicing strategies and compensatory vocabulary-learning strategies. The humanities students, in comparison with the science and engineering students combined, were found to (a) have a stronger orientation toward social and financial benefits associated with language learning, and immediate language use, and were more intrinsically oriented; (b) have less language use anxiety, (c) believe more strongly in their ability to learn English, (d) value more the importance of English and strategy use, and (e) use self-directed practicing strategies more frequently. Compared with the engineering students, the science students used metacognitive strategies more frequently.

Finally, significant relationships among motivations, beliefs, strategy use, and English language proficiency were identified in the present study and presented as follows. All four strategy use factors were significantly influenced by the motivation factors. Three motivation factors significantly influenced *social interactional strategy use*. They were (a) *orientation toward immediate language use*, (b) *orientation toward competition and academic self-efficacy*, and (c) *intrinsic motivation*. *Metacognitive strategy use* was significantly influenced by *orientation toward competition and academic self-efficacy*. Thee motivation and belief factors significantly affected *self-directed practicing strategy use*. These were (a) *orientation toward immediate language use*, (b) *orientation toward competition and academic self-efficacy*, and (c) *ability beliefs*. The two factors that significantly influenced *compensatory vocabulary-learning strategy use* were (a) *ability beliefs*, and (b) *value beliefs about language and strategy use*. Two motivation factors, one beliefs factor, and one strategy use factor directly influenced English language proficiency. These factors were (a) *competition and academic self-efficacy*, (b) *intrinsic motivation*, (c) *ability beliefs*, and (d) *compensatory vocabulary-learning strategy use*. Chapter 5 presents the qualitative results. See Chapter 6 for a discussion of both quantitative and qualitative results.

Chapter 5: Qualitative Results

This chapter presents the results of the qualitative interviews that were conducted with nine students representing three out of the six universities involved in the overall study. The organization of the chapter is as follows. It starts by describing the background information concerning the nine interviewees who were selected for an in-depth analysis. This is followed by a synopsis of each interviewee's prior learning and the major themes that have emerged out of the interviews. These synopses and themes are summarized toward the end of the chapter. The interviews addressed research questions 1.b, 1.c, 1.d, 2.b, 2.c, 3.b, and 3.c.

Background

This section presents the background information of the nine interviewees. It describes the rationale for selecting these students and the interview questions.

Selection of Nine Interviews for Full Qualitative Analysis and Reporting

The procedure for selecting a nine-student subsample from the total of 18 interviews was described under "Participants" in Chapter 3. As a reminder, the subsample was selected so that each university was represented by three interviews and so that each of the three proficiency levels, i.e., (a) high proficiency, (b) intermediate proficiency, and (c) low proficiency, was well represented. As noted in Chapter 3, it was decided to focus in depth on qualitatively analyzing and reporting nine interviews rather than giving a more superficial treatment to all 18 interviews (or to the 14 interviews that had complete data, including standardized English test scores). Some details drawn from Chapter 3 about the

nine subsampled students are reiterated here to provide the necessary background for understanding the qualitative results.

Three of the nine students in the subsample, Xin Wang, Hua Zhang, and Yu Wei, were English majors from University I. Of the remaining six students, Yuan Yao, Yun Pan, and Xi Zhou were engineering majors from University IV, and Jie Bin, Lin Lin, and Xia Zhao were from three different programs at University III. One of them, Jie Bin, was an education major. The other two, Lin Lin, and Xiao Zhao, majored in chemistry and computer science respectively. Yun Pan and Xi Zhou were sophomores when they were interviewed. All other students were juniors. Xin Wang and Xia Zhao started to learn English in elementary school. All other interviewees started to learn English in the first year of secondary school. Thus, on average, the students had a prior learning experience of nine to ten years when they were interviewed.

Table 4 Characteristics of the Subsample of Students Chosen for Full Qualitative Analysis and Reporting

Name	**University Number**	**University Type**	**Academic Major**	**Status at University**	**School Level of First English Study**	**Proficiency Level**
Xin Wang	I	National Comprehensive	English	Junior	Elementary	High
Yu Wei			English	Junior	Secondary	Medium
Hua Zhang			English	Junior	Secondary	Low
Xia Zhao	III	Provincial Normal	Computer Science	Junior	Elementary	High
Lin Lin			Chemistry	Junior	Secondary	Medium
Jie Bin			Education	Junior	Secondary	Medium
Yuan Yao	IV	Provincial Engineering	Engineering	Junior	Secondary	High
Xi Zhou			Engineering	Sophomore	Secondary	Medium
Yun Pan			Engineering	Sophomore	Secondary	Low

Interview Questions

As noted in Chapter 3, all interviews were guided by the interview questions listed in the *Interview Protocol* (Appendix 4). The questions were primarily inquiries into the students' motivations for learning English as a foreign language, their use of and

knowledge base of language learning strategies, and their beliefs about language learning. The students also answered the following question about their language learning experience: "How did you learn English before being admitted to the university?" The interviews were meant to supplement and flesh out what was discovered in the quantitative analyses, i.e., they generated a more detailed view of how the learner variables investigated in the present study were embodied in the students.

All interviews were semi-structured. The questions were raised to guide but not control the students' responses. The students responded to the questions with varying degree of detail. For instance, they responded more to the questions whose answers they had thought about a lot, such as how they learned English. Some responded in less detail to questions about which they had not earlier given much thought, such as what learning English meant. Some students naturally provided more detail than others, though the researcher made attempts to probe when necessary.

Grounded theory procedures were employed to analyze the interview transcripts (Strauss & Corbin, 1998), as described in Chapter 3. The transcript of each interview was read several times to identify emerging themes and concepts, which were then aggregated. The write-up responded primarily to the qualitative research questions. What follows is a presentation of the themes that emerged in the analyses. They were organized into five categories: (a) prior learning experience; (b) use of learning strategies; (c) language learning motivations; (d) language learning attitudes; and (e) learner beliefs.

Learning Prior to Being Admitted to Universities

The student comments about their prior learning experience seemed to focus mainly on the influence of English tests, family, and classroom teachers on their learning. This

theme was reflected in all nine interviews. This section presents a synopsis of each of the nine interviewees and their prior learning experience.

Xia Zhao: "My Learning Is Guided by My Teacher"

Xia Zhao, a computer junior, was a top student in her class. She started to learn English in her fourth year of elementary school. Her performance on the CET-4 was outstanding at 89.5. Xia's discussion about her high school learning emphasized the role her classroom teacher played in learning English. She described her learning as being guided by her teacher, and oriented toward the English tests. She recalled:

> Prior to being admitted to university, my learning was primarily oriented toward tests. [pause] I learned English by following my teacher's guidance, [pause] since learning took place most of the time in the classroom. [pause] There was also self-study at night and things like that [pause]. I normally learned English by following my teacher's guidance and did not have my own learning strategies.

Xia's words suggested that, in high school, her learning was primarily teacher-directed, and the focus was on English tests. Self-study, as discussed by Xia, was probably marked by the same orientation, as her learning was directed by her teacher. She had not developed her own learning strategies at that time.

Yuan Yao: "Learning Is Cumulative and Motivated by Peer Competition"

Yuan Yao was a junior engineering major. He was described as a model student, the very top student who twice represented his college to participate in the preliminary contest of the national China Central Television (CCTV) English Speech Contest, the College and University Students Group. He was the head of his class and was well-known for his excellence in English.

He described his learning as more focused in secondary school and early on in high school and "slackened in later periods in high school" due to the need to learn other subjects. He described learning as incremental and cumulative and attributed his superior performance in English primarily to what he had learned cumulatively prior to being admitted to university, and to intensive self-training prior to participating in the preliminary contest of the national CCTV Speech Contest.

When asked about the motives for learning English, Yuan emphasized his need for a worthy competitor. He related the need to the learning success he experienced at a younger age in secondary school. His passion for learning English at that time was fueled by the competition between him and his learning partner, whom he described as a good language learner. For instance, they competed with each other to try to be the first to remember all the words in a dictionary. Yuan also described how they helped each other learn new vocabulary. They shared the words that they had learned with each other and reviewed them together. This description seemed to suggest that competition and cooperation motivated him to learn English in secondary school. Yuan further stated he became less motivated in high school and at university because he had never since encountered such a worthy competitor and a close learning partner. The need for peer competition to rekindle his passion for learning at university suggested that his performance in English in high school and at university was superior and unparalleled.

Xin Wang: "Everybody in the Family is an English Teacher"

Xin Wang, an English major, started to learn English in the third year of elementary school, and had learned English for about 13 years when she was interviewed. She enjoyed learning English and described her childhood learning in detail. Her family

seemed to have played a role in nurturing her interest in learning English. Her sister and her mother's sister were both English teachers. Under their influence, she became interested in learning English as a young child. Her reason to learn English was very simple. She stated:

> Why did I like learning English very much as a young child? The reason was very simple: if someone did not understand something said in English and I understood it, I could translate it so that s/he[2] could also understand. I felt very proud of myself. For me, this was the most important motive for learning English. When I went out with my mum and we met a foreigner, my mum did not understand what s/he said, but I did. I felt that this was the motive, being able to translate one language into another.

Xin also described what she thought of language learning strategies. She was considered a successful English language learner in middle school and was often asked this question, "What did you do to become such a good learner of English?" Xin replied:

> I really don't know. I do not seem to have what I could summarize as a system of learning strategies. I do not have it. I think that I became gradually interested in it (English) as a young child. I think that learning (English) is a cumulative process that takes days, months, and years. If someone was a good learner and is not doing very well now, s/he could gradually improve his/her learning and might eventually be able to do well. However, if someone was a poor learner, it is hard for him/her to improve English over a short period of time simply by using a system of learning strategies. I

[2] The interview was conducted in Chinese. The Chinese language does not distinguish between the sounds, ta (he) and ta (she). The researcher was, therefore, unable to determine whether it was "he" or "she" on the basis of tape recordings.

> feel that I am not that aware of what system of learning strategies I used to learn English.

As Xin talked about her approach to learning specific English courses, such as intensive reading, extensive reading, and listening, she started to remember how she was able to significantly improve her listening in the second year of high school and thus drew the conclusion that while other skills such as reading could not be improved over a short period of time by using a system of learning strategies, listening seemed to be the exception. Drawing on her own learning as an example, Xin practiced listening to boxes of English cassettes when she prepared to take the Test of English as a Foreign Language (TOEFL). She felt that the intensive practice helped improve her listening considerably.

Xin's learning prior to being admitted to the university was primarily oriented toward the MET. She chose to major in science in high school and had to learn other subjects such as physics, chemistry, and math. She stated that these subjects were very difficult for her and, as a result, had a limited amount of extracurricular time to learn English.

Lin Lin: "I Liked English Very Much and My English Teacher Liked Me"

Lin Lin, the junior chemistry major, talked about her secondary school English curriculum. She said that her school was located in a rural town and that her secondary school English curriculum did not have a listening and speaking component. Nevertheless, she held positive opinions about learning English and her secondary school English teacher. She said:

> At that time (in secondary school), I liked English very much, and my English teacher liked me very much. At that time I was very interested in English. My grades

> ranked among the top in my class. Otherwise I would not have been able to pass the CET-4 in the first year at university.

Lin Lin further described how one of her favorite English teachers in secondary school taught English, why she liked this teacher, and what she liked about him/her. She also described how the attention she received from her teacher motivated her to earn better grades. She said:

> S/he used very good teaching methods, and used them very in a very vivid way [pause]. (For instance) after we learned new words, [pause] just as seen on TV, [pause] s/he would write a new word on the blackboard, and asked one student to paraphrase the word using English or act it out. The other students would try to guess what the word was. This activity kindled our interest in English. [pause] His/her way of teaching [pause] got me interested in English. Plus I always earned good grades. The better my grades were, the more attention I received from my teacher. The more attention I received, the better grades I wanted to be able to earn.

While it was not clear how Lin felt about her learning in high school since this was not covered in her response, it was apparent that, overall, she thought positively about her prior learning experience and attributed her being able to pass the CET-4 in the first year at university to what she described as solid grounding in English that she had laid prior to being admitted to university.

Yu Wei: "The MET Was the Focus"

As a young child, Yu learned a few English words. She started to learn English systematically in the first year of secondary school and had ten years' prior learning experience. Like the other interviewees, Yu described her prior learning as oriented

toward the MET and consisted primarily of completing English exercises that were modeled after the test. She said:

> Prior to being admitted to university, I liked learning English, and reading English. But the primary focus was on test-preparation exercises. That kind of learning helped me remember English words, but was ineffective in other ways. My listening and speaking were very poor.

Yu seemed to suggest that her prior learning contributed to vocabulary learning. She also seemed to suggest that since the MET was the primary focus, neither learning nor teaching at that time seemed to have an explicit speaking and listening component.

Jie Bin: "My English Teacher Was Originally a Russian Speaker"

Like Lin Lin, Jie Bin, an education junior, also described herself as liking English very much when she started secondary school. Her attitude toward English became negative in high school, and she attributed this change to the influence of her high school English teacher and the sudden increase in the amount of learning in the second year in high school. She said:

> …in the second semester in the second year in high school [pause] I think at that time learning depended a lot on my teacher. [pause] At that time my English teacher might possibly [pause], s/he was originally a Russian teacher and then started to teach us English. His/Her pronunciation was not accurate. So at the beginning I did not quite understand what s/he said. My effort started to slacken. In high school, one should expect oneself to become more aware of the importance of learning and focus on learning. The amount of learning at that time increased a lot. I started to lag behind: my grades got worse, and I felt less accomplished. This caused me to drop

> effort further. So later, in the third year of high school, when I realized how important the College Entrance Examinations were, and started to put in more efforts, I had a different feeling about my learning. I felt that I was under the pressure to learn. Before, I had enjoyed reading aloud to myself. I felt that imitating English pronunciation was great fun [pause] and imitating the tone, pronunciation, and intonation was great fun. In that year, that feeling was gone. I felt instead that I was under pressure and that I learned because I had to learn. Learning thus became less interesting and dreary.

These words indicated that, as a language learner, Jie felt less accomplished and less competent in high school than in secondary school, a feeling that persisted after she was admitted to university.

Yun Pan: "I Developed a Test-Taking Awareness"

Yun was an engineering major. He started to learn English in 1997, in the first year of secondary school, and had learned English for eight years when he was interviewed. He described his learning in secondary school and high school as primarily directed by his teachers, and his learning as consisting primarily of rote memorization. For him, memorization was the primary means by which he coped with English tests. He also described the effect of intensive test-taking practice on him: he had so much practice that he felt that he had developed a test-taking awareness. By using this awareness, he could figure out an answer very quickly, without much thinking. Yun recalled:

> …in secondary school, the teacher taught us English in class and we then studied it ourselves. There seemed to be no tricks. We used rote memorization to try to remember the exercises we did as we practiced taking tests. Frankly speaking, it was

like what our teacher said: we had so much practice that we developed a test-taking awareness. I could figure out an answer the moment I saw the question.

Yun described his high school English teacher as having a strong influence in his attitude toward learning English. His teacher introduced him to English songs and encouraged him to listen to them and practice singing them. S/he also taught Yun to read and learn the new words in the songs. Under his/her influence, Yun gradually developed a liking for English songs and English.

Xi Zhou: "I Could Answer a Test Question Without Reading the Choices"

Xi Zhou, another engineering major, also described her learning in secondary and high school as teacher-directed, i.e., she did what her teacher directed her to do to learn English, such as remembering new words and completing exercises. She further stated that she did not seem to have enough practice in the spoken language. Xi recalled:

> (In secondary school and high school) we did what our teachers told us to do (to learn English). We would try to remember new words if that was what our teacher told us to do. So we did lots of exercises in English. We did not have much practice in the spoken language.

Xi emphasized the role that English tests played in her prior learning. She stated that the amount of practice she had in English tests had enabled her to derive an answer without even reading the choices. She further described her listening practice as simple and primarily oriented toward the MET. She felt that the limited amount of practice she had in listening and speaking seemed to limit the development of her listening and spoken language skills.

Hua Zhang: "Chinese Is My Second Language"

Hua Zhang was the only non native Chinese speaker. Her first language was Korean. She started to learn Chinese as a second language in elementary school and English as a foreign language in her first year of secondary school. She had learned English for about ten years when she was interviewed.

Hua described herself as liking English very much in secondary school and high school and attributed it to the fact that her performance on English tests always ranked among the top in her class. This caused her to develop confidence in herself as a language learner. She recalled: "In secondary school and high school, I liked English very much. This was because my grades ranked among the top in the class and this helped build my self-confidence." Hua further described her prior learning as depending primarily on her English teachers, and learned English by primarily following her teachers' directions.

How Is English Learned? Episodes and Anecdotes

Student interviews suggested that their learning consisted of distinct episodes and dimensions. These are illustrated in this section.

Dimensions and Habits: The Shaping Influences of English Curriculum and English Tests

As the students talked about their current learning, the theme that had emerged in their discussions about their prior learning continued: the English curriculum and the English tests appeared to have a shaping influence in their current learning, resulting in two distinct dimensions: classroom-based learning versus self-initiated learning, as well as distinct learning episodes. In these dimensions and episodes, the learning strategies that were initially developed to improve course performance and test performance eventually became internalized and were made automatic as learning habits. A

continuation of this theme was reflected in the responses of four students: Xin Wang, Xia Zhao, Jie Bin, and Xi Zhou.

Classroom-Based Learning versus Self-Initiated Learning

English tests and English curriculum appeared to play a role in forming two learning dimensions. This was reflected in the interviews of two students: Xia Zhao and Xi Zhou. Xia Zhao's discussion delineated two distinct learning dimensions: (a) classroom-based learning, and (b) self-initiated learning. As a computer science junior, Xia was not taking any English courses when she was interviewed and described the learning of her computer science courses as her focus at that time. She defined the classroom-based learning in the first year and the second year at university as primarily guided by the English curriculum and oriented toward meeting the course requirements and English tests. Her description of the English course suggested that it was a general one that integrated listening, speaking, reading, and writing. At the beginning of a new lesson, her teacher allowed them some time to read a text and then raised a few questions about its content. This was followed by listening to supplementary materials that seemed to summarize its main ideas. Xia and her classmates listened to the materials first and then answered some questions.

In addition to attending the English course and completing the course assignments, Xia read magazines written in English. She said that her focus was vocabulary learning, as opposed to the spoken language or the structure. This comprised some of her self-initiated learning. She ruled out the necessity to learn the structure of English, stating that she had mastered it in secondary school. Spoken language practice was not a focus either since there were few chances for such practice. Vocabulary became the focus at

university, because she felt that the lack of vocabulary knowledge seemed to have caused reading comprehension difficulties: she felt that she did not understand many new words that appeared in the English newspapers and magazines.

Her other self-initiated learning activities included reading newspapers and novels written in English. She read *Twenty-First Century*, a national English newspaper in China, and described it as more entertaining than *China Daily*, another national English newspaper in China, which she described as carrying a lot of reports about politics and was thus more difficult to read than *Twenty-First Century*. Xia read English novels, too, but did not read many of them. She said that one of the three novels that she had read was a simplified version, and that the other two were unabridged. She also said that she did not finish one of the unabridged novels because it contained many colloquial expressions and therefore was very difficult to understand.

The same learning dimensions also emerged in Xi Zhou's interview, although Xi did not appear to be as active or extensive in self-initiated English learning. Xi described her learning as primarily directed by her teacher and consisting of attending the English courses, completing home assignments, and listening to her textbook materials and English radio programs. Speaking of classroom-based learning, Xi described herself as an attentive listener in the English class, which met twice a week for 90 minutes for listening and intensive reading separately. She described these classes as short in duration and limited in content.

She visited a listening lab at her university weekly to practice listening. Xi stated that she lost the interest and passion that she used to have to read the *Bookworm Series*

and other unabridged readings. Reading, apparently, was not her focus, as she did not read much at university. These appeared to be her only self-initiated learning activities.

Habit Formation in Learning English as a Foreign Language

What the students initially started as test-oriented language practice could eventually become their learning habits. This was illustrated in the responses of two students: Xin Wang and Jie Bin.

Xin Wang described her approach to studying intensive reading as primarily oriented toward tests. She used an example to illustrate the effect of intensive test-oriented language practice on her learning. In the first semester at university, she encountered two question types on an English test that she had never had any practice before: (a) dictation, and (b) word derivation. Word derivation was an exercise that involved changing the parts of speech or the meanings of given words by adding a prefix or a suffix. She performed very poorly on these two types of questions since she had never had any practice in them in high school. So she found for herself a lot of dictation materials and focused on improving her performance on dictation. She also practiced extensively changing nouns into adjectives, and adjectives into nouns in order to do better on "word derivation".

As a result of such practice in "word derivation", she formed the habit of using the dictionary to identify not only the meaning of a new word given in English and Chinese, but also its derivatives, whether or not the word was likely to appear in a test. She described this habit as very useful for vocabulary learning. She stated that many of the methods that she currently used to learn English were originally employed to improve her

test performance. Over time, however, these methods were internalized and became her learning habits.

Similarly, Jie Bin also described how her learning habits were formed and how they related to the classroom instruction she experienced at university. She stated that from the time she started to learn English, she started to form her own learning habits. She further described the role that her teacher played in this process. She stated that at the beginning, she followed the teacher's guidance very closely and did what she was assigned to do. The methods she learned from her teacher were gradually internalized and became her learning habits. She stated that those habits were (a) rote learning texts, (b) reading paraphrased essays, and (c) completing test-preparation exercises such as reading comprehension exercises, all of which she thought were very important.

Reading, and Listening/Speaking: Skill-based Strategy Use

Skill-based strategy use was another theme that emerged in the interviews. This was reflected in the interviews of three students: Yun Pan, Xin Wang, and Yu Wei. They talked at length about what strategies they used to develop reading and listening/speaking skills in English. These included (a) varying reading strategy use by the types of reading materials, (b) locating Internet-based reading materials, (c) reading aloud as a practice strategy, and (d) guessing as a reading strategy.

Varying Reading Strategy Use by the Types of Reading Materials

Reading development was mentioned in several student interviews. As the interview data suggested, the students approached reading differently as they read different types of reading materials. This was reflected in Yu Wei's discussion about her use of reading strategies.

Other than taking her English courses, Yu read novels and newspapers and watched English movies. She also read the online version of *Economist.* Her focus in reading was on comprehension. Yu Wei's use of reading strategies varied by the types of materials she read. For instance, when reading novels, she focused on the content. This was different from reading short essays. When she read short essays, she focused on the usage. When she read newspapers, she tended to skip a lot. Her responses clearly illustrated how her use of readings strategies varied by the types of materials she read.

Locating Internet-Based Reading Materials

Locating Internet-based reading materials was also a strategy used by the students to practice and improve reading. This was especially emphasized in Yuan Yao's talk. Yuan Yao focused on two broad skill areas (a) reading, and (b) listening/speaking. His purposes for reading were to understand articles, papers, and magazines written in English. He felt that he had the language ability to handle daily communication, and yet his reading was not strong because sometimes he did not understand his academic readings.

Yuan specifically described one of the strategies he used to practice reading: he surfed the Internet to find reading materials in English. On his list of frequently visited websites were the official website of *China Daily*, and the websites of the ten most popular English magazines, such as *Business Week*. *China Daily* was his favorite, because it reported in great detail important events that occurred in China. It was unlike other websites that published reports about local events that occurred elsewhere in the world. He felt that these reports were difficult for him to make connection with and thus difficult to understand. So the official website of *China Daily* remained his favorite.

Reading Aloud as a Practice Strategy

Yuan Yao also talked about the strategies he used to practice speaking. He described that his goals for listening and speaking practice were "to communicate naturally in English". To practice speaking, he participated in English corners, where students talked to each other in English, but described such opportunities as very rare. He also practiced the spoken language by taking advantage of the opportunities to practice with the foreign nationals who asked him for directions and by reading aloud in the morning.

Yuan described reading-aloud as helping him memorize new English words and English sayings, such as "Two heads are better than one". Reading-aloud was also good practice for improving pronunciation, spoken English, and listening comprehension. He felt that frequent practice in reading-aloud would naturalistically improve his spoken language competence and help him become an eloquent speaker. Yuan further described his interest in American English. He described himself as capable of speaking standard American English, and apparently was very proud of this ability.

Guessing as a Reading Strategy

Xin Wang, the high proficiency English major, talked specifically about the use of guessing as a reading strategy. She described how she used this strategy in extensive reading. She stated that she did not have the patience to look up every new word in a dictionary. Instead, she tried to figure out for herself what a word meant. She referred to a dictionary only when she could not figure out the meaning of a key word in the reading. She described *guessing* as useful for improving her reading comprehension. She said:

> If you look up a word directly in the dictionary, it is very unlikely that you will think about the context in which it is used in and the usage. If you guess, you will think about the tense it is used in, the sentence pattern it is used in, or the tone it carries. You will not think about these things if you look it up directly in a dictionary.

Xin's talk seemed to suggest that guessing contributed to deep processing of the form and usage of a new word.

Xin's use of guessing as a reading strategy was in contrast to how Yun Pan avoided this strategy when encountering new words in the reading materials. His approach was to look up and memorize all the new words in the reading first before he started reading it. He described himself as "not strong at guessing" and said that if he did not memorize the new words first, he would not be able to understand what he read.

Improving Memorization: Tricks for Learning and Remembering New Information

Yu Wei and Yuan Yao talked specifically about the strategies they used to enhance memory. They called these strategies "tricks". These were (a) repetition, and (b) syllabic segmentation.

Yu Wei stated that the most effective way to reinforce her memory of what she read was repetition. She tended to forget what she read in her intensive reading textbooks. To compensate for this, she read repeatedly to reinforce her memory. By reading, she meant silent reading and not reading aloud. Yu also experimented with another form of repetition, retelling. She stated that retelling would help her internalize what she had read and thus improve her ability to use the language. She also stated that she needed to use this strategy persistently. Her experimentation with retelling, however, did not last very long. She recalled:

> I tried it for some time, but later, I don't know why, I gave it up [pause]. Persistence. It needs to be practiced persistently. I persisted in using it for some time, but later gave it up [pause] Got lazy [pause] I think that if I read something first, I become less curious about it. Retell something that I have already read? Some times it is the last thing I will think of.

The other trick described as effective for remembering new words was "syllabic segmentation. This was described by Yuan Yao. When asked if there was a trick for learning English, Yuan stated that learning English depended primarily on vocabulary building. He said that, in English, words were composed of syllables. When he pronounced the syllable(s), he focused his attention on letter combination that represented the syllable(s). As he pronounced a word, he broke it up into several syllables. Later, he would piece them together and pronounce the whole word. Using this strategy, he was able to remember new words at a faster rate than his peers did in middle school. He described it as a habit and did not appear to remember who taught him this.

The Role of the Teachers and the Peers: Contextual Influences in Learning and Strategy Use

Just as the English tests and the English curriculum had a shaping influence in the students' learning, their classroom teachers and peers also played a role in influencing how they learned. This theme was illustrated in the responses of two students: Lin Lin and Xi Zhou.

While Lin Lin's interest in English diminished at university, she did describe how, in the first semester, her classroom teacher encouraged her to speak English in class. She stated that she received special attention from her English teacher due to her superior

performance in English. When she was unwilling to speak English in class, her English teacher called on her to answer questions in English and speak about a given topic. The attention and the support she received from her teacher helped foster her interest in practicing the spoken language. She felt that her spoken English was improving and was thus more confident about her spoken language ability.

Xi Zhou also described how one of her high school teachers helped her learn English. The teacher stressed the importance for them to take charge of their own learning and introduced them to the *Bookworm Series*. This series consisted of 50 books. Xi stated that she read all 50 books, which helped improve her test performance. She felt that, as a result of this reading practice, she was able to earn better grades.

Xi Zhou additionally described herself as engaging in a variety of activities to practice listening and speaking. She and her friend often spoke English to each other. Xi stated that there seemed to exist telepathy between them. Although they made mistakes when they spoke English, they understood each other just as well.

Other Students' Strategy Use: Critiques and Comments

Yu Wei, Xia Zhao, and Xi Zhou discussed other students' strategy use. Their comments suggested that the students had differential opinions about their peers' strategy use: Yu Wei and Xi Zhou commented on the potential effectiveness of their peers' strategy use whereas Xia Zhao expressed critical opinions.

Potential Effectiveness of Other Students' Strategy Use

Yu Wei commented on her classmates' use of blogs to practice writing. Her classmates built their own personal space on the Internet and posted onto it the dairies

they wrote in English everyday. Yu thought it was a very effective strategy for practice writing. She stated:

> They (her classmates) have their own space for writing diaries. Everything is written in English. I think they post diaries everyday. This is very effective and improves writing.

Yu further commented on the incentive for using blogs to practice writing. She stated that her classmates posted to the blog everyday and appeared to be very interested in this practice. Others responded to their postings. She felt that these responses encouraged her classmates to persist in this practice.

Similarly, Xi Zhou described what one of her roommates did to practice English. Her friend whom she described as a successful learner subscribed to a newspaper that published a translation exercise in every issue. Her roommate regularly translated the articles into English and then checked her own translation against the key published in the next issue to find out how her translation was different from the key. Xi thought that her roommate might be able to publish her translated work in the newspaper. While acknowledging the usefulness of this strategy, Xi felt that it might not work for her and therefore did not use this strategy herself.

Critical Comments on Other Students' Strategy Use

Xia Zhao critically evaluated her peers' use of vocabulary learning strategies. She contrasted her vocabulary learning strategies with those used by her peers. She described what her peers did to try to remember CET-4 vocabulary. They all purchased a vocabulary book that listed the CET-4 vocabulary alphabetically, and tried very hard to remember all words, from the first word in the book to the very last one. When they

found that they could only remember a limited number of words after going through the vocabulary list, they would start all over again. They would repeat the process several times, only to find that that the number of words they could remember was very limited.

Her strategy was different. She carefully chose her vocabulary book. Instead of getting the book that her peers used, she bought a vocabulary exercise book that required her to read a sentence first and then determine, out of several choices, which word was the best to use in this sentence. In other words, the book allowed her to learn the word by learning how the word was used in a sentence or a phrase. She felt that by using this strategy, she was able to remember many more words using less time.

Xia further talked about how learning about how senior students learned English might influence her own learning. She stated that learning about how others learned English and following suit might help save the time that was needed to figure out to how to learn herself; however, this approach might not necessarily be effective. She thought that what worked for others might not work for her. This led her to the conclusion that taking the time to figure out how to learn was crucial to language learning. Xia used an example to illustrate her point. As a program tradition, all new students had the privilege to listen to several juniors and seniors talk about how they coped with the CET. One of the strategies they introduced for improving listening comprehension was to create an all-English environment by wearing an earphone and listening to English everyday. They stated that this would eventually help improve listening comprehension even though at the very beginning they might not understand what they heard.

Xia was critical about this strategy. She stated,

…I think this is way too simple. It is useless if you wear earphones and are thinking about something else. Creating an all-English environment? I think it won't help improve listening comprehension at all; rather, it will probably hurt my ears.

Xia further criticized specific recommendations given by this student with regard to the amount of time one should spend listening to English. She said:

…I think that his/her description of the listening process is too vague. S/he said, 'If you keep listening to English for a long time, you will eventually understand what you hear.' So I asked him/her, 'for how long?' S/he said, 'four hundred hours is the amount of time that is needed to for making a significant improvement'. I think this process is way too long. We all sometimes get lazy, don't we? Sometimes, in the middle of the listening process, like today, we may feel that we do not want to have any more listening practice. We may feel that we can not do that today.

Xia stated that she used two resources to learn about how to learn English: (a) her own independent thinking, and (b) other students' ideas. She described this way of learning about how to learn as comprehensive.

The Genesis of Second Language Learning Motivation

The students listed a variety of reasons for learning English, from learning it because of an interest in the language, to learning it and seeing it as an indispensable tool for pursuing more advanced study and gaining higher social status and greater financial benefits. The interviews revealed major motives for them to learn English as well as temporal shifts in these motives, some of which related to contextual influences, i.e., the influence of the classroom teachers, their peers, and the state policy.

Now versus Then: Remembering Motivation as Originating from Interest in English and Changing Over Time

Five of the nine students, Lin Lin, Yu Wei, Yuan Yao, Xin Wang, and Hua Zhang, talked about what learning was like in secondary school. All five students described their interest in English at a younger age, described themselves as either "a good student" or being able to "learn English well" then, and related the amount of interest they held in English directly to their test performance and the support of their family and their classroom teachers. They also drew comparisons between their motives for learning English in secondary school and their current motives, suggesting temporal shifts in motivational patterns.

When asked the question, "Why do you learn English?" Lin Lin, the Chemistry junior, stated that her reasons for learning English at university were different from her earlier reasons in secondary school and high school. Prior to being admitted to university, she learned English because she was interested: her interest was reinforced by her superior performance as a language learner and by the amount of attention she received from her teacher as a good student, as discussed under "Learning Prior to Being Admitted to University" in this chapter. At university, however, learning became more of a burden and a task that she needed to complete. Lin said:

> The atmosphere for learning is gone [pause]. For the purpose of passing the CET-4 and CET-6, I feel that since everybody around is memorizing something in English, so should I. I force myself to learn, and do not learn it voluntarily and willingly. So learning has become more a task (that I have to complete).

Similarly, Yuan Yao, the junior engineering major, felt that learning English meant a different thing for him at university versus in secondary school and high school. Previously, learning English was his interest and his hobby. The interest caused him to become highly vigilant to the English words and the letters that he saw in the streets and to think about what they meant. His responses seemed to suggest that he initially became determined to learn English as a result of a conflict between him and his peers. Following this conflict, he became determined to master English so that he would understand any reviling language spoken in English that was used against him.

Yuan's interest in the language seemed to diminish after he was admitted to university. He felt that English was more of a tool for him, a tool for communication and learning. His interest in English became jaded, as he stated that he currently looked upon it as "commonplace".

Other than stating their interest in the language at a younger age, the students also talked about how this interest started. This was reflected in Xin Wang's responses. Xin Wang, the English major, explicitly described the role her family played in nurturing her interest in English. As discussed under "Learning Prior to Being Admitted to University" in this chapter, under the influence of her sister and her mother's sister who are both English teachers, Xin became interested in English as a young child. Her interest in English at that time was supported by a very simple motive: the pride she took in herself when she found that she was able to understand what non-English users did not understand and to translate between the two languages.

Yu Wei, another English major, also described the role interest played in her learning and her decision to choose her current major. In high school, English was her favorite

subject, and her performance on the English tests and examinations was always the best in the class. Her superior performance, in turn, increased her interest in English. As a result, she applied to her current university and chose English as her major. She also described how interest in English helped create a desire in her to learn more about English so that she could read English books. Yu stated:

> At the very beginning, I learned English because it was a required subject. Later, I found that I became very good at it, and the better I became, the more interested in it I became. I am interested in it and want to learn more and know more about it so that I can read and understand books written in English. This is what it is like.

Yu's responses clearly described her interest in the language and the perceived utility value associated with it: She could read and understand books written in English.

While Xin Wang and Yu Wei's interest in English lasted and grew, a third English major, Hua Zhang's story, revealed a different picture. Like Lin Lin, Yuan Yao, Xin Wang, and Yu Wei, prior to becoming a university student, Hua liked English and was able to earn good grades on the English tests. This, in turn, increased her interest in the language. She applied to the current university and was admitted. She stated that she had wanted to study business English at the university and that her goal was to master English and translation first so that she could use it to learn more about business and commerce. She stated further that she intended to pursue an advanced degree.

Her interest in the language and her confidence in herself as a language learner, however, were seriously dampened in the first year at university when she found out she ranked at the bottom of the class and was unable to compete with her classmates from a major metropolitan city in China. She found it very hard to accept the change in her

ranking and, as a result, developed an avoidance attitude toward all learning, including learning English.

More on "Now": Learning and Valuing English for Dimensions of Its Usefulness

Unlike at a younger age when learning English was perceived more as an interest and was associated with the need to take the MET, the students' descriptions of their current learning focused more on the utility values associated with learning the language as well as its importance ascribed by the society. In their responses, almost all the students described English as a useful tool for learning about other subjects, such as computer science, and as playing an important social role in an increasingly open society.

The Usefulness of English as an International Language

One of the most common reasons mentioned for learning English was it being a useful tool. The utility value of English as a tool for communicating with English-speakers, and for facilitating the learning of another subject was addressed by several students. Learning and valuing English as an international language and a much needed tool for communicating with foreign nationals was discussed in light of the country's openness to the rest of the world and the perceived influx of English-speaking foreign nationals in China. As Yuan Yao stated:

> (English) should be very important. This is because after China joined World Trade Organization (WTO), it becomes more open, and there exists the need to get in touch with foreigners in every aspect of our society. A very apparent characteristic of our country is that nowadays many foreigners are doing business in China or traveling in China. We will likely meet them. So we need to communicate with them. Also since our society is very open now, we will encounter things imported from other countries,

> for example during our travel or our study. There is the need for us to learn about these things, to reach out for these things. So we need to learn English.

Yuan clearly described the important role that he thought English as an international language would play in light of the perceived omnipresence of foreign nationals in China. This created the need for learning the language as it was a universal language spoken by foreign nationals in China.

The same thought was expressed by Lin Lin, Jie Bin, and Yuan Pan. Lin Lin talked about what she felt was the instrumental role that English would play in her future career: a tool for communicating with foreign nationals and for pursuing more advanced study. She said:

> I feel that English is a commonly used international language. Wherever we are and even in a small city like ours, we may meet foreigners and we need to communicate with them. As a university student, if your English is very poor, it's like (unfinished) [pause] I feel English is a commonly used international language, so we need to learn it. And for the purpose of pursuing more advanced study, I need to learn it well.

Like Yuan, Lin conceptualized English as an international language that played an indispensible and instrumental role in intercultural communication. Her comments, likewise, emphasized the strong possibility of using the language as well as the need to use it given the increasing presence of foreign nationals in China.

Jie, on the other hand, talked about learning English in the age of globalization as a distant need. She said:

> Other social reasons, [pause] these are big reasons, things like the development of national economy and economic globalization…One thing that I know for sure is that in order for the human society to make progress, we need to learn English.

In presenting her list of "big reasons" for learning English, Jie seemed to vaguely associate learning English with broader issues, such as economic globalization and even the development of human society. This association seemed to relate more or less to the current status of English as an international language.

The Usefulness of English as a Valuable Addition to Academic Expertise

Yun Pan, the engineering major, discussed the usefulness of English in relation to the future job market. He stated explicitly that his primary reason for learning English was not to meet a test requirement, but to develop the ability to use it to express his thoughts and ideas so that he could communicate with foreigners. Given the intense competition in the job market and the fact that English was an international language, he felt that competence in English would constitute one of his strengths and give him a competitive edge in the future job market. He felt that English was important because it has become an important qualification in today's job market.

As another example, Xi Zhou described specifically how English could complement her academic expertise. She stated that the incentives for her to learn English were (a) using English to translate her academic papers, and (b) enjoying English songs. She related the learning of English to the learning of her major subjects and cited one of her teachers' comments to justify the value she placed in learning the language: she could translate academic papers. Her teacher told her that she already had the advantage of majoring in a subject that was becoming increasingly popular and useful and that it would

bring her greater prospects if she was able to translate academic papers in her field of study. This caused her to place great value in learning English and developing her translation expertise.

Xia, the most proficient language learner, also described the relation between English and the learning of computer science. She described English not only as an important tool for communication, but also as extremely instrumental for her, a computer major, since most computer languages were written English. She said:

> If you surf the internet [pause] and especially for those of us who are computer science majors [pause] [unfinished] things like the "help" function in our PC, if you press the F1key, all you see are English words. [pause] If you don't know English, and if you write programs, you would not even know which line contains a error.

The Usefulness of English for Self-Learning Purposes

The students additionally addressed the many other ways in which English was very useful. Several of them, Xi Zhou, Xia Zhao, Xin Wang, Yun Pan, and Yu Wei, described English as a useful tool for learning about the English-speaking culture, and for acquiring information presented in English.

Xin Wang, Yu Wei, and Yuan Pan described English as a very useful tool for self-learning purposes. Their responses revealed how the use of English could help them acquire information and understand the English-speaking culture. Xin, for instance, described English as a tool for her to understand the world outside China. Her motivation was reinforced by the understanding that, by learning English, not only could she translate between languages, as she did as a child, she could also learn what non-English users did not get to know, such as the English-speaking culture. When asked to define

“culture”, Xin seemed to associate it with the culture’s mode of thinking, literature, and religion. She felt that, often times, translation failed to capture the nuanced meanings and stated that “many things could only be understood in the source language and might not get conveyed if translated into another language”. She further described English as enabling her to understand movies and TV serials that she perceived as epitomizing the life in the English-speaking countries. Learning English thus enabled her to see what those countries look like without traveling to those places. Yu Wei, as another example, described English as part of her life and as far beyond an academic major for her. She felt that at least half of the information she obtained was via the use of English, such as reading English newspapers and books written in English. She seemed to perceive English as a medium for her to acquire information presented in English.

Like Xin Wang, Yun Pan also expressed his interest in English-speaking culture, and described the pragmatic aspect of his learning purposes: to understand more about English speaking cultures, such as England and the U.S., and, vaguely, to learn something. He described what he believed was mysterious about English as a language: there were layers of meanings in English that could be understood but were not describable using the spoken language. He felt that translation sometimes failed to capture the layers of meanings conveyed by well-written English. He further used an example to describe the difference between what was conveyed in the source language versus what was conveyed via translation. Chinese poems, for instance, often read differently when they are translated into English.

Now and Then: Learning and Valuing English to Meet Test Requirements

Test requirements continued to be a theme as the students talked about what motivated them to learn English at the current stage. Jie Bin, the less proficient education junior, described her main reason to learn English as "first and foremost oriented toward the tests". Her learning was guided by two purposes (a) to meet test requirements, and (b) to communicate with foreign nationals. She stated that where she lived, there were not many opportunities for her to communicate with foreign nationals, and this made it difficult for her to meet her first purpose. Her primary purpose was to pass the standardized written English tests. This was because English was required in all major examinations leading toward higher levels of education. She additionally saw learning English as "a need ascribed by the society". When asked what she meant by those needs, she stated:

> There is this reason. [pause] It is closely related to us and therefore is easy to understand [pause] It is also an acceptable reason. [pause] The reason is that if you want to improve yourself, English is a stepping stone. English is tested in the College Entrance Examinations and in the Graduate Examinations, which we need to take it in order to get admitted into a masters program or a doctoral program. All those examinations require us to take an English test. This is the most immediate reason and one that is the easiest for us to understand.

Jie seemed to suggest that, for her, the most relevant reason to learn English was that it was tested in all major examinations that she needed to get better educated. Her comments were a direct reflection of the fact that English language education has become an integral component of the education system in the country, a system that values

English language education and designates it as a required subject and a required test at all educational levels. Further, rather than seeing it as a personal reason, Jie described it as being a reason ascribed by the society. This seemed to indicate the lack of investment that caused Jie to see it not as something that was interesting to learn, but something that she needed or had to learn because it was a tested subject.

Mutability versus Consistency in Language Learning Attitudes

Just as some students' interest in learning English persisted and grew while others' changed and diminished, the same pattern surfaced in their attitudes toward learning English, with some describing themselves as liking English prior to and after being admitted to university and others talking about how their liking for English decreased under changing circumstances. Mutability and consistency emerged as the theme in their responses to the question: Do you like learning English? Why or why not?

Now versus Then: Temporal Shifts in Language Learning Attitudes

Concomitant with temporal shifts in the students' interest in learning English were the temporal shifts in their language learning attitudes. These were evident in the responses of three students: Lin Lin, Jie Bin, and Hua Zhang.

As noted under "Learning Prior to Being Admitted to University", Lin contrasted what she felt was her strong interest in learning the language in secondary school and high school versus what she felt was the pressure to learn at university. She described herself as liking English very much in secondary school. At university, however, learning had become more of a pressure that stemmed from peer competition and the requirement to pass the national standardized English tests. She felt that the interest that she used to

have in learning English vanished, partly due to the above-mentioned pressure, and partly due to the changes that occurred in the learning in the university. She said: “For one thing, learning has become more demanding. It has become less easy because I need to learn so many words. Another reason is that the learning atmosphere is gone.” Lin later described the learning atmosphere as the presence of a learning group that she would have had in an English class. Since she passed CET-4 in the first year at university, she had the option of waiving English courses and therefore was not taking any English classes when she was interviewed. She was no longer exposed to the learning atmosphere in an English class. She apparently valued this atmosphere and described its unavailability as causing her to feel less interested in learning the language.

Like Lin Lin, Jie Bin’s attitudes toward learning English also underwent a temporal shift, which took place in high school. Contributing toward this shift was the influence of her high school English teacher, and the increase in the amount of learning she had to handle. As was described under “Learning Prior to Being Admitted to University”, Jie’s high school teacher spoke English in an incomprehensible way and this caused her to relax her efforts. This was compounded by the sudden increase in the amount of learning she had to handle, which caused her English achievement to drop further. When she refocused on learning the language in high school, she felt differently. She felt that she was under the pressure to learn and was forced to learn, and this made her feel that learning became less interesting and dreary.

Her current attitudes toward learning English were similar to and different from her prior attitudes in high school. She described herself as “still disliking learning English”. However, her attitudes had improved since then. She said:

> I still do not like learning English. However, I have improved (my attitudes toward learning English), probably because [pause] I feel like [unfinished] [pause] probably because my cognition in this regard has changed. It is not like what it was like before when I learned English because I had to learn it. Now as I am growing up, I realize that something is different. Now I feel I need to improve myself and become a better person. However, because I lagged behind others before and my grounding in English is not solid enough, I feel that learning is a little bit strenuous. That's how I feel.

Jie's words precisely described the change in the meaning she ascribed to learning English and the resulting change in her attitudes toward learning English. She apparently associated learning English with "becoming a better person". Thus her attitudinal changes seemed to relate to changes in the meaning she assigned to learning as well as to changes in her cognition.

Like Lin Lin and Jie Bin, Hua's attitudes toward English underwent a similar temporal shift. As noted under "Learning Prior to Being Admitted to University", in elementary school and high school, she liked English very much and her interest was reinforced by her superior performance on the English tests and the resulting confidence in herself as an English language learner. Her interest and confidence, however, were greatly dampened in the beginning years at university when she discovered that the students from a major metropolitan city in China had much better language competence. She stated:

> The pride I took in myself (as a good student in the high school) [pause] all of a sudden, I found myself ranked at the bottom of the class. That was such a terrible

> feeling. I could not even accept this as a fact. So I tried to escape (from the reality). I told myself: I am like this now, but, before, I was a good student. I will not compete with you. I will do what I like.

Hua's talk suggested that she experienced a difficult transitional period. She withdrew from the competition and developed avoidance attitude toward English in the first two years at university. In her third year, however, she felt that she could no longer squander her tuition and started to refocus on her learning. Hua stated that her interest was rekindled by her English teacher in her third year. She described her English teacher as "a very good teacher" who gave her lots of encouragement. Her efforts picked up and her interest increased. Hua stated:

> I now start to learn in a step by step manner. Although my English achievement has not improved much, I feel that I could use a lot more new words than before and my interest in learning has also increased a lot.

Now and Then: Persistent Liking of English

Unlike Lin Lin, Bin Jie, and Hua Zhang whose language learning attitudes changed over time, Yun Pan, Yu Wei, and Xia Zhao talked about their persistent liking of English, which did not seem to be affected by the time factor.

As noted under "Learning Prior to Being Admitted to University", Yun's prior interest in the language seemed to relate to his interest in learning English songs and also to the fact that his high school English teacher introduced him to English songs and taught him how to learn English words via listening to English songs. As noted under "The Usefulness of English for Self-Learning Purposes", his current interest seemed to relate to his perception of English as having the power of conveying meanings that only

those who read English could understand. He seemed to suggest that his interest in English was underscored by his curiosity to understand the nuanced meanings that English conveys, since translation might not capture them.

Yun said that his liking of English does not seem to be supported by a specific reason. He used his teacher as an example to illustrate this point. His English teacher in his high school said that it gave him/her a pleasant feeling to listen to BBC programs in English. Yun also described his liking of his current English teacher, whom he described as speaking very good English and sometimes interpreted for foreigners. He further described a clear-cut difference between learning English and taking the English tests. He stated explicitly that he liked learning English but disliked English tests. He stated that his purpose for learning was not to pass English tests, but to use it to understand English-speaking cultures and communicate with foreigners.

Similarly, Xia Zhao, the computer junior, openly expressed her liking of English. She stated that she liked English, because she learned it well, and was well-known for her superior performance on English tests. She felt that the recognition she had earned as a good language learner helped develop a sense of self-satisfaction, which increased her desire to learn the language. Other than herself being a successful language learner, Xia also felt that English would be very useful for her in the future. She, therefore, needed to develop solid grounding in English so as to meet the future demand.

Among those whose liking of English lasted and grew was Yu Wei, the English junior. As noted under "The Usefulness of English for Self-Learning Purposes", Yu Wei described herself as liking English and English as her favorite subject in the high school since her grades were the best in her class. She described herself as still liking English at

university and further stated that English had become part of her life and a medium for acquiring at least half of the information. She valued English as a means by which she could read and understand books written in English and as a tool for her to communicate with English-speaking foreign nationals.

What Does Learning English Mean and What Contributes toward Success/Failure?

Two of the major themes that emerged in the student interviews concerned what learning English meant and what the reasons were for success/failure. These are illustrated below.

What Does Learning English Mean?

One of the questions asked of the students was: What does learning English mean? Some of the students responded to it by describing what their goals for learning were. Others' responses suggested that they associated English learning with the more distant gains that could occur if they mastered the language. Divergent opinions existed concerning what should be the focus of learning and what mastery of English would eventually lead to.

Several students responded to this question by stating what their focus of learning was. Lin Lin, the junior chemistry major, for instance, stated that speaking was the most important of the four skills. Her purpose was to improve her spoken language competence so that she could communicate with others in English. When she was asked to describe what kind of process learning English was, she stated that learning English was both a painful and joyful experience. It was joyful in the sense that she felt very accomplished when she understood what others said in English and using it to

communicate with others. It was painful when she found out that she was having difficulty remembering new words and understanding articles written in English.

Xi Zhou, as another example, associated her learning goals with what she perceived were her learning difficulties. She had problems understanding others and making herself understandable when speaking English. So she stated that for her successful learning meant that she was able to speak the language so that others could understand her. In other words, she equated learning success with becoming a competent English speaker. Xi Zhou explicitly stated that grammar was not her focus. She stated that learning English meant more the learning of the English-speaking culture, e.g., the cultural background of the English-speaking countries and proverbs that reflected those cultures. She also felt that it was necessary to learn what was important in interpersonal communication, such as etiquette.

Yuan Yao, the engineering major, responded to this question in a different way. He stated that English was a pillar stone that underscored his success in the future career and that English language competence was a must for him to be successful in the future. He felt also that currently English was very important as he was trying to learn how to use programming languages and computer software, since they all used English. He stated specifically that the structure of the programming languages resembled the structure of English.

Similar to Xi Zhou, Yun Pan stated that for him, learning English meant learning about the culture of the English-speaking countries. Ultimately, it meant the development of the abilities to communicate with foreign nationals in China. He underscored this latter notion with what he thought was the ultimate purposes of all languages in the world. He

stated that languages were invented for humans to communicate with each other, i.e., they were used as a tool for people to say aloud their ideas and thoughts so as to share them. Yun said that, as an international language, English was a communication tool.

Ability versus Effort: Attributions of Success and Failure

Language performance and the factors affecting success or failure emerged as another major theme in the student interviews. This theme was addressed by four students: Yuan Yao, Xin Wang, Xi Zhou, and Yun Pan. A dichotomy of internal ability versus external effort surfaced in the interviews: while Yuan Yao, Xin Wang, and Yuan Pan attributed their learning success to effort and conceptualized language learning as an incremental process, Xi Zhou seemed to believe more about the importance of innate ability and attribute the difficulties she experienced to the lack of this ability.

Yuan Yao seemed to attribute his superior performance to effort, and not ability. He made this comment when he described how others talked about him as having a gift for learning English. He stated: "They (peers) all say that I have a gift (for learning English). I do not think it is gift. I think it all comes from what has been learned cumulatively over time." As noted under "Learning Prior to Being Admitted to University", Yuan believed that learning English was a cumulative and incremental process and, therefore, attributed his superior performance in English to what he had learned cumulatively in secondary school and high school. His talk indicated his belief that investment in time and efforts, rather than giftedness, contributed toward learning.

Other than attributing his learning success to investment in time and effort, Yuan expressed high self-efficacy beliefs and stated that he was able to accomplish all major goals he set for himself. He explicitly attributed his success to his goal-setting

mechanism. He stated: “I think it (my success) relates to the goals I set for myself. It is because I do not want to be a mediocre person. I think I need to be better than others when I enjoy what I am doing.” Yuan’s comments suggested that success meant superior performance and related it to the goals he set for himself as an English language learner. This belief indicated that his learning was driven by his desire to excel and was oriented toward lifting his ability in English above and beyond that of the average students. His self-efficacy belief related also to what he stated was the major motive for learning: competition. Competition drove him to learn, and his learning was driven by his desire to excel, to perform better than others.

Like Yuan Yao, Xin Wang also believed that learning English was a cumulative and incremental process. She elaborated on this point by describing her theory about the good and the poor learner. As was reported under “Learning Prior to Being Admitted to University”, Xin said:

> If someone was a good learner and is not doing very well now, s/he could gradually improve his/her learning and might eventually be able to do well. However, if someone was a poor learner, it is hard for him/her to improve English over a short period of time simply by using a system of learning strategies.

This suggested that Xin Wang, like Yuan Yao, seemed to attribute her superior performance as a language learner to effort and cumulative learning that occurred over time.

Yun Pan, as a third example, endorsed what his teacher described as contributing to skill-building in learning English, and attributed his failure to lack of effort and practice.

He used an analogy stated by his teacher to describe the importance of effort for improving writing and speaking:

> Writing and speaking, like our teacher said, it is like you are trying to make a sauce, the more materials you dump into it, the more overflowing it gets [pause]. He suggested that we do not work hard enough to memorize the elements of English. If we did work hard to memorize a lot of things, naturally, we should be able to speak the language.

Yun explicitly attributed the difficulties he experienced using the spoken and written language to the lack of effort and also related them to goal-setting. He drew a comparison between his learning in high school and his learning at university to illustrate this point. In high school, he had an explicit goal: to gain admission into a four-year university. After he accomplished this goal, however, he felt that he no longer had a goal. Further, the courses he needed to take at university were considerably shorter than those in high school and did not require much work. As a result, life became empty and he spent much time playing around rather than studying.

Xi Zhou expressed a different opinion about what caused success or failure. She felt that language learning requires gift. She acknowledged the importance of effort, but felt that innate ability definitively played a role in language learning. She used pronunciation as an example. Xi was concerned with the fact that she spoke English with a strong accent that was characteristic of the local residents of her home province. She seemed to think that she was born with this accent, which caused her to feel discouraged about her ability to improve pronunciation. She thought that better pronunciation would increase her confidence in herself as an English language learner.

Summary of Qualitative Results

This chapter presented a rich description of the major themes that emerged in the student interviews. These themes were organized into five major categories to address the qualitative research questions reiterated at the beginning of this chapter. The five categories were: (a) Learning Prior to Being Admitted to University; (b) How Is Language Learned? Episodes and Anecdotes; (c) The Genesis of Second Language Learning Motivation; (d) Mutability versus Consistency in Language Learning Attitudes; and (e) What Does English Mean and What Contributes to Success/Failure?

Drawing all the themes together, we find the following picture of these students in relation to English language learning. Language learning in the student interviews appeared to be comprised of distinct dimensions and episodes. There existed the dichotomy of classroom-based learning versus self-initiated learning. They occurred concurrently to form learning dimensions, and sequentially to form learning episodes. Learning also appeared to be oriented toward skill acquisition, as the students talked about the strategies they used to gain practice in reading and listening/speaking, such as varying reading strategy use by the types of reading materials and reading aloud to practice pronunciation and spoken English. In these dimensions and episodes, strategy development appeared to be influenced by a multitude of factors. It was influenced by English tests and English curriculum, since what was employed initially to gain practice in taking tests and meet course requirements was eventually internalized and became learning habits. Contextual influences such as classroom teachers and peers also appeared to affect strategy use, as the students learned about what strategies to use from them and practiced using the strategies in teacher-structured or peer-assisted learning activities.

Temporal shifts appeared to characterize language learning attitudes and motivations. Second language learning motivation appeared to germinate as interest at a younger age. As learners grew older, they became more cognizant of the utility value associated with the learning of English, such as learning it as an international language for intercultural communication and using it for self-learning purposes. Test requirements also appeared to be a major motive. Learners were most likely to experience demotivation and attitudinal changes in major transitional periods when changes occurred in their learning environment. Positive attitudes persisted when learners continued to maintain their superior language performance, or when they identified more with the utility values associated with the learning.

Student interviews suggested that they conceptualized learning as a cumulative and incremental process. Goals for learning varied among the students, as some of them focused on vocabulary while others focused on spoken language practice. In describing reasons for success or failure, some students attributed them to effort while others ascribed them to innate ability.

Chapter 6 discusses and integrates these qualitative results and the quantitative results from Chapter 5. It also offers implications for future educational practice and research.

Chapter 6: Summary, Discussion, and Implications for Future Educational Practice and Research

This research was undertaken to identify factors affecting the learning of English as a foreign language among university students in the Chinese EFL context. It explored and validated the factor structures underlying *Part B: Language Learning Attitudes and Motivation Scale*, *Part C: Beliefs about Language Learning Scale*, and *Part D: Language Learning Strategy Use Scale* in *the Language Learning Questionnaire* (Yin, 2005). It additionally probed the developmental paths of these individual learner variables as they became alive in the student interviews. The three purposes of this chapter are (a) to integrate the qualitative and quantitative results, (b) to put them into the context of already-published research, and (c) to explore implications for future teaching and research.

In this chapter, the quantitative and qualitative results described in prior chapters are integrated and linked with relevant research that has already been published. This is followed by implications for future classroom pedagogy and research. This chapter concludes with a summary of discussions and implications.

Integration and Discussion of Quantitative and Qualitative Findings

This study was guided by five research questions. This section summarizes findings for each question in turn by presenting key findings for each question obtained via quantitative and qualitative methods. Specifically, these questions are:

1.a. What factor structure underlay *Part D: Language Learning Strategy Use Scale* (Appendix 3)?

1.b. How did study participants learn English prior to being admitted to university?

1.c. What general strategies did study participants use to learn English?

1.d. How did study participants develop their knowledge about the use of language learning strategies?

2.a. What factor structure underlay *Part B: Language Learning Attitudes and Motivation Scale* (Appendix 3)?

2.b. What motivated study participants to learn English?

2.c. What were study participants' attitudes toward learning English?

3.a. What factor structure underlay *Part C: Beliefs about Language Learning Scale* (Appendix 3)?

3.b. What beliefs did study participants hold about learning English?

4. Did gender significantly affect (a) latent strategy use factors, (b) latent attitude and motivation factors, and (d) latent belief factors, and if so, in what ways? Did academic major affect these latent factors, and if so, in what ways? Was there an interaction between gender and academic major, and if so, in what ways?

5. How did latent strategy use factors, latent motivation factors, and latent belief factors relate to each other and to English language proficiency?

Integration and Discussion of Findings Regarding Students' Use of Language Learning Strategies

This section briefly reiterates quantitative and qualitative findings concerning students' use of language learning strategies. It integrates these two types of findings and discusses them in the context of already-published research.

Factor Structure Underlying *Part D: Language Learning Strategy Use Scale*

The first research question comprised four segments, the first of which concerned the factor structure underlying *Part D: Language Learning Strategy Use Scale* (Appendix 3). Exploratory and confirmatory factor analyses performed on student responses to self-report measures of frequency of strategy use yielded a four-factor structure composed of *metacognitive strategy use*, *self-directed practicing strategy use*, *compensatory vocabulary-learning strategy use*, and *social interactional strategy use*. Those factors accounted for 38.655% of the total variance in the students' use of language learning strategies.

This four-factor structure is consistent with existing literature highlighting the role that the four types of language learning strategies play in second language learning. Metacognition involves "'active monitoring and consequent regulation and orchestration' of cognitive processes to achieve cognitive goals" (Flavell, 1976, p. 252, as cited in Hacker, 1998). The seven items that loaded on this factor described the students as actively managing their own learning by using strategies such as frequent review, planning, setting goals, and self-encouragement. The use of such strategies activated the self-regulatory process, which was essential for students to take responsibility for their own learning, and thus an important aspect of strategic learning (Oxford, forthcoming).

This four-factor structure also emphasized the important role self-directed language practice and social interaction played in second language learning. The eight items that loaded on self-directed practicing strategies, while generic in nature, described the variety of activities the students initiated to gain practice in comprehension, i.e., reading and listening comprehension, as well as in written language production. Similarly, the five items that loaded on the social interactional strategy use described the activities the

students typically initiated to gain or facilitate the practice in oral language production. Frequency in using these generic strategies could potentially contribute to skill acquisition.

The present study additionally provided evidence for the construct validity of compensatory vocabulary-learning strategies. The role that this factor played in second language learning and acquisition was well documented (e.g. Fan, 2003; Gu & Johnson, 1996). Certain types of compensatory vocabulary-learning strategies, such as inferencing, were reported to differentiate among the stronger and the weaker learners and were found to positively relate to English language proficiency (Gu & Johnson, 1996). In the present study, this construct was validated both quantitatively in the analyses, and qualitatively in the student interviews.

What Students Said about General Strategy Use

The interview results suggested that learning, as described by two of the interviewees, was conceptualized as consisting of two dimensions: classroom-based learning and self-initiated learning. National standardized English tests and English curriculum appeared to have a shaping influence in these students' learning, as they consistently described their learning prior to and after being admitted to the university as being primarily oriented to the tests. Activities characteristic of classroom-based learning included completing course assignments and test preparation exercises, which appeared to be different for English majors and non-English majors. English majors did exercises such as word derivation and dictation, while those for non-English majors were primarily reading comprehension and listening comprehension exercises. The student talks also reflected the differences in the English curriculum between these two groups, as non-

English majors were offered a generic English course that integrated the four skills, whereas English majors took intensive English course as well as courses in American literature and English-speaking culture.

Their self-initiated learning, in contrast, consisted of activities such as reading English newspapers and magazines, listening to English songs, and learning new words. Vocabulary learning appeared to be the primary focus for several students. These results were consistent with the results of exploratory and confirmatory factor analysis performed on *Part D: Language Learning Strategy Use Scale* (Appendix 3), as *self-directed practicing strategy use* and *compensatory vocabulary-learning strategy use* were among the four strategy use factors identified and validated in the analyses.

While it was apparent that English curriculum and national standardized English tests had a shaping influence in the students' learning, it was also evident that these students did, to a varying degree, take initiatives to plan and regulate their own learning, to explore and experiment with novel strategy use, and to adjust their strategy use in response to the changes in their learning environment. Strategy use described by these learners was characterized by temporality, i.e., changing across time, by varying amount of learner initiatives or learner investment, and by its relevance for specific language skills. The student talks about skill-specific strategy use revealed them using strategies such as reading aloud in the morning, and guessing. They also revealed how learning was approached less strategically, such as avoiding making guesses and memorizing all new vocabulary prior to reading new materials.

The Development of Learner Knowledge about Strategy Use

The student responses about strategy use granted an additional insight into how they

became cognizant of the use of various learning strategies. Their talks clearly illustrated the social nature of language learning, i.e., language learning involved extensive interaction with learning partners and occasional interaction with English-speaking foreign nationals. Its social nature was further illustrated by the fact that the learners gradually became aware of the use of general as well as specific learning strategies by following their teachers' advice and gradually internalizing it in the language learning process. They were also conscious of their peers' strategy use, as was indicated by their talks and their comments on such strategy use. Some described their peers' strategy use as useful and potentially effective, while others critically evaluated such strategy use and, on the basis of this, developed their own strategies for completing the same learning task.

The students identified potentially useful strategies from books about learning strategies and experimented with them. They seemed to be more willing to experiment with novel strategies where there existed a clear need for them, as in Xin's case when she was preparing for TOEFL. These students often self-evaluated the effect of using these novel strategies, based on which they determined whether or not they would continue using them.

Integration and Discussion of Findings Regarding Language Learning Attitudes and Motivation

This section briefly reiterates quantitative and qualitative findings concerning students' language learning attitudes and motivations. It integrates these two types of findings and discusses them in the context of already-published research.

Factor Structure Underlying *Part B: Learner Attitudes and Language Learning Motivation Scale*

The second research question comprised three segments, the first of which concerned the factor structure underlying *Part C: Language Learning Attitudes and Motivation Scale* (Appendix 3). Exploratory and confirmatory factor analyses performed on student responses to self-report measures of learning attitudes and motivation yielded a six-factor structure composed of (a) *orientation toward social and financial benefits*, (b) *orientation toward immediate language use*, (c) *intrinsic motivation*, (d) *orientation toward competition and academic self-efficacy*, (e) *language use anxiety*, and (f) *teacher-as-guide*. The three factors accounted for 53.483% of the total variance.

This six-factor structure is consistent with existing literature that documented the validity of various motivational orientations (e.g. Csizer & Dörnyei, 2005; Masgoret & Gardner, 2003; Schmidt & Watanabe, 2001). The two distinct motivational orientations, (a) *orientation toward social and financial benefits*; and (b) *orientation toward immediate language use* represented the immediate pragmatic purposes associated with the learning of English as a foreign language in China. The validity of instrumentality as a motivational construct was reported and validated in studies on second language learning motivation research (e.g. Csizer & Dörnyei, 2005; Masgoret and Gardner, 2003). For instance, Csizer and Dörnyei (2005), in a study of 8,593 Hungarian pupils, used four items to measure "instrumentality" of foreign language learning (a) become knowledgeable; (b) second language important in the world; (c) useful for travel; and (d) useful for career. Gardner's Attitude/Motivation Test Battery (AMTB) employed four items to measure instrumentality (a) need it for future career; (b) become knowledgeable; (c) useful for getting a good job; and (d) win people's respect (Gardner, 1988). Compared with the representation of "instrumentality" in those two scales, the two items that

loaded on "orientation toward social and financial benefits" in the present study roughly corresponded to "useful for career" in the Csizer and Dörnyei (2005) scale and "need it for future career" in AMTB (Gardner, 1988). The two dimensions of instrumentality as suggested by the present study characterized language learning in China as motivated by potential social and financial benefits as well as immediate use of the language.

Of the other factors in the model, *orientation toward competition and academic self-efficacy* was identified as a single factor in the present study. This finding seemed to suggest that in the EFL context in China, orientation toward competition and academic self-efficacy were strongly related such that, rather than standing as two distinct factors, they combined to form a single factor that influenced the students' strategy use as well as English language proficiency.

In the present study, *intrinsic motivation* was measured by the items that described the enjoyment of learning English as opposed to learning it due to an external influence. This subscale reflected the definition of intrinsic motivation: "doing something because it is inherently interesting or enjoyable" (Ryan & Deci, 2000). This subscale also aligned with the original subscale measuring this construct (Schmidt &Watanabe, 2001). Three of the five items that loaded on the same factor were in the original scale. They were (a) enjoy learning English, (b) learn English even if it is not a required course, and (c) do not like learning English. "Enjoy learning English" and "learn English even if it is not a required course" loaded positively on this factor. "Do not like learning English" loaded negatively on this factor. The other two items with negative loadings represented possible external influences in learning English (a) earning a good grade, and (b) meeting university requirement. These loadings suggested that intrinsic motivation related

positively to enjoyment of learning English, and negatively to negative attitude and external influences such as grade and university language requirement. Validity evidence for this subscale also surfaced in the student interviews, as the students talked about how they enjoyed learning and how learning English had become part of their life.

Motivation and Motivational Orientations as Discussed in the Student Interviews

The interview results suggested that the students' motivations for learning English were characterized by temporality. Several students recalled that, at a younger age, they learned English because they were interested in the language. Their interest, however, diminished over time. As they grew older and more mature, they identified more with the utility value associated with learning English. Dimensions of usefulness identified by the students included English being an international language and henceforth a useful tool for intercultural communication. This was emphasized in almost all student talks. Almost all nine students described English as becoming increasingly useful, since the number of foreign nationals in China was growing, and the opportunities for people working in different fields to meet and communicate with foreign nationals were also growing. English was also a useful tool for understanding the English-speaking culture and acquiring information presented in English.

English was additionally a useful tool for the students to pursue activities such as reading English books, English newspapers, and English magazines and watching movies or TV programs spoken in English. Several students discussed an obvious advantage of learning English: Being able to understand and appreciate novels and books written in English. They also watched English movies and listened to English songs. It becomes very evident that the usefulness of English has dimensions that go far beyond simply a

language required on the national standardized tests, in an era when China becomes increasingly open and a part of the international community.

These results were consistent with results of the exploratory and confirmatory factor analyses performed on *Part C: Language Learning Attitudes and Motivation Scale* (Appendix 3). The analyses identified two motivational orientations: (a) *orientation toward social and financial benefits*, and (b) *orientation toward immediate language use*. The belief that English could bring additional social and financial benefits was associated with the fact that English was a useful tool for cross-cultural communication. It was directly reflected in Xi and Yun's talks, as they described it as capable of bringing them an additional advantage in the job market. Interview results also validated another factor identified in the factor analyses, namely, *intrinsic motivation*. This was represented as persistent learner interest in the language and was reflected in Yu's talk, who viewed it as an interest at a younger age and a part of her life in the current stage. Competition and academic self-efficacy was qualitatively validated in Yuan's talk that described his learning as being primarily motivated by peer competition. Yuan's talk also illustrated his self-efficacy beliefs.

The Students' Language Learning Attitudes

In the student interviews, language learning attitudes were dynamic and changing constructs and were associated closely with their interest in learning the language. Attitudinal changes seemed to result from changes in the learning environment. At a younger age when interest emerged and was relatively fresh and strong, most students viewed learning positively and described themselves as liking English. Their attitudes toward learning English seemed to relate to their attitudes toward their English teacher.

This, in turn, was affected by teacher attitude toward them and perceived teacher competence. Their attitude also related very strongly to their perception of themselves as language learners, which they seemed to determine on the basis of their performance on English tests and examination. Several students, for instance, described themselves as very interested in the language and liking English very much because they were very good language learners at a younger age, and ranked among the top in the class.

Distinct patterns emerged from the student talks as they compared and contrasted their prior and current attitudes toward learning English. While most of them described their prior language learning attitudes in a positive light, as they grew older, some of them experienced deteriorating attitudinal changes while others were able to sustain or even strengthen their interest in and positive attitudes toward learning the language. It appeared that deterioration was likely to occur when the students experienced changes in their learning environment in which perceived teacher competence and classroom pedagogy appeared to be key elements, or in their learning load. Several interviewees, for instance, became less fond of learning English in high school or at college and attributed it to teacher incompetence or the sudden increase in learning load which turned difficult to handle. Others were able to maintain or even strengthen their positive attitudes either because they continued experiencing learning success, or because they emphasized more the utility value of the language for various purposes. In the latter case, they appeared to dissociate learning attitudes from language performance and valued more using the language to fulfill gratifying purposes.

Integration and Discussion of Findings Regarding Learner Beliefs about Language Learning

This section briefly reiterates quantitative and qualitative findings concerning students' beliefs about language learning. It integrates these two types of findings and discusses them in the context of already-published research.

Factor Structure Underlying *Part C: Learner Beliefs about Language Learning Scale*

The second research question comprised two segments, the first of which concerned the factor structure underlying *Part C: Beliefs about Language Learning Scale* (Appendix 3). Exploratory and confirmatory factor analyses performed on student responses to self-report measures of beliefs about language learning yielded a three-factor structure composed of (a) *ability beliefs*, (b) *value beliefs about grammar and translation*, and (c) *value beliefs about language and strategy use.* The three factors accounted for 28.850% of the total variance. The rather low percentage was attributable to the fact that the three factors loaded on 11 items, less than half of the 25 items in *Part C: Beliefs about Language Learning Scale*. This suggested that the items in this scale tended not to cluster. This result was expected since the scale was adapted from the *BALLI*, which was originally designed to measure frequency of opinions rather than latent constructs.

This three-factor structure is consistent with existing literature documenting the validity evidence for two of the factors (a) *ability beliefs*, and (b) *value beliefs about language and strategy use* (e.g., Yang, 1999). The two items that loaded on ability beliefs (a) difficulty of English, and (b) special ability for learning English, were among the six items that loaded on the "self-efficacy and expectation about learning English" factor in

the Yang (1999) study. Three of the six items that loaded on *value beliefs about language and strategy use*, i.e., the importance of English and the importance of using strategies to learn English, were also reported to be among the nine items that loaded on the perceived value and nature of learning English factor in the Yang (1999) study. The partial convergence of the items that represented the two factors constituted validity evidence for the two factors. Differences between the Yang (1999) study and the present study in construct interpretation and representation might relate to the adaptations made of the original instrument for the purpose of the present study. Details about how the adaptations were made were presented in Chapter 3.

What the Students Said about Their Beliefs

The interviews revealed two different views of what was important for learning and this did not seem to relate to their perception of themselves as language learners. Superior learners such as Yuan and Xin were often asked this question: "How come that your English is so good?" Their responses to this question indicated that both believed learning English to be a cumulative and incremental process. They attributed their learning success to personal efforts rather than ability. Another contributor to learning success seemed to be the goal-setting schema, and this was reflected in both Yuan and Yun's talk. Yun, for instance, stated that, in comparison with his learning in high school which was driven by a very clear goal, at university when that goal was accomplished and when there existed no more goals for learning, he seemed to get lost and did not know where to direct his efforts. A slightly different view stressed the importance of innate ability. This was reflected in Xi's talk. Xi acknowledged the importance of efforts for learning English, but argued that natural ability was just as important, if not more

important. She further supported her argument with her own example and attributed the difficulties she experienced in making herself understood by others to her strong regional dialect, which she thought she was naturally born with.

This ability versus effort dichotomy to a certain extent validates the *ability beliefs* factor identified and validated in the exploratory and confirmatory factor analyses performed on *Part C: Beliefs about Language Learning Scale* (Appendix 3)? For instance, one of the two items that loaded on this factor described students as believing that they had a special ability for learning English. This item coincides with Xi's discussion about naturally born language ability such as pronunciation, which she considered to relate strongly to the difficulties she had experienced in practicing the spoken language and listening. The validity of this construct was also indirectly established in Yuan's belief that effort, rather than innate ability, was a major contributor to learning success.

The student interviews also suggested that divergent opinions existed concerning what learning English meant. The interviews indicated what they thought were the foci of learning. Several of them stressed the importance of vocabulary learning and described it as their current focus. Developing spoken language competence was also the focus, as they talked explicitly about how likely it was for them to meet with foreign nationals in the street or in their future career. They similarly valued the learning of English-speaking culture and literature written in English, and using English as a tool for understanding another culture. Grammar, as described in their talks, appeared not to be very important at their current stage, as several of them stated explicitly that it was not their focus.

The student interviews additionally suggested that a discrepancy seemed to exist between what they believed were the foci of learning and their reported use of learning

strategies. While several students described the spoken language as their focus of learning, the skill-specific strategies that they talked about in the interviews focused more on reading and less on speaking. Yuan Yao appeared to be among the few who talked about how he practiced the spoken language by reading aloud in the morning. This strategy, however, did not involve real-time spoken communication. One possible explanation for this discrepancy was the level of difficulty that students likely experienced when trying to use the language for real-time communication. For example, Xi Zhou was the student who described how she practiced spoken English with her learning partner. Her response suggested that in this practice, she and her partner often encountered language gaps that made it difficult for them to persist in the practice. It appeared that students like Xi Zhou who experienced much difficulty in speaking English were probably less willing to practice the spoken language than to practice other language skills such as reading and thus had limited opportunities to use speaking strategies. Another explanation was that students believed the most effective strategy for practicing the spoken language was to speak with native English speakers, who unfortunately were not generally available, esp. in inland areas. Jie Bin, for example, stated that even though spoken language competence was one of her primary learning purposes, she was unable to fulfill it because there were not many opportunities for her to practice with native speakers of English. Her example indicated that students who believed that practicing with native speakers of English was the most effective speaking strategy might limit themselves from using an array of other possible speaking strategies. Therefore, Jie Bin specifically shifted to another priority, using strategies to prepare for the written English proficiency test.

Student responses that deemphasized grammar learning indirectly supported the construct validity of the *value beliefs about grammar and translation* factor. One of the two items that loaded on this factor stated that it was important to learn grammar. While this appeared to be at odds with the student talks that described grammar learning as unimportant, it was possible that participants other than those interviewed in this study might consider grammar a focus of learning, since over 1,200 students responded to the questionnaire, whereas only 9 interviews were selected for detailed qualitative analysis.

While most learners did not talk specifically about how they developed the above-mentioned beliefs about what was important for learning and what should be the focus, it appeared that these students reflected on their own learning experience and used such reflections to support their arguments. In other words, what they learned from their own learning experience enabled them to describe what the process of learning was like and what was important or less important in terms of success or failure. Their beliefs about what should be the focus of learning, on the other hand, seemed to be more of a response to the learning difficulties they experienced and what they thought were the causes of such difficulties.

Integration and Discussion of Findings Regarding the Effect of Gender and Academic Major on Attitudes, Motivation, Learner Beliefs, and Strategy Use

This section briefly reiterates quantitative findings concerning the effect of gender and academic major on attitudes, motivations, learner beliefs, and strategy use. These are discussed in the context of already-published research.

The Effect of Gender on Language Learning Strategy Use, Attitudes, Motivations, and Learner Beliefs

Research question 4 concerned the effect of gender and academic major on language learning attitudes, motivations, beliefs about language learning, and language learning strategy use. Results of the latent means analyses were reiterated here for the ease of reading. Analyses of student responses to the attitudes and motivation scale revealed that significant gender differences existed in three attitude and motivation factors: (a) *orientation toward social and financial benefits*; (b) *intrinsic motivation*; and (c) *orientation toward competition and academic self-efficacy*. Significant gender differences also existed in the three belief factors: (a) *value beliefs about language and strategy use*; (b) *ability beliefs*; and (c) *value beliefs about grammar and translation*, and one strategy use construct: *self-directed practicing strategy use*.

These results were consistent with gender differences discussed in the studies reviewed in Chapter 2. As noted in Chapter 2, while some studies found no significant gender differences in overall strategy use or the use of specific type strategies (e.g., Osanai, 2001; Yin, 2004), other studies reported that the female students used specific types of strategies significantly more often than males. This lends support to the hypothesis that females, compared with males, might have a stronger social orientation and thus might display a greater need for social approval (Oxford & Nyikos, 1989; Oxford, Nyikos, & Ehrman; 1988; Wen & Johnson, 1997). Female students were also reported to value more the importance of self-management (Wen & Johnson, 1997). Gender differences on the three sets of factors found in this study were very similar: females, compared with males, were found to value more the social and financial benefits of learning English, and the importance of language and strategy use. Relative to males, females reported greater academic self-efficacy, and were more orientated toward

competition. Females also reported using self-directed practicing strategies significantly more often than males. Significant gender differences found on those constructs strengthened gender profiles reported in those studies, which lends support to the hypothesis that females are be more socially oriented and need more social approval than males.

The Effect of Academic Major on Attitudes, Motivations, Learner Beliefs, and Strategy Use

Latent means analyses performed on student responses to the three scales suggested that academic major significantly affected all six attitude and motivation factors, all three belief factors, and three of the strategy use factors. Compared with the humanities students, the science students, and engineering students combined, the medical students were more strongly oriented toward immediate language use, and had significantly greater amount of *intrinsic motivation*. They also valued more teacher guidance, and the importance of learning English and using strategies to learn English. They reported significantly stronger belief about their language ability and significantly higher use of self-directed practicing strategies and compensatory vocabulary-learning strategies.

One possible explanation for this finding was that the learning load that the medical students were subject to was higher in comparison with the students of the other academic majors. Medical students typically undertook a higher learning load which included the learning of medical English. The amount of learning they needed to process in order to develop competence in medical English might cause them to become more conscious of the use of learning strategies, more self-directed, and to pursue more opportunities for self-initiated language practice. This resulted in the differences noted.

The higher value that the medical students placed in teacher guidance relative to the other three groups combined suggested that their language teachers were viewed as role models whose guidance was carefully followed. This seemingly conflicts with the stronger self-directedness that the medical students displayed when compared to the other three groups combined. One possible explanation was that the teachers of the medical students might intentionally encourage them to pursue self-directed learning activities and thus potentially foster learner self-directedness. In other words, the teachers offered them guidance on how they could become more self-directed, without necessarily dictating specific activities they should pursue, as this would render the activities teacher-directed rather than self-directed. This might also be explained by the fact that the student interviews revealed their learning as consisting of two distinct dimensions: self-initiated learning versus classroom-based learning. It is possible that the medical students who displayed stronger *intrinsic motivation* compared to the other three groups combined carefully followed their teachers' guidance in the zone of classroom-based learning. They might at the same time actively purse self-directed learning activities in the zone of self-initiated learning. Thus, the coexistence of the value that the medical students placed in teacher guidance and their self-directedness seems rational and conceivable rather than contradictory.

Further, when compared with the science and engineering students combined, humanities students were more oriented toward social and financial benefits of learning English, and immediate language use. This result was consistent with the higher value that the humanities students placed in the importance of English and in using strategies to learn English, since the students who identified more with the social and financial

benefits of language learning and the practical use they could make of the language likely valued more the importance of the language and of using strategies to learn the language.

Moreover, humanities students, when compared to the science and engineering students combined, also had stronger belief about their ability to learn the language. They were also more intrinsically motivated, and used self-directed practicing strategies significantly more often. This result was expected as students who were more intrinsically motivated to learn English likely found language learning enjoyable. This, in conjunction with stronger ability beliefs, likely motivated them to engage in more self-directed learning activities. On the anxiety factor, however, the comparison went in the opposite direction: the science and engineering students had significantly greater amount of *language use anxiety* when compared with the humanities students. This was consistent with the result on *ability beliefs*, as an explicit statement about one's special ability to learn another language is a manifestation of self-confidence, which stands opposite to language use anxiety. Lastly, when compared with the engineering students, the sciences students displayed (a) significantly stronger *orientation toward social and financial benefits*, and (b) significantly higher *metacognitive strategy use*.

Various studies reported the effect of academic major on learners' strategy use (e.g., Gu, 2002; Oxford & Nyikos, 1989). As noted in Chapter 2, Oxford and Nyikos (1989) found that the students majoring in humanities/social science/education reported more frequent use of functional practice strategies and resourceful, independent strategies. The present study found that the humanities students, when compared with the science and engineering students combined, used self-directed practicing strategies significantly more frequently. This finding is consistent with the Oxford and Nyikos (1989) finding

concerning the effect of academic major on the students' strategies use. One possible explanation, as stated by Oxford and Nyikos (1989) was that this difference could possibly reflect the goal of learning. Humanities students, in comparison with the science and engineering students combined, might be more self-directed in seeking out opportunities to engage in language practice, and could be more driven by an explicit goal of attaining high-level language competence, as compared to science and engineering students who might have a different learning focus, such as mastery of domain-specific knowledge and skills.

Integration and Discussion of Findings Regarding Relationships among Motivations, Learner Beliefs, Strategy Use, and English Language Proficiency

This section briefly reiterates quantitative findings concerning the relationships among strategy use, motivations, learner beliefs, and English language proficiency. These are discussed in the context of already-published research.

Research question 5 concerned the relationships among attitudes and motivation, learner beliefs, strategy use, and English language proficiency. Latent variable path analyses performed on student responses to the three scales revealed a picture of the relationships among them. Of the five attitudes and motivation constructs discovered to directly impact strategy use constructs, *orientation toward competition and academic self-efficacy* directly influenced three out of the four strategy use constructs: (a) *social interactional strategy use*; (b) *metacognitive strategy use*; and (c) *self-directed practicing strategy use*. These results suggested that students who were more strongly oriented toward academic competition, and had greater self-efficacy beliefs about their ability to earn good grades on English tests were likely to use social interactional strategies,

metacognitive strategies, and self-directed practicing strategies significantly more often. They engaged more in learning activities that involved interaction with speakers of English, were more invested in planning and improving their learning, and practiced more often listening, reading, and writing through self-initiated activities. *Orientation toward competition and academic self-efficacy* also directly impacted English language proficiency, as was indicated by the direct path from it to English proficiency. This influence, however, was negative. The negative effect of *orientation toward competition and academic self-efficacy* was attributable to the emphasis on academic competition and grades. The students with this orientation tended to focus more on validating their superiority through test performance, and this might function as a distraction from their learning, resulting in worse performance on the national standardized tests.

Of the other motivation and belief factors, *ability beliefs* influenced two of the four strategy use factors: (a) *self-directed practicing strategy use*, and (b) *compensatory vocabulary-learning strategy use*. This suggested that the students who believed more strongly about themselves as having a special ability to learn English used self-directed practicing strategies more often, such as reading newspapers and magazines, and writing diaries and short stories in English. They also used compensatory vocabulary-learning strategies significantly more often, such as inferencing and circumlocution. *Ability beliefs* also directly and positively influenced English language proficiency, as was indicated by the direct path from this construct to English language proficiency.

The influence of *ability beliefs* on English language proficiency and on the two strategy use constructs was expected and justified as follows. The "*ability beliefs*" construct, i.e., the belief that one has a special ability for learning English, was in fact an

expectation of learning success and, hence, a manifestation of efficacy expectations. Efficacy expectations were identified as key variables associated with academic success (Bandura, 1997). High academic self-efficacy was found to link to academic performance, and self-regulatory strategy use (Bandura, 1997; Finney & Schraw, 2003). This belief, therefore, potentially motivated the students to use more self-directed practicing strategies as well as more compensatory vocabulary-learning strategies. Its influence on English language proficiency as identified in the present study paralleled the relationship between high academic self-efficacy and academic performance.

Of the other motivation and beliefs factors, *intrinsic motivation*, a much discussed motivational construct, directly and negatively influenced *social interactional strategy use*. This influence was attributable to sources of *intrinsic motivation* that obviated learner engagement in activities involving social interaction. *Intrinsic motivation* also directly and positively influenced English language proficiency, suggesting that the students who learned English because they enjoyed learning, and were thus self-motivated, had better test performance. These findings were consistent with existing literature that described one of the manifestations of self-motivation, relative to externally coerced motivation, as enhanced performance (Deci & Ryan, 2000; Ryan & Deci, 2000). *Orientation toward immediate language use*, another motivation construct, directly influenced *social interactional strategy use* and *self-directed practicing strategy use*. This influence was expected because the students who learned English for the purpose of using the language for immediate purposes such as reading English books and watching TV programs in English were very likely to self-initiate activities that allowed them to practice using English and to engage in social interactions.

Value beliefs about language and strategy use directly influenced *compensatory vocabulary-learning strategy use*. This construct, however, did not influence the use of other strategy use constructs, such as *social interactional strategy use*, *metacogntive strategy use*, and *self-directed practicing strategy use*. One reason for this was that its influence on these other strategy use constructs was outweighed by the influence of the other motivation and beliefs constructs that had a stronger impact, such as orientation toward competition and academic self-efficacy and ability beliefs, and thus became insignificant.

Of the four strategy use factors, the only one that directly influenced English language proficiency was *compensatory vocabulary-learning strategy use*. *Social interactional strategy use* did not influence English language proficiency. This was expected since the use of social interactional strategies most likely would lead to gains in oral language proficiency. The proficiency test, however, did not have a speaking component. *Metacognitive strategy use* did not directly influence English language proficiency. This was because the use of metacognitive strategies helped learners plan and regulate their own learning. These activities did not contribute directly to learning. Their effects might be mediated by skill-specific strategies, such as vocabulary-learning strategies, and grammar strategies. *Self-directed practicing strategies* did not directly influence English language proficiency possibly because these were general activities the outcomes of which might not get reflected in the students' test performance.

Implications for Educational Practice

The results of this study have manifold implications for educational practice. The strong causal relationships between motivation, beliefs, strategy use, and English

language proficiency stand as cogent evidence of the strong influence of the aforementioned learner variables in effects of learning, highlighting the important role that these variables play in the EFL context in China. These results, in conjunction with interview results, speak powerfully to the need for classroom pedagogy to explicitly integrate strategy instruction and to address the motivational aspect of learning for the purpose of motivating student involvement and enhancing learning effectiveness.

The results presented herein indicate an urgent need for implementing strategy instruction in regular language classrooms and a concomitant challenge. As was suggested by the interview data, the learners situated in classroom context and the broader context of schools, academic majors, regions, and the society are often diversified in that their language proficiency and skill acquisition are not necessarily developmentally parallel. The diversity is also marked by differential learning purposes and beliefs among learners about what language learning means and how language should be learned. A potential challenge, therefore, is for language teachers to tailor strategy instruction to the needs of individual learners. This challenge becomes especially real in the Chinese EFL context given that language teachers oftentimes need to meet the existing challenge of teaching large-size classes. Designing and delivering strategy-based language instruction to meet the needs of individual learners thus poses as an add-on challenge for language educators in China.

Well-designed learning strategy instruction is based on a thorough understanding of learners' current strategy use (e.g., Chamot, 2004, 2005; Oxford, 1990, 1996a, 1996b, 2001, 2002, forthcoming). This could be gained by using tools such as self-report questionnaire, e.g., the SILL, and recollective narratives such as learner autobiographies,

learner interviews, and learner diaries and biographies (Oxford, 1996a, forthcoming). Of particular relevance to learning strategy instruction in the EFL context in China is the knowledge of current models of language learning strategies, e.g., Oxford's (forthcoming) new two-tier system of strategies and tactics as reviewed in Chapter 3, and models of learning strategy instruction, e.g., Oxford's (forthcoming) culturally-relevant strategy assistance for self-regulation (CURSA-SR). CURSA-SR aims for the acquisition of language skills and advanced level language proficiency and accounts for the sociocultural context in which learners are situated (Oxford, forthcoming). It further emphasizes metacognition and fosters learner self-reflection (Oxford, forthcoming). In classroom-based strategy instruction, CURSA-SR could be implemented by directly teaching learning strategies in language classrooms. This could be complemented by the use of course materials and textbooks that emphasize strategies and autonomy, or general guidebooks on how to become a better language learner.

The strong influence of *intrinsic motivation*, *ability beliefs*, and *academic self-efficacy* on strategy use constructs pinpoints the need for English language instruction to relate to the learners in content as well as in methods and foster the development of learner interest in the language. These results suggest that teachers may benefit from employing a repertoire of motivational strategies in the language classrooms. Motivational talks and attribution beliefs training are potentially beneficial for learners who experience demotivation in critical transitional periods, as is indicated by interview data.

An emphasis on English tests and earning good grades, as revealed by the interview data, and the negative influence of *orientation toward competition and academic self-*

efficacy on English language proficiency and learning in general, suggest that such an emphasis, which stands antithetical to mastery-oriented learning, i.e., learning for the purpose of mastering English, might function as a distraction in the learning process. Classroom teachers, therefore, might benefit from directing learner attention on tests and examinations to developing language competence. This reorientation would help learners refocus on the inherent value associated with learning the language and on potential pathways leading toward advanced level English language proficiency.

Implications for Future Research

In exploring learner factors affecting the learning of English as a foreign language in China, the present study sought to explore and validate the factor structure that underlay the three scales used to measure the three learner factors, to validate the latent factors both quantitatively and qualitatively, and to disentangle and model the convoluted relationships among these latent constructs and English language proficiency. Both quantitative and qualitative data were presented, analyzed, and summarized in the preceding pages. From these data and interpretations, a number of implications for future research have emerged. These areas for continued research include (a) in-depth and focused research of students' skill-specific strategy use, (b) systematic examination of the variation in language learning attitudes and motivation, language learning strategy use, and beliefs about language learning by age, educational settings, and the broader sociocultural context, and (c) longitudinal research of the developmental trajectories of these variables and the contextual influences that shape these trajectories.

The interview data indicated that language learners tended to conceptualize language learning as the acquisition of specific language skills. Learners oftentimes focused much

attention on what learning system to use to facilitate the acquisition of individual skills, such as reading or listening. The present study shed light on what general strategies the students employed to improve a language skill. How learners' strategy use and their beliefs about language learning vary per se, and how this relates to their level of language performance and stage of language acquisition are yet to be further illuminated. It is, therefore, of vital importance for future research to identify and define strategy use in relation to a specific language skill, such as reading, listening, speaking, or writing, or in relation to an element identified to be crucial for language acquisition, such as vocabulary acquisition. Research on skill-specific strategy use, therefore, holds promise for enhancing skill acquisition and leading to advanced-level language competence.

The present study also indicated that the three learner variables were significantly affected by gender and academic majors. This pattern was corroborated by the major themes that emerged in the interviews, as the learners described how what motivated them to learn as well as what strategies they used to learn changed over time. These findings illustrate the promise of using both quantitative and qualitative methodology to explore and validate variation in the learner factors of interest. Future research is necessary to systematically examine patterns of variation that related to other crucial factors such as age, educational setting, and the broader social and cultural context. This line of research holds promise for generating rich, multidimensional, and contextualized definition of attitudes and motivation, learner beliefs, and strategy use. Interview data also highlight the necessity to integrate learner perspectives when conceptualizing and defining these learner factors.

The interview data additionally suggested that the students' prior and current attitudes, motivation, beliefs about language learning, and strategy use underwent temporal shifts over time. The patterns of change varied on an individual basis as some learners were able to sustain or strengthen their interest and motivation over time while others experienced amotivation or demotivation in critical transitional stages. More focused examination of this developmental pattern on an individual basis thus represents an important focus for future research. In exploring these patterns, longitudinal studies that follow students from secondary school to college offer great potential for illuminating the interplay of contextual influences and individual characteristics that contribute to formation of these patterns.

Conclusions

This study draws several very important conclusions regarding factors affecting the learning of English as a foreign language in the EFL context in China. First, four broad categories of general strategies were used by learners in this context. These were employed in two seemingly disparate yet interrelated learning dimensions or episodes: classroom-based learning, and self-initiated learning. Learning and strategy development was shaped by the English curriculum and resulting test requirement as well as by the social context in which classroom teachers and peers were the key players. In these dimensions and episodes, and under these influences, strategy use was characterized by temporality, by varying amount of learner initiatives, and by its relevance for specific language skills. Learning and strategy use was thus social by nature, dynamic, and constantly changing.

This study additionally shed light on attitudes, motivations, and learner beliefs in this context. English language learning was primarily motivated by the usefulness of English, by personal interest and enjoyment of learning, by peer competition, and by test requirement. Like strategy use, attitudes and motivation also changed over time, which might result from changes that occurred in the learning environment. Beliefs, in this context, appeared to consist of three distinct dimensions. Beliefs also displayed as divergent opinions about what should be the learning focus and dichotomized views about what caused success or failure. Some attributed it to efforts, whereas the other view attributed it to innate ability.

Finally, in this context, beliefs and motivations were strong influences in learners' strategy use. *Ability beliefs*, *orientation toward competition and academic self-efficacy*, *intrinsic motivation*, and *compensatory vocabulary-learning strategy use* directly influenced English language proficiency.

Summary of Discussion and Implications

This chapter presented the summary and discussions of the results of the five research questions concerning (a) structure of the students' language learning strategy use, (b) structure of the students' language learning attitudes and motivations, (c) structure of the students' beliefs about language learning, (d) the effect of gender and academic major on language learning attitudes, motivations, language learning strategy use, and beliefs about language learning, and (e) the relationships among language learning motivations, beliefs about language learning, language learning strategy use, and English language proficiency. It also examined manifestations of and patterns of variation in the three learner variables, as revealed by the interview data, and potential factors contributing to

the variations. This chapter concluded with recommendations for classroom pedagogy and future research and the summary of conclusions.

Appendices

Appendix 1

Informed Consent Forms

Initials_____
Date_____

INFORMED CONSENT FORM (Questionnaire)

Project Title	Investigating Learner Attitudes and Motivation, Learner Beliefs, and Learning Strategies in the English as a Foreign Language (EFL) Context in China
Why is this research being done?	*This is a research project being conducted by Yin, Chengbin Ph.D. Candidate and Dr. Rebecca Oxford in the Department of Curriculum and Instruction at the University of Maryland, College Park. We are inviting you to participate in this research project because you are at least 18 years of age and you are a university English learner in China. The purpose of this research is to understand factors that influence English language learning in China. These factors include: your learning background, your attitude, motivation, and beliefs, and how you learn English.*
What will I be asked to do?	*The procedure involves responding to a questionnaire about learner factors. It has four parts: Part A Learner Background; Part B Language Learning Attitude and Motivation; Part C Language Learning Beliefs; Part D Language Learning Strategies. Most of the items are multiple-choice items, but a few are completion items. You will read each statement and give you response to it. For example, You will read this statement: "I use contextual clues to understand the meaning of new English words in reading." The questionnaire will be administered during regular class time and will take approximately 50 minutes to complete.*
What about confidentiality?	*We will do our best to keep your personal information confidential. To help protect your confidentiality: (1) your name will not appear on the questionnaire; (2) a code will be placed on the questionnaire; (3) through the use of an identification key, the student investigator will be able to identify your questionnaire; (3) only the student investigator will have access to the identification key; (4) questionnaires will be stored in a secure cabinet at an office inside the student investigator Yin, Chengbin's residence in Shanghai and will be destroyed by shredding five years later. If we write a report or article about this research project, your identity will be protected to the maximum extent possible.* *Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities only if you or someone else is in danger or if we are required to do so by law.*
What are the risks of this research?	*There are no known risks. You will be doing the same type of activities you often do in your classroom: answering written multiple-choice or completion questions.*

Initials_____
Date_____

What are the benefits of this research?	*The benefits to you include: (1) you may develop an awareness of your own motives to learn English, beliefs about learning English, and learning strategies; (2) you may learn to reflect on your own learning experience and learning processes; (3) you could understand more about yourself as an English learner. This might help improve your English learning.*
Do I have to be in this research? Can I stop participating at any time?	*Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this study, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.*
What if I have questions?	*This research is being conducted by Yin, Chengbin PhD Candidate and Dr Rebecca Oxford at the University of Maryland, College Park. If you have any questions about the research study itself, please contact Yin, Chengbin or Dr Rebecca Oxford at: 2311 Benjamin Building, University of Maryland College Park, College Park, MD 20742, USA or phone number: 1-301-405-8157. Yin Chengbin's e-mail address is: yin@wam.umd.edu. Dr. Rebecca Oxford's email address is: roxford@umd.edu.* If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: **Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742; (e-mail) irb@deans.umd.edu; (telephone) 301-405-0678**
Statement of Age of Subject and Consent	*Your signature indicates that:* *you are at least 18 years of age;* *the research has been explained to you;* *your questions have been answered; and* *you freely and voluntarily choose to participate in this research project.*
NAME OF PARTICIPANT	
SIGNGUARE OF PARTICIPANT	
DATE	

Initials_____
Date_____

INFORMED CONSENT FORM (Interview)

Project Title	Investigating Learner Attitude and Motivation, Learner Beliefs, and Learning Strategies in the English as a Foreign Language (EFL) Context in China
Why is this research being done?	*This is a research project being conducted by Yin, Chengbin PhD Candidate and Dr Rebecca Oxford in the Department of Curriculum and Instruction at the University of Maryland, College Park. We are inviting you to participate in this research project because you are a university English learner in China. The purpose of this research is to understand factors that influence English language learning in China. These factors include: your learning background, your attitude, motivation, and beliefs, and how you learn English.*
What will I be asked to do?	*The procedure involves participating in an interview during which you will be responding to questions about yourself as an English learner. The interview will be conducted in Chinese at an office in your department and will take approximately 20 minutes. It will be audiotaped. Audiotaped interviews will be transcribed, translated into English, and aggregated with other interview data for further analysis. Interview data including the tapes, transcriptions, and translated transcriptions will be stored in a secure cabinet at an office inside the student investigator Yin Chengbin's residence in Shanghai, China and will be destroyed five years later. Tapes will be destroyed by erasure, and interview transcriptions and translated transcriptions will be destroyed by shredding.* *____ I agree to be audiotaped during my participation in the interview.* *____ I do not agree to be audiotaped during my participation in the interview.*
What about confidentiality?	*We will do our best to keep your personal information confidential. To help protect your confidentiality: (1) your name and the name of your university will not appear on the interview tapes; (2) a code will be placed on your interview tapes; (3) a pseudonym will be used to refer to you in the interview transcriptions and translated interview transcriptions; (4) through the use of an identification key, the student investigator will be able to link your interview to your questionnaire; (5) only the student investigator will have access to the identification key. If we write a report or article about this research project, your identity will be protected to the maximum extent possible.* *Your information may be shared with representatives of the University of Maryland, College Park or governmental authorities only if you or someone else is in danger or if we are required to do so by law.*

Initials_____
Date_____

What are the risks of this research?	*There are no known risks. You will be participating in an interaction with an experienced Chinese teacher of English.*
What are the benefits of this research?	*The benefits to you include: (1) you may develop an awareness of your own motives to learn English, beliefs about learning English, and learning strategies; (2) you may learn to reflect on your own learning experience and learning processes; (3) you could understand more about yourself as an English learner. This might help improve your English learning.*
Do I have to be in this research? Can I stop participating at any time?	*Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.*
What if I have questions?	*This research is being conducted by Yin, Chengbin PhD Candidate and Dr Rebecca Oxford at the University of Maryland, College Park. If you have any questions about the research study itself, please contact Yin, Chengbin or Dr Rebecca Oxford at: 2311 Benjamin Building, University of Maryland College Park, College Park, MD 20742, USA or phone number: 1-301-405-8157. Yin Chengbin's e-mail address is: yin@wam.umd.edu. Dr. Rebecca Oxford's email address is: roxford@umd.edu.* If you have questions about your rights as a research subject or wish to report a research-related injury, please contact: **Institutional Review Board Office, University of Maryland, College Park, Maryland, 20742; (e-mail) irb@deans.umd.edu; (telephone) 301-405-0678**
Statement of Age of Subject and Consent	*Your signature indicates that:* *you are at least 18 years of age;* *the research has been explained to you;* *your questions have been answered; and* *you freely and voluntarily choose to participate in this research project.*
NAME OF PARTICIPANT	
SIGNGUARE OF PARTICIPANT	
DATE	

Appendix 2

Instructions for Administering and Completing the *Language Learning Questionnaire* (Yin, 2005)

Dear Instructors,

Thank you very much for administering this questionnaire to your students.

The Language Learning Questionnaire consists of four parts: *Part A: learner background* (5 minutes); *Part B: Language Learning Attitudes and Motivation Scale* (15 minutes); *Part C: Beliefs about Language Learning Scale* (10 minutes); and *Part D: Language Learning Strategy Use* (20 minutes). The questionnaire takes approximately 50 minutes to complete.

It is designed to understand: (a) what learners' language learning attitudes and motivational orientations are; (b) what beliefs they hold about language learning; (c) what general strategies learners use to learn English; (d) what difficulties they encounter in learning English.

The consent form informs the students of the purpose and procedures, confidentiality, risks, benefits, and the contact information. Students should sign the form if they agree to participate in the study.

There are two types of items in the questionnaire: multiple-choice items and completion items. Students will fill out their background information in *Part A: Learner Background*. Items in Part B, Part C, and Part D are statements about learning attitudes and motivation, learner beliefs, and language learning strategy use. The five Responses to the items are presented on a five-point Likert scale. Please ask your students to circle the response that best describes themselves as an English language learner.

For example: I enjoy hard work.

(1) completely true

(2) somewhat true

(3) neither true or untrue

(4) somewhat untrue

(5) completely untrue.

If your students think this statement is completely true and that he or she enjoys hard work, he or she should circle (1) completely true.

Please give the consent form, instructions for participants, and the questionnaire to your students and explain briefly what the parts are in this questionnaire, what the purposes are for them to complete it, and how they will be filling out the questionnaire. Please advise them to read the instructions and the consent form carefully before they start to complete the questionnaire.

Thank you again for your assistance!

Dear Students,

Thank you very much for your willingness to fill out the *Language Learning Questionnaire* (Yin, 2005).

This questionnaire (Yin, 2005) consists of four parts: *Part A: learner background* (5 minutes); *Part B: Language Learning Attitudes and Motivation Scale* (15 minutes); *Part C: Beliefs about Language Learning Scale* (10 minutes); and *Part D: Language Learning Strategy Use* (20 minutes). It will take approximately 50 minutes to complete this questionnaire.

It is designed to understand: (a) what learners' language learning attitudes and motivational orientations are; (b) what beliefs they hold about language learning; (c) what general strategies learners use to learn English; (d) what difficulties they encounter in learning English.

In Part A of this questionnaire you will be filling out information about yourself as an English language leaner. Part B, Part C, and Part D are statements about you as an English language learner. We would like to ask you to help us by responding to these statements. The five responses to the items are presented on a five-point Likert scale. Please circle the response that best describes you as an English language learner.

For example: I enjoy hard work.

(1) completely true

(2) somewhat true

(3) neither true or untrue

(4) somewhat untrue

(5) completely untrue.

If you think this statement is completely true and you enjoy hard work, you should circle (1) completely true.

Again, thank you very much for completing this questionnaire!

Appendix 3

The Language Learning Questionnaire (Yin, 2005)

Language Learning Questionnaire (Yin, 2005)

Part A: Learner Background

1. Student ID: _____ 2. Year of Birth: 19_____

3. Gender (please check): ☐ male ☐ female

4. University attended (full name): _____

5. Semester and year in which your undergraduate study started:

(semester) _____ (year) _____

6. Name of your school: _____

7. Name of your program: _____

8. Grade Level (please check): ☐freshman ☐sophomore ☐junior ☐ senior

9. Year in which you started to learn English: _____

10. If taken, English score on the College English Test Band Four: _____

11. If taken, English score on the Graded Test for English Majors Grade Four: _____

Part B: Language Learning Attitudes and Motivation Scale

		Never true of me				Always true of me
1.	I learn English so that I can get to know new people from different parts of the world.	1	2	3	4	5
2.	I would like to spend some time abroad.	1	2	3	4	5
		Strongly Disagree				Strongly agree
3.	English will help me to know various cultures and peoples.	1	2	3	4	5
4.	Being able to speak English will lift my social status.	1	2	3	4	5
5.	English proficiency will bring me financial benefits.	1	2	3	4	5
		Never true of me				Always true of me
6.	I learn English now because I may need it later for jobs and studies.	1	2	3	4	5
7.	I learn English so that I can understand English-speaking films, videos, TV or radio.	1	2	3	4	5
8.	I learn English so that I can understand English pop music.	1	2	3	4	5
9.	I learn English so that I can read books, newspapers, or magazines written in English.	1	2	3	4	5
10.	I learn English mainly to satisfy the university language requirement.	1	2	3	4	5
11.	I really enjoy learning English.					
12.	I will learn English even if it is not a required course.	1	2	3	4	5
13.	I enjoy using English outside of class whenever I have a chance.	1	2	3	4	5
14.	I really don't like learning English.	1	2	3	4	5
15.	Getting a good grade in this class is the most important thing for me right now.	1	2	3	4	5
16.	I want to learn this language because it is important to show my ability to others.	1	2	3	4	5
17.	Competing with other students gives me the strength to learn better.	1	2	3	4	5
18.	When coursework is difficult, I either give up or only study the easy parts.	1	2	3	4	5
19.	I frequently think over what we have learnt in my English class.	1	2	3	4	5
20.	To be honest, I very often skimp on my English homework.	1	2	3	4	5

Part B: Language Learning Attitudes and Motivation Scale (Continued)

	Never true of me				Always true of me
21. I can truly say that I put my best efforts into learning English.	1	2	3	4	5
22. I am certain that I can master the four skills in English.					
23. I believe that I will receive excellent grades on English tests.	1	2	3	4	5
24. I am worried about my ability to learn English well.	1	2	3	4	5
25. I get nervous and confused when I am speaking in my English class.					
26. I always feel that the other students speak English better than I do.	1	2	3	4	5
27. I never feel quite sure of myself when I am speaking English in our English class.	1	2	3	4	5
28. I don't worry about making mistakes when speaking in front of this class.	1	2	3	4	5
29. My English instructors' guidance is important for me to improve my English.	1	2	3	4	5
30. My English instructor is a role model for me.	1	2	3	4	5
31. I figure out my own way to learn English rather than following all of my instructor's advice.	1	2	3	4	5
32. My English instructor may not have answers to all my questions.					

Note: This scale was adapted from the motivation scale reported in the Schmidt and Watanabe (2001) study.

Part C: Beliefs about Language Learning Scale

		Not difficult at all				Very Difficult
1.	English is _____.	1	2	3	4	5
		Strongly Disagree				Strongly agree
2.	Chinese students are good at learning English.	1	2	3	4	5
3.	It's important to speak English with an excellent pronunciation.	1	2	3	4	5
4.	It's important to know about English-speaking cultures in order to speak English.	1	2	3	4	5
5.	You shouldn't say anything in English until you can say it correctly.	1	2	3	4	5
6.	It is easier for someone who already speaks a foreign language to learn another one.	1	2	3	4	5
7.	People who are good at mathematics or science are not good at learning English.	1	2	3	4	5
8.	It's best to learn English in an English speaking country.	1	2	3	4	5
9.	It's Ok to guess if you don't know a word in English.	1	2	3	4	5
10.	If someone spent one hour a day learning a language, how long will it take him/her to become fluent?	1.1 year 3.3 years 5. Never.		2.2 years 4.4 years		
		Strongly Disagree				Strongly agree
11.	I have a special ability for learning English.	1	2	3	4	5
12.	The most important part of learning English is learning vocabulary words.	1	2	3	4	5
13.	It is important to repeat and practice a lot.	1	2	3	4	5
14.	Women are better than men at learning foreign languages.	1	2	3	4	5
15.	People in China feel that it is important to learn English.	1	2	3	4	5
16.	If beginning students are permitted to make errors in English without correction, it will be difficult for them to speak correctly later.	1	2	3	4	5
17.	The most important part of learning English is to learn the grammar.	1	2	3	4	5
18.	It's easier to understand than speak English.	1	2	3	4	5
19.	It's important to practice with tapes or cassettes.	1	2	3	4	5
20.	The most important part of learning English is learning how to translate from my native language.	1	2	3	4	5

Part C: Beliefs about Language Learning Scale (Continued)

	Strongly Disagree				Strongly agree
21. People who speak more than one language are very intelligent.	1	2	3	4	5
22. I want to learn to speak English well.	1	2	3	4	5
23. Everyone can learn to speak a foreign language.	1	2	3	4	5
24. It's easier to read and write English than to speak and understand it.	1	2	3	4	5
25. Language learning involves a lot of memorization.	1	2	3	4	5

Note: This scale was adapted from the *Beliefs About Language Learning Inventory* (BALLI; Horwitz, 1988).

Part D: Language Learning Strategy Use Scale

		Never				Almost always
1.	I think of relationships between what I already know and new things I learn in English.	1	2	3	4	5
2.	I use new English words in a sentence so that I can remember them.	1	2	3	4	5
3.	I connect the sound of a new English word and an image or picture of the word to help me remember the word.	1	2	3	4	5
4.	I use vocabulary books and/or electronic dictionaries to remember new English words.	1	2	3	4	5
5.	I say or write new English words several times.	1	2	3	4	5
6.	I review English lessons often.	1	2	3	4	5
7.	I remember new English words or phrases by remembering the context in which they appear, such as in a textbook article, a news report, or on a street sign.	1	2	3	4	5
8.	I try to talk like native speakers.	1	2	3	4	5
9.	I watch movies spoken in English or TV programs spoken in English, such as cartoons and news reports.	1	2	3	4	5
10.	I read newspapers, magazines, and books in English.	1	2	3	4	5
11.	I write diaries or short articles in English.	1	2	3	4	5
12.	I listen to radio programs spoken in English and English songs played in tapes or CDs.	1	2	3	4	5
13.	I find the meaning of an English word by dividing it into parts that I understand, such as roots, prefixes, and suffixes.	1	2	3	4	5
14.	I try not to translate word-for-word.	1	2	3	4	5
15.	I make summaries of information that I hear or read in English.	1	2	3	4	5
16.	To understand unfamiliar English words, I make guesses.	1	2	3	4	5
17.	When I can't think of a word during a conversation in English, I use gestures.	1	2	3	4	5
18.	I make up new words if I do not know the right ones in English.	1	2	3	4	5
19.	I read English without looking up every new word.	1	2	3	4	5
20.	I try to guess what the other person will say next in English.	1	2	3	4	5

Part D: Language Learning Strategy Use Scale (Continued)

	Never				Almost always
21. If I can't think of an English word, I use a word or phrase that means the same thing.	1	2	3	4	5
22. I try to find as many ways as I can to use my English.	1	2	3	4	5
23. I notice my English mistakes and use that information to help me do better.	1	2	3	4	5
24. I try to find out how to be a better learner of English.	1	2	3	4	5
25. I plan my schedule so I will have enough time to study English.	1	2	3	4	5
26. I look for opportunities to read as much as possible in English.	1	2	3	4	5
27. I have clear goals for improving my English skills.	1	2	3	4	5
28. I think about my progress in learning English.	1	2	3	4	5
29. I try to relax whenever I feel afraid of using English.	1	2	3	4	5
30. I encourage myself to speak English even when I am afraid of making a mistake.	1	2	3	4	5
31. I give myself a reward or treat when I do well in English.	1	2	3	4	5
32. I tell myself that there is always more to learn when learning English.	1	2	3	4	5
33. I notice if I am tense or nervous when I am studying or using English.	1	2	3	4	5
34. I talk to someone else about how I feel when I am learning English.	1	2	3	4	5
35. If I don't understand something in English, I ask the other person to slow down or say it again.	1	2	3	4	5
36. I ask my English teacher or fluent speakers of English to correct me when I talk.	1	2	3	4	5
37. I practice English with other students.	1	2	3	4	5
38. I ask for help from my English teacher or my friends.	1	2	3	4	5
39. I go to an English corner or English saloon and talk with others in English there.	1	2	3	4	5
40. I try to learn about the culture of English speakers.	1	2	3	4	5
41. I like to follow a schedule.	1	2	3	4	5
42. I like to make an outline before I start writing.	1	2	3	4	5
43. I like to learn things that are immediately useful.	1	2	3	4	5
44. I have a messy desk or room.	1	2	3	4	5

Part D: Language Learning Strategy Use Scale (Continued)

	Never				Almost always
45. I have many creative ways to solve a problem.	1	2	3	4	5
46. I like to think of new possibilities.	1	2	3	4	5
47. I find English reading materials on the Internet.	1	2	3	4	5
48. I use Internet chatrooms or messengers to chat in English.	1	2	3	4	5
49. I write emails in English.	1	2	3	4	5
50. I listen to Internet news spoken in English or download English songs from Internet.	1	2	3	4	5

Note: This scale was adapted from the *Strategy Inventory for Language Learning* (SILL) version 7.0 (Oxford, 1990).

Appendix 4

Interview Protocol

Investigating Learner Variables in the FFL Context in China

Time: _____
Date: _____
Place: _____
Interviewee Student ID: _____

The purpose of this interview is to understand how the following learner factors, (1) attitude and motivation,(2) learner beliefs, (3) learning strategies, manifest in the Chinese English as a foreign language (EFL) context and how they are developed in this context.

Questions:

1. <u>English learning experience:</u>
   a) How long have you been learning English?
   b) How did you learn English before starting your undergraduate program?
2. <u>Liking of learning English:</u>
   a) Do you like learning English?
   b) Why or why not?
3. <u>Reasons for learning English:</u>
   Why are you learning English?
4. <u>Importance of learning English:</u>
   a) Is English important to you?
   b) Why or why not?
5. <u>Current language learning strategies:</u>
   a) How do you learn English?
   b) What specific techniques and methods do you think are very useful in learning English?
   c) How do you know that they are useful or not useful?
   d) How did you find out about those methods to learn English?
6. <u>Other strategies:</u>
   a) What are the other ways that you know that could be used to learn English but you do not use them?
   b) How did you find out about them?

c) Do you think that they might be useful?

d) Why or why not?

7. Beliefs about language learning:

a) What do you think learning English is all about? In other words, what does learning English mean to you?

b) (If the students needs a prompt) For instance, do you think that learning English is remembering as many new words as possible?

c) Please explain.

8. Learning difficulties:

a) What do you find very difficult about learning English?

b) Please explain.

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