Motivation to Read and Thoughtful Literacy in an English as Second or Foreign Language Context

A DISSERTATION
SUBMITTED TO THE FACULTY OF THE GRADUATE SCHOOL
OF THE UNIVERSITY OF MINNESOTA
BY

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IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF
DOCTOR OF EDUCATION

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May 2013

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Acknowledgements

"When I let go of what I am, I become what I might be."
Lao Tzu

No dissertation is an easy path, however the Department of Education at the University of Minnesota-Duluth has offered me all the things needed to overcome my limitations and all obstacles from the first day I started my doctoral program four years ago. One and all, they gave a frightened student from a distant land a place to call home.

Dr. Frank Guldbrandsen has been my teacher and mentor in all manner of encouraging, inspiring, questioning, sharing and Googling together. I want to thank him, in particular, for his gentle and patient way of providing guidance.

I am especially grateful to my supervisor, Dr. Jean Stevenson, for her exceptional wisdom, support, guidance and encouragement: for being an outstanding educator.

I owe an immense debt of gratitude to another two doctoral committee members, Dr. Insoon Han and Dr. Aydin Durgunoglu, for their scholarship, especially in the field of quantitative study which is much like learning another foreign language. They have guided my uncertain steps and provided much needed inspiration throughout my work. This project could not have been completed without their constructive feedback and prompt replies to my many questions and insightful comments on all drafts. I could not have constituted a better committee to guide me through this learning process.

A special thank you goes to Dr. Joyce Strand for her high expectation of me and unfailing confidence in me. She was like a warm coat in the cold Minnesota winter, protecting and supporting me providing a safe and nurturing home at UMD.

I would also like to thank my American friends, Larry Simons and Tom Moran, for their support and professional editing of my English on all drafts.

No one could ask for a more generous heart and guiding influence than has Tony Applegate been for me. His life's work became my inspiration and our Skype conversations my motivation to focus on the questions. He will never know how much the kindness and attention he extended to an unknown graduate student meant in shaping this thesis.

Of course, this research would not have been possible without the cooperation of a great number of the students who volunteered to take part in the study. I am so very fortunate that they trusted me enough to share their self-revealing thoughts with me. The time intensive collecting, recording and translating the data was made much easier with the assistance of my graduate student Feng Huang.

And finally, to my husband, my parents and my sisters-in-law, for believing in me, and for making sure that I could devote all the time required to complete this work, thank you very much. My gratitude also goes to my son, Haoyan, for being so accepting and loving despite my absences, physical and otherwise. He is my inspiration.

Dedication

"The book to read is not the one which thinks for you, but the one which makes you think"
James McCosh

To people who are reading and who will read.

Abstract

Traditionally, English reading has been thought of as an approach used to acquire language proficiency rather than as a way to understand information and elicit thoughtfulness. Although a positive correlation has been found between motivation and engagement, no study has yet been undertaken to discover the relationship between motivation and Thoughtful Literacy often referred to as "depth of reading" in an English as second or foreign language (L2) context. This research study is the first academic inquiry to address the predictive power of reading motivation with respect to Thoughtful Literacy in Chinese L2 learners at the collegiate level. This research project is also one of a very few L2 acquisition studies that addresses the issue of depth of reading. The study utilized quantitative methods by which reading motivation and Thoughtful Literacy were quantified using data gathered from responses to two questionnaires administered to the project's subjects. Multiple regression analyses were conducted to establish a model and identify the relationships between motivational variables and the inclination of L2 readers to respond thoughtfully to an English text. The multiple regression model included four predictors: the Intrinsic Value of English Reading, the Importance of English Reading, the Self-Efficacy of English Reading and the Extrinsic Value of English Reading. Intrinsic Value of English Reading was also found to have more predictive power on Higher Order Comprehension than Text-Based Reading while Extrinsic Value of English Reading was found to have more predictive power on Text-Based Reading than Higher Order Comprehension. The results of the study revealed that the

different motivation constructs have impact on different levels of reading comprehension. Intrinsic Value and Importance of English Reading were also found to be the two most significant predictors of the four included in the model. These findings might subsequently encourage L2 educators to reevaluate instructional practices to enable them to more effectively inspire and motivate their L2 students.

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Chapter 1 Introduction

In China, within the field of English Language Teaching (ELT), academic interest in how Chinese learn is rising. One of reasons is, with the recent rapid economic development in China, more Chinese are studying at Western universities because their families can now afford the expense of studying abroad. China has become the single greatest source of international students in the U.S. According to the Open Doors 2011 report on college demographics for international students, 157,558 students came from China (an increase of 23 percent from the previous year) to attend a U.S. college for the 2010-2011 school year. Many Western universities are involved in helping Chinese students achieve their academic goals, including improving their English language proficiency.

Currently, English is the most widely learned foreign language in China. It is considered a way to enable China to join the trend toward globalization and to strengthen its economy. It is estimated that there were 200-300 million Chinese students studying English (Yang, 2006). Undoubtedly, China has the largest population of English as second or foreign language (L2) learners. It is crucial for educators and institutions to understand Chinese students and their learning processes in order to provide more efficient assistance.

Although L2 literacy in China consists of four important language skills: reading, writing, listening and speaking, the teaching of English in China at the university level has been focused on reading literacy since the first comprehensive College English Teaching Syllabus was published in 1980. Following a nation-wide

discussion of how to teach in English in 1980s and 1990s in China, the syllabus has been modified into the National College English Teaching Syllabus (NCETS) of 1999. Reading literacy was still retained as the fundamental language teaching priority in college English classrooms. Dong (2003) supported reading literacy as the main source for language learners to obtain an authentic and rich language exposure. It was believed that while listening can be an alternative source, reading had proved more reliable and efficient. The written text can be reread and studied, with the aid of a dictionary, while spoken language is difficult to capture and retain. Without a command of reading proficiency in English, speaking and listening are "water without a source, tree without roots—things without solid foundation" (Dong, 2003, p. 5). Some scholars (Dong, 2003; Li, 2003; Song, 2006;) argued that since English is a foreign language in China, reading is the most efficient, useful and relatively painless approach to acquiring the basic structure and vocabulary of the language.

Consequently, among the four language skills, reading has long been regarded as the strongest strength of Chinese L2 learners. However, according to 2010 data published by International English Language Testing System (IELTS), the world's leading test of English proficiency, the performance of Chinese academic test-takers (on a 9 point scale) were: listening 5.7; reading 5.9; writing 5.2; speaking 5.3 (IELTS, 2010). The reading score is merely at 30% percentile when compared to other students from 40 different countries. Considering that reading literacy has been the focus of L2 teaching in China, by any measurement the performance in this assessment is unsatisfactory.

English Reading Assessment and Teaching in China

In the test-driven educational system we find in China, the government uses the College English Test (CET), designed in the late 1980s, as a measure of students' overall English proficiency. It is designed to improve the teaching and learning of English as a foreign language in China. The purpose of the CET is to examine the English proficiency of undergraduate students in China and provide an accurate assessment to the language teaching and learning prescribed in College English Curriculum Requirements of 2004 (Syllabus for College English Test 4, 2006). Since it was first offered in 1987, the CET has attracted an increasing number of test takers every year until there were 13 million in 2006. The CET is a test battery including the written tests of Band 4 (CET-4) in which certificate-holders have reached the English level of non-English major undergraduate students, and "Band 6" (CET6), in which the certificate-holders have reached the English level of non-English major postgraduates, and CET Spoken English Test (CET-SET).

Similar to American schools, when it comes to assessing the reading comprehension of their students (Applegate, Quin, & Applegate, 2002; Barr & Dreeben, 1991; Goldenberg, 1992), Chinese teachers tend to use a large percentage of questions that require merely factual recall of information included in text. The reading section of CET-4 is intended to assess students' ability to understand English in a written format and contributes 35% to the total score.

The purpose of Skimming and Scanning of the CET-4 assessment is to evaluate the efficiency of acquiring information in a limited time. The rationale of this

Table 1

Reading Assessment Format in CET-4 of China

Section	Formats	Number of Passage	Percentage of Total Score
Reading in Depth	Multiple choice questions Banked cloze Short answer questions	3 short passages	25%
Skimming and Scanning	Multiple choice questions True or false Sentence completion	1-2 long passages	15%

assessment is to determine whether students can locate and identify selected information in the passages. To successfully complete this portion requires a grasp of a main idea of the passage and a recall of facts and details.

Reading in depth is assumed to examine the students' depth of understanding about the reading. However, Paxton (2000) criticized that multiple choice tests measure knowledge and recall only, never ability to analyze and understand, or deep thinking.

The banked cloze test requires students to select one word for each blank (10 blanks in total) from a list of 15 choices given in a word bank following the passage. The test-takers must determine the English sentence structures and be familiar with conjunctions and lexical cohesion. This measurement tool determines understanding of the vocabulary in relationship to its embedded, comprehensive and context-dependent nature. A test-taker has to consider any word in terms of its meaning, collocations, its relationship within the context of the sentence etc.

The short answer question is a format that can be used to test Thoughtful Literacy, but 70% percent of questions in CET-4 are about recalling factual details instead of drawing inferences or answering questions requiring critical thinking.

"What is tested in the CET reading comprehension section is mainly careful reading for main ideas and important details" (Jin & Yang, 2006, p.28). Although the test specifications promise to assess higher-order reading skills including understanding and determine, the test-takers' understanding of writings' purpose and main ideas which require the making of reasonable judgments and inferences on the passage content as well as understanding logic relationships ascertainable only within context, nowhere within the present format are these promised assessments delivered.

For an undergraduate student, having a CET-4 certificate indicates the prerequisite skills in English to successfully obtain employment, a chance to further his/her education and upward social mobility. For L2 teachers, the passing rate of their students, in some institutions, has become an indicator of teaching quality and a determinant for receiving a raise. Therefore, in the education system, the tests are regarded as the objective because teachers want to raise the students' scores and their passing percentile. The inevitable consequences of this reality is that reading instruction in the classroom remains as a "explanation-centered" function focusing on the main ideas and text-entailed factual information. Teachers become the owners of factual knowledge while students become merely the containers. The process of teaching and learning has become a process of dictating actively and receiving passively. It is also misleading to attempt explanations of complex lexical or phrasal meanings without fostering higher-order reading skills. Real and deep understanding can only be taught by teaching the methods of reaching inferential meaning of reading materials and making critical evaluations of it.

Purpose of the Study

Edward Fry (1965) claimed that acquisition of grammar, phrases and vocabulary requires little interpretation or judgment. Traditionally, reading is focused on decoding words and analyzing text by answering specific comprehension questions both orally and in writing. In L2, reading is an important approach to acquire vocabulary, sentence structure and discourse organization. L2 reading literacy is a way to enhance the language proficiency rather than to cultivate thinking skills. Grabe and Stoller (2002) proposed a new view of L2 reading and classified four levels of reading literacy, 1) to get general understanding; 2) to search for information when a reader scans the text for some specific information and skims for a general idea; 3) to learn when a reader needs to acquire a considerable amount of information from a text; and 4) to integrate information when a reader evaluates, composes, selects and critiques information being read.

Additionally, according to Bloom's learning taxonomy (1956), there are six levels of learning: knowledge, comprehension, application, analysis, synthesis, and evaluation. This is a continuum from lower order thinking to higher order thinking skills. Knowledge acquisition from reading is a lower level learning. On a higher-level of learning, the reader should be able to get subjective information, i.e. the meaning of the story and unstated ideas, to analyze the content and to anticipate development.

The newest English Curriculum Standard (ECS) in China, for primary and secondary schools (Ministry of Education, 2003), also echoed Grabe and Stoller's

idea saying language is not merely a tool for communication, it is also a means of promoting thinking and learning and a tool for encouraging social participation. The goal of learning a foreign language cannot be limited to mastering the knowledge of and skills in the foreign language. Like other school subjects such as mathematics, the arts and physical education, foreign language learning must be part of the overall development of positive attitudes and values meant to enrich their life experience, broaden their world vision and enhance critical thinking skills. (Ministry of Education, 2003) Additionally, ECS also describes what a senor high graduate should acquire about English reading literacy. He/she should be able to acquire the information from different English media, identify the different opinions of authors, recognize the various genres, understand the general ideas and characters of narrative passages, understand the instructions of common merchandise and accomplish English reading amounting to about a total of 360,000 words outside the classroom, which is a rich source to develop language proficiency and thinking skills. The vocabulary size acquired by a student should be no less than 3,500 words before the beginning of collegiate study. These requirements guarantee that the students in college have acquired a certain language proficiency to conduct higher order learning and deeper reading as long as the readability of the passage is not beyond their L2 and their cognitive development.

With a more complete understanding of the reading process, it becomes no longer a simple and passive collection of information. Reading is regarded as “an active process that requires an intentional and thoughtful interaction between the

reader and the text" (Report of the National Reading Panel, 2000, pp. 4-5). L2 students need to become aware of reading as a social interaction and to move beyond the text itself as simply a means of improving their language proficiency. Thoughtful reading refers to an active, considered, reflective reading process to uncover what it means to the reader personally, to recognize what the author meant, to understand tone and persuasive elements, to critically recognize bias. Thoughtful Literacy has also been defined as the literacy of "engaging the ideas in the text, challenging those ideas, reflecting on them, and so on" (Allington, 2012, p.151). This differs from comprehension tasks focused mainly on remembering material, instead focusing on the skills of analyzing, synthesizing, generalizing and applying ideas through literate conversation. In Thoughtful Literacy the right answer is not as important as recognizing the reading process and understanding how this analytic process can be applied in personal experience. Since the focus of this research is on narrative passages, through the lens of Thoughtful Literacy, reading is elaborated by a continuum of complexity of narrative comprehension on six levels (Applegate T., personal communication, June 19th 2012):

Level 1: Remembering Details

Level 2: Recognizing ideas when it is expressed in different words

Level 3: Recognizing simple relationships

Level 4: Recognizing complex relationships

Level 5: Generalizing to the world

Level 6: Applying observations to myself

The students who are intent on reading to understand and for enjoyment rather than information recall are referred as engaged readers. Baker, Afflerbach & Reinking (1996) defined engaged readers are "motivated, strategic, knowledgeable, and socially interactive" (p. xv). They are motivated to utilize knowledge gained life experiences, developing new understandings, and participate in discussions as meaningful social interactions. Engaged readers comprehend a written passage not only because they can do it, but because they are motivated to do it. Cambourne (1995) suggests that such motivation includes several aspects and qualities that involve purpose, seeking to understand, self-efficacy or believing in one's own capability, and becoming personally responsible for learning. Engaged readers can work through obstacles to achievement and retain control of their progress (Guthrie, Schafer, & Huang, 2001). "Engaged reading is a merger of motivation and thoughtfulness" (Guthrie, 2001, p. 1).

It was not difficult for me to create a hypothesis speculating about the relationship between the motivation to read and thoughtful reading. It seems intuitive to suppose that when readers think about what they read, they will be likely to learn and combine what they learn with the lessons from their experience to create understanding. They will likely use the vicarious experiences read to, and in turn, add to their own and construct additional understandings. The more they are deeply involved in reading, and become excited by the narrative, the more they will become good at it. These readers would have elevated levels of self-efficacy about their reading skills and when experiencing difficulty they can be expected to maintain

their efforts in order to reach an understanding of the reading. Guthrie and Wigfield (2000) see motivation as the critical factor in engagement and note that extensive research shows the strong connection between engagement and achievement in reading (Campbell, Voelkl, & Danahue, 1997; Wang, Haertel, & Walberg, 1990).

Although these studies have established the connection between engagement and reading literacy, readers may not become engaged if there are no motivations to do so. Anthony Applegate and Mary Applegate (2010) have conducted an empirical study to examine the link between thoughtful response and motivation to read in English as first language (L1). Before the study, little or no empirical evidence existed to support the linkage. The subjects were 443 children from grades two through six. The findings indicated that the inclination to respond thoughtfully to text is in relationship with the motivation to read. The researchers were cautious to interpret the relationship as causal in this study. Nevertheless, it creates a further need for continued intellectual inquiry and deliberate research. Moreover, most of the research on Thoughtful Literacy and motivation to read has been conducted in an L1 context. The important variables in L2, such as motivation to read would have to be constructed somewhat differently than in an L1 setting.

Key Terms and Models

Expectancy value of motivation proposed by Atkinson (1957) and developed by Eccles and Wigfield was used to build the theoretical framework for this study. In Expectancy Value Theory (Eccles, Adler, Futterman, Goff, Kaczala, Meece & Midgley, 1983; Wigfield & Eccles, 2000), the focus is upon the degree to which

students believe a task is worth pursuing (task value) and the degree of confidence they have in accomplishing a task (self-efficacy). These are two cornerstone components in understanding the choices students' make to achieve behaviors and their academic outcomes (Liem, Lau, Nie, 2008, pp. 487-88).

Before illustrating the basic tenets of these theories, it might be useful to settle upon the definition of the key terms used in this study:

Thoughtful Literacy is the literacy of "engaging the ideas in the text, challenging those ideas, reflecting on them and so on" (Allington, 2012, p.151).

Motivation to read is the beliefs, values, expectancies and goals that lead individuals to act in explicit, goal-directed ways in a reading process. "Motivation involves a constellation of beliefs, perceptions, values, interests, and actions that are all closely related" (Lai, 2011, p.5).

Self-efficacy is "people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave" (Bandura，1994，p.71). Self-efficacy of English reading was defined as "the belief in one's capability to read well and to understand hard parts in books" (Guthrie, Hoa, Wigfield, Tonks, Humenick, & Littles ,2007, p. 295).

Task value of English reading is the beliefs students have about the reasons to engage in the reading. Based on expectancy-value theory (DeBacker & Nelson, 1999; Eccles, 1984; Eccles et al., 1983), the factor of *Extrinsic Value of English Reading (utility value)* together with Importance of English Reading, Intrinsic Value of

English Reading, and Willingness to Pay Cost to English Reading constitute task value in the research.

Intrinsic Value of English reading is the motivation that comes from personal enjoyment, interest, or pleasure in the reading. It is "the enjoyment one gains from doing the task. When individuals do tasks that are intrinsically valued, there are important psychological consequences for them, most of which are quite positive" (Wigfield & Eccles, 2000, p. 72). In the research, the task is reading in English.

To pair with Intrinsic Value of English Reading, the term of *Extrinsic Value of English Reading* was used in the study. Extrinsic value refers to the degree of perceived usefulness, instrumentality, of a task in attaining personal goals. The degree of motivation is decided by a certain reward from an external source. Examples of this could be financial, subject or test grades, promotion or even the approval of others. Whatever the specific motivation might be for any individual, the essential factor is that the motivation of the person's actions is external (Deci & Ryan, 1985; Eccles, 2005).

Wigfield and Eccles (2000) defined attainment value as "the importance of doing well on a given task" (p. 72). It is equivalent to *Importance of Reading* in L2 in the research, which is defined as L2 learners' perceived importance of engaging in English reading.

Willingness to Pay Cost to English Reading refers to L2 learners' inclination to spend effort and time to accomplish English reading and how the decision to engage in English reading limits to do other activities.

Text-Based Reading (TBR) is the reading comprehension level measured by text-based questions from two reading passages (eight questions) adopted from Critical Reading Inventory (CRI).

Higher Order Comprehension (HOC) refers to the reading compression level assessed by Inferential and critical questions from two reading passages (12 questions) adopted from Critical Reading Inventory (CRI).

Statement of the Problem

While it is understood that a positive relation exists between motivation and engagement, no study has been conducted to explore the relationship between reading motivation and Thoughtful Literacy or, more precisely, the depth of reading in an L2 context. Inspired by these contemporary questions and previous research in the field, I wondered whether motivation to read in L2 would have an impact on the depth of L2 learners' reading comprehension. In other words, whether the inclination of L2 readers to think deeply and respond thoughtfully to text is related to their motivation to read. This research is the first inquiry to explore the connection between reading motivation and Thoughtful Literacy in an L2 context.

Considering the important work done by others and the context provided above, a guideline research question with four sub research questions guide my inquiry:

Research Questions:

Would the Chinese English learners' inclination to respond thoughtfully to narrative text be related to the overall L2 motivation to read?

Sub-questions:

1. To what extent is Self-Efficacy of English Reading ascribed to reading based on Expectancy Value Theory related to Thoughtful Literacy in an L2 context?
2. To what extent are Intrinsic Value of English Reading and Extrinsic Value of English Reading related to Thoughtful Literacy in an L2 context?
3. To what extent do Importance of English Reading (attainment value) and Willingness to Pay Cost to English Reading account for the L2 learners' inclination to respond thoughtfully in an L2 context?
4. Of the five variables of motivation, which is the dominant source of English reading motivation impacting the Thoughtful Literacy for L2 learners?

These questions were explored through a quantitative method study conducted at a university in China. The purpose was to seek a better understanding of the relationships between specific motivational factors and Thoughtful Literacy. The study investigated the differences among L2 Chinese learners, within a convenience sampling, with differentiated depth of thinking. The L2 learners' motivation is measured against five variables: Self-Efficacy of English Reading, Importance of English Reading, Extrinsic Value of English Reading, Intrinsic Value of English Reading and Willingness to Pay Cost to English Reading. It is hypothesized that the motivated students would outperform on the assessment of Thoughtful Literacy. In other words, the five motivational variables (independent variable) are significant predictors to Thoughtful Literacy (dependent variable). It is also postulated that intrinsic motivation is the most dominant predictor to Thoughtful Literacy compared

to the other four variables.

Assumptions and Limitations

This study is the first research attempt to address the predictive power of reading motivation to Thoughtful Literacy of Chinese L2 learners at the college level. This study is also one of the few L2 acquisition research studies that address the issue of depth of reading. This is the first research study attempting to determine the dominant motivational construct of thoughtfulness for Chinese L2 learners. While the findings of this study are noteworthy theoretically and have pedagogical application, any implications drawn should be done mindful of the following limitations.

The first limitation is sampling bias of convenience sampling. The sample is not representative of the entire population. It should be cautious to generalize the results of this survey beyond the participants although it provides some information about the reading motivation toward English of newly enrolled college students in China. Since the participants of the study were selected from only one university in China this limits the generalizability of the findings to larger populations.

Another limitation is that it has limited explanatory power due to the number of motivational variables included. Given the factors that are, or may be, associated with Thoughtful Literacy it is certain that more than just motivational variables (e. g. the learners' family background, relatedness to the story and teachers' instruction, etc.) are involved, this limitation seems to be unavoidable. For the sake of the law of parsimony, all factors that are associated with Thoughtful Literacy were not included.

The present study limits its scope by looking at the most direct and immediate motivational influences hypothesized in L1 context.

The third limitation deals with the nature of any self-reporting instrument. Validity relies, in part, on the participants' honesty and candor. Since the participants were informed that their anonymity could not be insured (so that the values of the participants' motivational data could be matched with their Thoughtful Literacy data) there exists a potential influence on this honesty and candor.

Overview of the Dissertation

This dissertation consists of five chapters. Chapter 1 is an introduction that describes the context of the study, definitions of key terms, statement of the problem, research limitations and the general methodology of my research. Chapter 2 provides a literature review on the development and progress of investigation into the motivation to read in L1 and L2, as well as Thoughtful Literacy. Chapter 3 delineates the research methods by describing research procedures, participants, research instruments, and their psychometric properties in a comparable research context. Chapter 4 presents the research findings and interpretation from the survey results and Thoughtful Literacy data. Chapter 5 discusses the findings of the study in the light of the relevant literature, and explores their implications in the fields of teaching, learning, and testing English as a second or foreign language.

Summary

In the field of education generally and Teaching English to Speakers of Other Languages (TESOL) in particular, interest in Chinese learners is on the rise. Chinese

L2 learners have always been considered as good English readers compared to their listening, speaking and writing language skills. However, they only perform well in reading when the assessment focuses on linguistic proficiency and text-entailed factual information recall. Fortunately, educators and administrators have started realizing that linguistic elements are not the only objectives of reading English texts; L2 reading should also develop Thoughtful Literacy including understanding the meaning, its relationship to one's own experience and applying the ideas contained in the text to different situations.

The current L2 reading instruction and assessment "continuously mirrors the prevailing definition of L2 proficiency" (Kudo, 2005, p. 227). Although the previous study has revealed the complexity of L2 reading and the development of linguistic elements, there is little research investigating the depth of L2 reading and there is no research exploring possible factors that influence Thoughtful Literacy in an L2 context which might assist L2 learners to think analytically, critically and response thoughtfully. This research is the first inquiry into this unexplored domain.

Chapter 2 Literature Review

Motivation is the key determinant of "why people decide to do something, how long they are willing to sustain the activity and how hard they are going to pursue it" (Dörnyei, 2001a, p. 8). Dörnyei (2001b) described the motivation as “one of the most elusive concepts in the whole domain of the social sciences” (p.2) because it explains the reasons behind a human behavior, which is an extremely complex, changeable and variable schema between and among learners and groups of learners. Motivation is paramount to students’ learning. It can energize, direct and sustain learning and it is also a consequence of learning. Both psychologically and biologically, motivation and learning are inseparable (Zull, 2002).

However, the constructs of motivation are complex. It is closely connected to other educational and psychological constructs such as attention, contents, needs, goals and personal interests. They all contribute to stimulating students’ motivation to learn and their inclination to engage in particular activities and achieve various goals (Krause, Bochner & Duchesne, 2003).

Most contemporary theories of motivation have moved toward a social cognitive perspective. Learning is viewed as a process that results in the construction of meaning and understanding which also contributes to growth in general problem-solving skills and metacognitive processes (Anderson, 1996). Individual learning process was explained though social interactions in terms of the individuals’ perceptions, goals, inferences, beliefs, values, peer influence and so on. Many theories of motivation (e.g., self-determination theory, expectancy-value theories, and goal theories) had been developed which were highly useful in explaining

learners' motivation in the contexts of general education. These theories all provide different lenses to observe and understand the nature of learning motivation.

The focuses of these three theories are outcomes, particularly achievement outcomes, i.e., the accomplishment of specific goals or tasks, or some other kind of results that can be observed or measured (Oxford & Shearin, 1994; Ryan & Deci, 2000, 2002).

Self-determination theory and goal theories use dichotomies to illustrate the complexity of motivation, which may oversimplify all motivational constructs. Additionally, Expectancy Value Theory has a significance of relevance to the context and methodology of the current study since experiments and questionnaires are two favorite methods of the research using the theoretical framework. Moreover, the theory is appropriate for exploring the relationships among students' engagement with reading, motivation and the reading outcomes.

General Motivation Theories

Self-efficacy and Expectancy Value theory

Self-efficacy was first presented and researched by Dr. Albert Bandura in 1977. He argued that self-efficacy, the very important construct of self-beliefs, had been ignored in social learning research. Social learning theorists (Bandura, 1977, 1982, 1989; Zimmerman, Bandura, & Martinez-Pons, 1992) think self-efficacy can influence future effort, persistence, learning and achievement. This concept is an aspect of social cognitive theory, which holds that individuals are capable of introspection and judgment about their actions. Moreover, these individuals are

capable of not only controlling their own behavior but are capable of becoming actors who can exert influence, become agents of change in shaping their environment rather than merely reactionary. Social cognitive theory assumes that individuals are reflective beings who act with purpose and intention.

Bandura (1997) proposed two distinct expectancy beliefs: (1) outcome expectations, that holds that the learner believes certain behaviors, like reading, will lead to certain outcomes, for instance better grades and (2) efficacy expectations, which suggests that the learner believes himself/ herself capable of the behaviors required to generate the outcome. The belief that a certain behavior will produce a certain outcome is outcome expectation, which is different from believing that one has the ability of doing that behavior (efficacy expectation).

Bandura argued (1986) that self-efficacy is described simply as one's ability to attain a certain level of performance. However, Bandura (1994) went on to elaborate upon self-efficacy as “people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves and behave.” (p.71) It establishes the groundwork for human motivation, well-being, and personal accomplishment (Pajares, 2002). Self-efficacy is not about learning how to succeed, but rather it is about how to keep trying when one does not succeed. “A strong sense of efficacy enhances human accomplishment and personal well-being in many ways” (Bandura, 1994, p.71). People will be more likely to carry out specific tasks if they believe they can accomplish them (Pajares, 2006). It influences

decision-making, the effort exerted, and the mastery of learning. Pajares and Schunk (2001) conducted a study which found that students with high efficacy beliefs used more cognitive and metacognitive strategies. They also consistently persisted longer. Bandura's research (1984, 1997, 2006) concluded that self-efficacy beliefs of students can highly predict their capability to accomplish academic tasks. A number of researchers have found that self-efficacy has a greater effect on academic performance than other motivational beliefs (Pintrich & De Groot, 1990; Pintrich & Schunk, 2002).

Considering the field of L2 learning, some empirical research studies have been conducted to investigate the influence of self-efficacy beliefs. Magogwe and Oliver (2007) studied 480 students from primary schools, secondary schools, and a tertiary institution between 2002 and 2005. The results of this study revealed a positive and significant relationship between self-efficacy beliefs and use of overall language learning strategies across all three educational levels. Zimmermen argued "the development of an individual's self-efficacy, or level of confidence in successfully completing a task is closely associated with effective use of learning strategies" (cited in Oxford, 1996, p. 178).

Chen (2007) studied the relationship between EFL learners' self-efficacy beliefs and their English listening achievement. The subjects were college English learners at two universities in Taiwan. The students' listening course grades were used as a measurement of the students' listening proficiency level. He also found a significant and positive correlation between self-efficacy beliefs and listening achievement.

A descriptive-correlational study was conducted on 1,146 students from eight secondary schools in Malaysia (Mahyuddin, Elias, Cheong, & Muhamad, etc., 2006), which found positive correlations between several dimensions of self-efficacy and academic performance in English language learning.

While it seems clear that self-efficacy is at the root of an individual's self-esteem and motivation, one's beliefs about his/her capabilities are sensitive to situation-specific constructs. Beliefs of self-efficacy generally should be separated out from self-efficacy judgments about specific tasks. Bandura (1997) claimed that self-efficacy may be differentiated into academic, social, emotional, and physical domains. He argued that self-efficacy can be defined more precisely and is more task and situation specific than other beliefs. Dörnyei (2001b) explained that "self-efficacy is always specific to a concrete task" (p. 56). Self-efficacy measures are properly used to determine perceived competence at specific tasks (Bandura, 2006; Bong, 2006; Pajares, 1997). It is therefore argued that self-efficacy is domain specific. Beliefs about efficaciousness in the performance of one task cannot be assumed to apply to a task in a different domain (Schunk, Pintrich, & Meece, 2007). It is for that reason that "academic domain-specific assessments of self-efficacy are especially common in educational research" (Pajares, 1996).

Between 1980 and the early 2000s, Jacquelynne Eccles and her colleagues studied the motivational and social factors influencing school behaviors, curriculum design and high school graduation. They established Expectancy Value Theory (Eccles, Adler, Futterman, Goff, Kaczala, Meece and Midgley, 1983) and elaborated

learners' motivation and achievement behaviors come from two sets of beliefs (Figure 1): the individual's expectations for accomplishing an academic task (self-efficacy) or success and the importance or value (task value) the individual attaches to the academic task (Eccles et al., 1983; Wigfield & Eccles, 2000).

According to the theory, expectancy beliefs were defined as the learner's calculated subjective probability of success on a task or the learner's anticipated outcomes or consequences of an action. They also defined a relationship between these achievement-related pursuits and cultural norms, personal beliefs, life experiences and attitudes as well as the learner's individual aptitudes (Eccles et al., 1998). They linked expectancy beliefs with individual interpretative systems, which include input from family, peers, and teachers, self-identity, culturally based beliefs, self-perceptions and perceptions of the tasks.

The construct of ''expectation for success'' can be differentiated between (1) one's belief in one's capability in accomplishing a given task, or also called "efficacy expectation" or "self-efficacy", and (2) one's belief that the effort one exerts would lead to a desired outcome, or also called "outcome expectancy" (Bandura, 1997). He claimed that efficacy expectations, rather than outcome expectancies, are the major determinant of goal setting, task choice, the willingness to exert extended effort, and persistence.

According to Expectancy Value Theory, students must also have a real expectancy that they can complete an activity successfully. This is very close to Bandura's (1997) personal efficacy expectations. As stated by Wigfield and Eccles

(2000, p. 71), ". . . our expectancy construct is more similar to Bandura's efficacy expectation than it is to the outcome expectancy construct." In the present study, we therefore measured students' efficacy expectation or self-efficacy rather than their outcome expectancy.

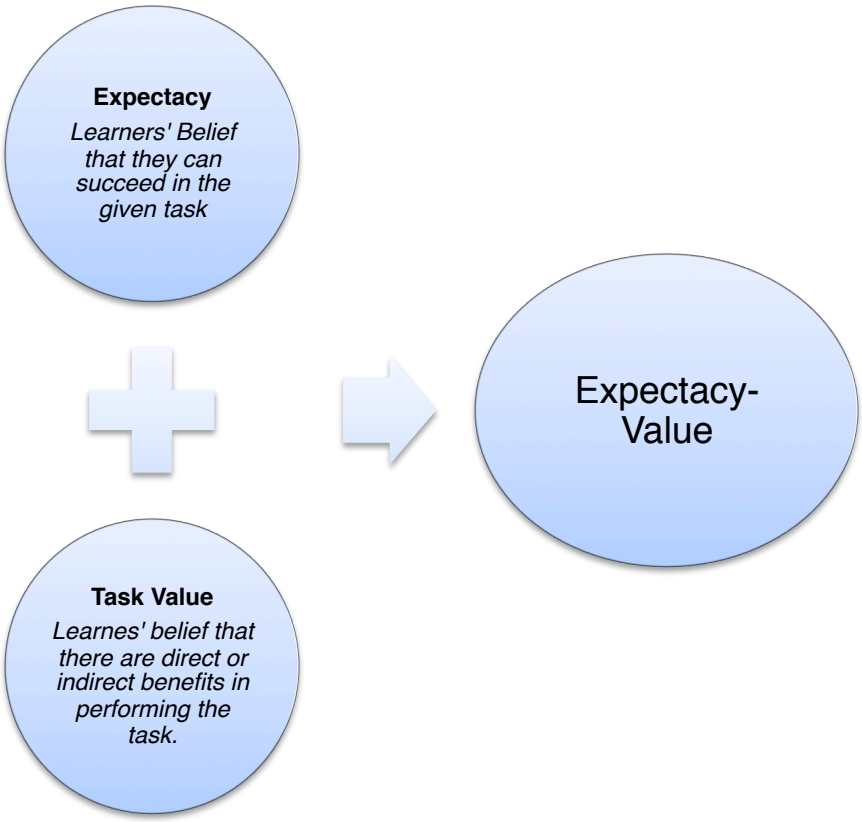

Figure 1. Expectancy Value Theory

Eccles (1990) also summarized and differentiated expectancy-value theory and self-efficacy theory. She said:

> Expectancy-value and self-efficacy theories stress the importance of conceptually similar constructs and processes. First, both approaches stress the important influence of individuals' judgments of their ability to perform or to succeed at a task as critical determinants of task choice, persistence, affective

> reactions, and performance in achievement situations. Second, both theories emphasize the critical role of cognitive and inferential processes in forming expectancy judgments. And third, both expectancy-value and self-efficacy approaches maintain that the incentive or reinforcement value of an outcome can mediate achievement-related behavior. (p. 61)

Eccles's expectancy-value model and research on personal interest have focused on values as the reasons why an individual chooses to engage in a task. Values are an important component of the Eccles' expectancy-value model (Eccles, Adler, Futterman, Goff, Kaczala, Meece and Midgley, 1983). Eccles and her colleagues determined that task value was the incentive for doing individual tasks. Their findings revealed that individuals would engage in tasks they positively valued and avoided tasks that they negatively valued. Eccles and Wigfield (2002) asserted that the relative value attached to any goal would influence the likelihood of a person reaching the goal and exerting the necessary effort.

According to Eccles's model (1983), task value includes four distinct components: attainment value, intrinsic value, utility value and cost (see Figure 2). Attainment value is the importance that an individual attaches to performing well on a given task. Intrinsic value is the enjoyment and satisfaction that one gains from engaging in a task. Utility value refers to how a task or activity fits into a person's future plans, such as when students are motivated to study English because of their plans to pursue an education in an English speaking country. The value of costs is the perceived consequences of pursuing a valued task. The costs include anxiety, fear of

failure, the time spent, effort expended and inability of doing an alternative task. Although extensive, these values alone are viewed as insufficient to motivate students to learn independently.

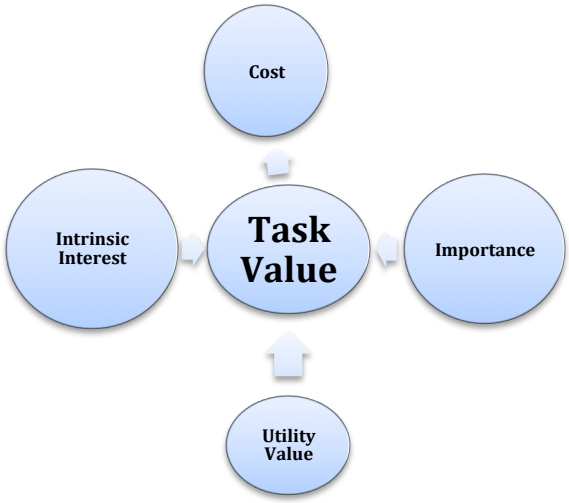

Figure 2. Factors that Influence Task Value

Motivation is an important area in reading in English as a first language, however it has produced a few research studies (Mathewson, 2004; Miller & Faircloth, 2009). Surprisingly little research has been done on the effects of motivational factors on reading comprehension for English Language Learners (ELL) in an L2 context. Many issues can affect the motivation of these ELLs: lack of self-efficacy because of poor language skills, lack of the learner's task value because remedial activities are not challenging, or a limited prior knowledge of the contents included in reading materials. All of which can have an impact upon performance (Rueda, Velasco, & Lim, 2008).

Self-determination theory

Deci and Ryan (1985) proposed a theory espousing self-determination. They asserted that motivational orientations are classified as either extrinsic or intrinsic. Intrinsic motivation refers to an inclination to engage in an activity because that activity is enjoyable and satisfying. Intrinsically motivated learners value rewards gained through the process of task completion regardless of any external rewards. The fulfillment of a task gives them a sense of personal enjoyment and control. When their motivations are self-determined, they become more involved in activities and make greater efforts to reach challenging goals (Deci & Ryan, 1985). Extrinsic motivation refers to motivation that exists because the behaviors are those actions carried out to achieve some instrumental end, such as earning a reward or avoiding a punishment. For example, extrinsically motivated English as a Second/Foreign Language (L2) students may indicate that they are taking English classes in order to improve their chances of getting a good job.

The intrinsically motivated students are self-regulated, engaged in work, concentrated over time and use different strategies to manage challenges (Miller, 1988; Zimmerman, Bonner, & Kovach, 1996). Research has established that learning a second language for personally satisfying, intrinsic reasons is linked to greater motivational intensity (Noels, Clément & Pelletier, 2001), and a greater likelihood of pursuing formal education (Ramage, 1990), and a more positive sense of self-efficacy, including both speaking and reading proficiency (Ehrman, 1996). Learners who are interested in learning and achieving educational outcomes for their

own sake, rather than for rewards, are more likely to become successful learners. Wang (2008) investigated Chinese L2 learners and found that intrinsic motivation is correlated significantly with English achievement and the factor of motivation for knowledge was a moderate predictor of it.

Noels and her colleagues (2003) applied the self-determination theory in the L2 learning context with self-developed statistical-proved scales. They measured both intrinsic motivation and extrinsic motivation to study the correlations between them and with Gardner's integrative and instrumental motivation. Noels et al. (2003) found that external regulation strongly correlated with instrumental orientation; intrinsic motivation correlated with travel, friendship and knowledge orientation in second language learning. Tae-Il Pae (2008) found a statistical similarity between the instrumental orientation and external regulation, whereas similarity between the integrative orientation and intrinsic motivation did not reach the point of statistical significance indicating that intrinsic and integrative orientations are not identical. Noels et al. (2003) revealed that integrative orientation is an intergroup substrate while intrinsic/extrinsic motivations are an interpersonal substrate, which contribute to an individual's propensity to engage in any behavior including L2 learning. Noels et al. (2003) and Clément, Noels & MacIntyre (2007) have argued that an appreciation that motivation to learn a language is enhanced by a separation of interpersonal motivational substrate for language learning from an intergroup substrate. However, Schwartz (2000) criticized that the self-determination theory

emphasis on individual autonomy and control may lead to alienate the individual from his or her need for interdependence.

Since I think the Schwartz critique has merit insofar as learning another language is inclined to involve the exchange of two ethnic identities and language communities, this study will focus on the intergroup substrate rather than the interpersonal substrate.

Goal Theory

A focus of goal theory is to explore the meaning students attach to achievement situations and the purpose for their behaviors (Ames, 1992; Nicholls, 1984). It has conceptualized learners' perceptions about the reasons for accomplishing a learning task. Schunk, Pintrich & Meece (2007) claimed that there is an integrated pattern of beliefs that direct students to respond and accomplish learning tasks and situations in specific ways. Goal theorists (Ames, 1992; Nicholls, 1984;) posited that achievement goals could be classified into two contrasting categories, which are mastery versus performance goals. Mastery goals refer to a student's concern with learning new skills and increased understanding and a focus on development and mastery. Performance goals refer to a focus on demonstrating superior ability relative to others (Ames, 1992). These goals reflect the schema how students engage and evaluate their performance in an achievement context. It represents "a general orientation to the task that includes a number of related beliefs about purposes, competence, success, ability, effort, errors, and standards" (Pintrich, 2000, p. 94).

Mastery-oriented learners would tend to develop new skills, increase

competence, and achieve a sense of mastery (Elliot, 1999, 2005). In other words, learners would delineate success as personal improvement, mastery of skills and enhancement of competence. The pride and satisfaction comes from task-attainment rather than comparison relative to others.

On the other hand, one can expect that recognition by others of competency and exceptionalism is important to performance-oriented learners. Learning is a means to obtain acceptance and peer admiration. Similarly, recognition and praise from teachers, parents and others in authority are powerful motivators and measures of their success. He (2004) explored the motivation of L2 learners in the frame of goal achievement theory. He studied 319 Taiwanese L2 sixth graders and found that only mastery goal contributes to self-regulated learning and the learners' integrated goals can be attributed to the their self-efficacy.

With constant inquiry, cognitive social goals have been added into the developments of goal theory. Acceptance and approval by others such as parents, educators and peers have been found to be motivators for achievement (Martin & Dowson, 2009; Dowson & McInerney, 2003; Elliot, 1999).

Motivation to Learn a Second/Foreign Language

In reviewing the research pertaining to the connection between learner motivation and successful acquisition of second/foreign language (L2) reading skills I came to realize that the relationships, if any, were not well understood and certainly not clearly defined. Intuition suggests to us that motivation determines learners' willingness and readiness to learn, which often defines how they perform in

educational settings. Lepper (1985) argued a person's level of motivation while engaged in a learning task affects important elements of his/her mind's information processing related to learning. Motivational variables may influence the direction and intensity of attention processes, persistency of effort, depth of processing, and problem representation. Therefore, it is overly simplistic to assume that a simple linear relationship exists between motivation and performance in any area of learning. In the field of English as second language, although motivation to learn L2 is one of the most important and well-researched determinants of students' L2 performance, the relationships are complicated and warrant further investigation. Motivation as it influences L2 reading skills, specifically, has drawn the attention of some researchers (Mori, 2002, 2004; Takase, 2007; Dörnyei, 2001a, 2001b, 2005). Let us take a look at some of the current opinions about the motivation of L2 learners.

Motivation plays an important role in second/foreign language (L2) learning. "Motivation is often seen as the key learner variable because without it nothing happens" (Schmitt, 2002, p. 172). It has a significant influence on language proficiency, persistence of learning and the efforts exerted towards accomplishing the learning objectives. Language learning goals and motives are central concepts in L2 learning research (Gardner, 1985, 2001).

It is not ensured that all such individuals will be successful in the learning of the language by simply taking L2 courses and being immersed in an L2 context. When examining factors that influence foreign language learning and communication, motivation is consistently at the top of the list (Clément & Gardner, 2001). As

foreign language learning is considered a challenging subject where many learners fail to excel (Dörnyei, 2003), learners' motivation in language studies is therefore especially important to investigate. Gardner and Lambert (1972) were the pioneer researchers in the study of the relationship between learners' attitudes and motivation for L2 learning. They theorized a differentiation between integrative and instrumental motivation for second language learning. Integrative motivation is defined as:

> A genuine interest in learning the L2 in order to come closer psychologically to the other language community. At one level, this implies an openness to, and respect for other cultural groups and ways of life. In the extreme, this might involve complete identification with the community. (Gardner, 2001, p. 5)

Instrumental motivation is defined as "the potential pragmatic gains of L2 proficiency, such as getting a better job or a higher salary" (Dörnyei & Skehan, 2003, p. 613).

However, since the 1990s, doubt has arisen about how generalizable the integrativeness might be. Gardner's theory was developed in a multicultural context, which provides many interaction opportunities with the target language for L2 learners. "…but in learning situations where a foreign language is taught only as a school subject without any direct contact with its speaker, the 'integrative' metaphor simply did not make sense" (Dörnyei, 2010, p. 75). For instance, students from mainland China who learn English may never have an opportunity to meet a native English-speaking person, let alone to integrate with an English-speaking community. The reasons these students are motivated to learn English will be very different from

why Anglophone Canadians want to learn French in Quebec. In fact, Warden and Lin (2000) investigated 445 Taiwanese non-English majors who took required English courses at the college level. Their findings indicated a notable absence of integrative motivation, but found a dimension of "requirement motivation," a more utilitarian attitude than instrumental motivation.

Motivation is a complex and multi-dimensional construct. Williams and Burden (1997) divided motivational components into two categories: internal and external influences with a number of subcomponents. They distinguished three motivational phases. First, they found that motivations in individuals can be both internal and external and will vary among a group. Secondly, these individuals consider the personal costs of effort and time they must commit as factors in making a decision. Thirdly, they must make the deliberate commitment to apply whatever effort is necessary to achieve success and accomplishment. Williams and Burden also noted the environment of culture as well as individual contextual issues bear upon a language learner's decisions while in these phases of motivation.

Dörnyei (1994, 2001a, 2001b), focusing on motivation in a classroom setting, conceptualized language learning motivation, and described a model based on a process-oriented approach.

Gardner's (1985) work on second language learning motivation built upon the social psychological model. Many others have also contributed their efforts to develop these theoretical concepts (Dörnyei, 1994; Oxford & Shearin, 1994; Tremblay & Gardner, 1995; Williams & Burden, 1997). Research into the motivation

of language learners is growing in numbers and sophistication. But while many theories are being discussed in our field, much work remains to be done to confirm and quantify these motivational concepts of language learning followed but robust analysis and discussion to specify the relationships among and between the various posited components. Only then might we be able to approach an understanding and find practical application.

Motivation to Read in First Language (L1) and Second/Foreign Language (L2)

Motivation to read in L1

Engaged readers are willing to read because reading is both enjoyable and interesting for them. They read to learn new things, to solve problems, to answer questions, to be challenged and then to share the knowledge they have acquired with others. They are intrinsically motivated and read for reasons other than extrinsic reward. They become deeply involved in reading and take ownership over their own learning.

Lack of motivation to read is one of the most reliable predictors of a struggling reader's mediocre academic achievement. Students lacking intrinsic motivation are often detached from the learning experience and can be expected to avoid reading (Beers, 2003). This aversion to reading is predictive of further failures, which are rooted in their unsuccessful reading experiences and the lower enjoyment of the reading they actually do. (Johnston & Winograd, 1985). It becomes a downward spiral of successive failures. Sharon Pitcher and her colleagues (2007) assert that "motivation to read is a complex construct that influences readers' choices of reading

materials, their willingness to engage in reading, and thus their ultimate competence in reading, especially related to academic reading tasks" (p. 379)

Therefore, it becomes increasingly important to focus attention upon the elements of reading motivation. We now understand that motivation is an essential precursor to general literacy as well as many other specific learning skills.

Among empirical studies of reading motivation, a few have investigated the relationship between motivation and reading outcomes. Wigfield and Guthrie (1997) documented that students who were identified as intrinsically motivated spent three times more time in reading activities than students who possessed low intrinsic motivation. Compared to the ten other elements of motivations (efficacy, challenge, involvement, importance, work voidance, competition, recognition, grades, social reasons, compliance) intrinsic motivation was the most highly correlated with whether or not students would read on their own and how much reading they would do. Repeatedly, research has shown us that internal or intrinsic motivation is positively correlated with reading achievement, while external motivation is not (Guthrie & Coddington, 2009). Students with high intrinsic motivation demonstrate better comprehension on science texts (Guthrie & Wigfield, 2000). When intrinsically motivated students' show greater interest in reading they are more likely to interact with text more thoughtfully while acquiring greater knowledge and/or aesthetic experience (Schiefele, 1999). It should be no surprise, then, that these intrinsically motivated readers are often quite academically competent and predictably high achievers.

Self-efficacy is another important factor in a reader's motivation. "Self-efficacy for reading was defined as the belief in one's capability to read well and to understand hard parts in books" (Guthrie et al, 2007, p. 295). It was Bandura (1986) who proposed that motivation to read is often connected to students' sense of self-efficacy. When students have high reading efficacy, they are more likely to exert the necessary effort required to understand challenging text. Self-efficacy in students is related to thoughtful engagement and the willingness to persevere (Pintrich & De Groot, 1990). "Efficacious readers believe they are capable of performing reading activities and are willing to attempt more challenge texts" (Guthrie & Coddington, 2009, p.505). Chapman and Tunmer (1995) found that students' reading efficacy was positively associated with reading comprehension for fourth and fifth grade students. Students who expressed greater confidence in their reading abilities scored higher on comprehension tests than students with lower perceptions of their own competence (Chapman & Tuner, 1995; Winfield & Guthrie, 1997). Guthrie et al., (2007) and Zimmerman (2000) have investigated students' reading efficacy and found that students with low reading self-efficacy are both less involved and less stimulated while reading. They tended to avoid challenging reading and avoid engaging themselves in tasks they believed were beyond their capabilities. Mucherah and Yoder (2008) found that perceived reading self-efficacy is an important predictor of reading scores on a standardized reading test in students.

Research has revealed that the motivation to read is multifaceted. Motivation to read has a number of complex factors. It encompasses internal desires, external

pressures and the goals that influence readers' perceptions of self, perceptions of risks and benefits. Several recent studies suggest self-perceived confidence and perceptions of task value significantly influence motivation and level of a reader's task engagement. The expectancy-value theory of motivation has been widely validated as proposing achievement behaviors are related to individuals' expectancy-related beliefs and task-value beliefs (Eccles, et al., 1983). There is evidence suggesting that students who consider reading as valuable, important and have personally meaningful reasons will read in a more purposeful way with more focused concentration (Ames & Archer, 1988; Dweck & Elliott, 1983;). Similarly, Winne (1985) views the "idealized reader" as one who feels competent as a reader and perceives reading to include both personal value and practical importance.

With regard to L1 reading motivation, Wigfield and Guthrie (1995) argued that students' motivation must be understood as domain-specific. For, some students, although motivated to read, may be less motivated to listen, speak, or write. "Reading motivation must be developed for its own domain and construct" (Grabe, 2009, p.184). In order to improve our understanding of the relationship between motivation and reading, reliable and valid measures of reading motivation are essential.

Based upon expectancy-value theory, Wigfield and Guthrie (1997) developed the Motivation for Reading Questionnaire (MRQ) in order to investigate the factors involved with reading motivation. They used this instrument to examine the relationship between motivation and the depth of a reader's involvement as well as

breadth of reading material. As expected, it was found that intrinsic motivation is a powerful predictor of reading achievement. The Motivation to Read Profile (Gambrell, Palmer, Codling & Mazzoni, 1996), which primarily focuses on self-efficacy and task value, is also an extensively utilized measurement instrument in the field. The Motivation for Reading Scale (Baker & Scher, 2002) is an assessment in four areas of reading motivation: enjoyment, value, self-concept, and library-related activities. It is significant that these three widely used instruments all focus on task value and self-efficacy.

Motivation to read in L2

As we have discovered, the specific construct of the motivation to read is multifaceted (Guthrie & Wigfield, 2000). There are numerous studies (Wigfield, 1997; Wigfield & Guthrie, 1997; Wang & Guthrie, 2004; Guthrie at el., 2007) focusing on motivation and L1 reading behaviors, but since, as above mentioned, the L2 reading research community understands the L2 learning process to be similar, relatively little research has been done on motivation in the field of L2 reading. Only Day and Bamford (1998) have attempted to conceptualize motivation to read in L2. They utilized an expectancy value model. There are two key factors in motivation to perform a behavior: "…the individual's expectancy of success in a given task and the value the individual attaches to success in that task" (Dörnyei & Otti, 1998, p. 44). Eccles et al. (1983) defined expectancy as learners' belief about how well they would do in a given task, either in the immediate future or long term.

People do what they expect to accomplish successfully and tend to avoid what

they expect they cannot accomplish. This is balanced by people tending to undertake tasks that they value, and tending to avoid those things that have little value for them. (Day & Bamford, 1998, p. 27)

Figure 3 presents the four major variables of expectancy valuation that are believed to influence the decision to read in a second language: (a) materials, (b) reading ability in the L2, (c) attitudes toward reading, and (d) socio-cultural environment factors (Day & Bamford, 1998).

In their L2 reading model, materials and reading ability are related to the expectation component of successful L2 reading, and attitudes and socio-cultural environment are related to the value component. Considering the relative weight of the components, Day and Bramford wrote that motivation to read in an L2 is strongly influenced by (a) extensive reading materials and (b) attitudes and less by (c) reading ability and (d) the socio-cultural environment. Although Day and Bamford first attempted to conceptualize the motivation to read in L2, they did not conduct any empirical study to prove their theories.

In addition to the conceptual work of Day and Bamford, Mori has conducted two empirical research studies on motivation to read in L2, one study conducted in 2002 and another in 2004. Mori (2002) developed a 30-item L2 reading-motivation questionnaire based on the 11 traits of the Motivation for Reading Questionnaire

(MRQ) (Wigfield & Guthrie, 1997). She investigated the opinions and beliefs of 447 Japanese university students' L2 reading motivation with her modified MRQ. She included four factors: three from the original MRQ: intrinsic value of reading,

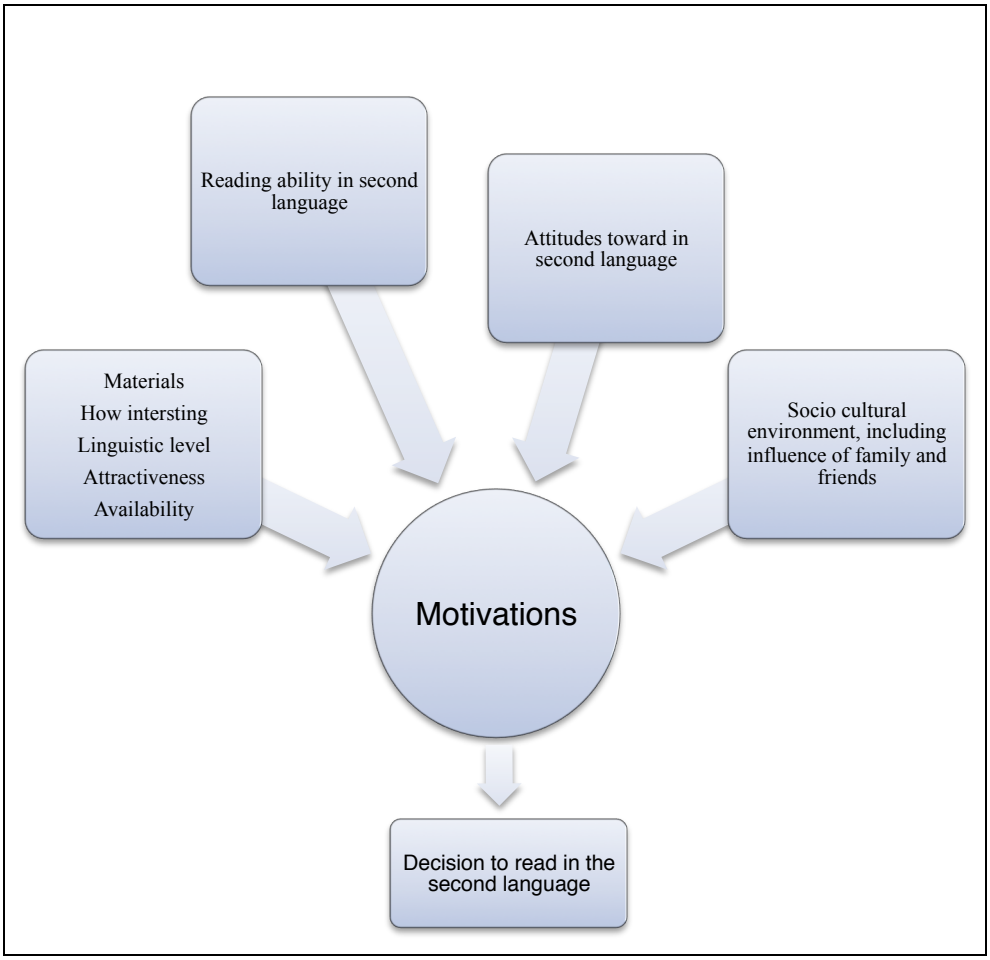

Figure 3. Model of the Major Variables Motivating the Decision to Read in a Second Language (Day & Bamford, 1998)

extrinsic utility value of reading, reading efficacy, and added her own factor: importance of reading. She added questions to explore Gardner's integrativness and its items all loaded on the extrinsic factor. The study reveals that foreign language reading motivation is multidimensional, closely resembling more general forms of motivation as laid out in Expectancy Value Theory (Eccles et. al., 1983; Eccles, Adler & Meece, 1984; Eccles, Lord & Midgley, 1991; Eccles & Wigfield, 1995; Wigfield, 1994; Wigfield & Eccles, 1992).

Dörnyei (2003) made an interesting observation: most L2 motivation studies that address the connection between magainotivation and L2 learning are primarily

concerned with how it is related to general achievement measurements such as final course grades, but not to more specific learning behaviors. Junko Yamashita (2004) studied motivational variables and the extent of reading. She investigated the relationship of L1 and L2 reading to the affective domain of reading and found that positive feelings towards reading, both in L1 and L2, facilitates a learner's performance in extensive reading. Takase (2007) examined the impact of motivation on extensive reading with 219 high school EFL students in Japan. She found that L1 intrinsic motivation and L2 intrinsic motivation both significantly predicted the amount of L2 reading. However, current research primarily focuses on the relationship between motivational constructs and the amount of the students' reading.

No research has been conducted to examine the relationship between motivation and the depth, or thoughtfulness, of reading. Deep reading is to be understood as reading which allows L2 learners to "have deep and complex comprehension, the detection of relationships between and among ideas, or the application of ideas to new situations" (Applegate, 2010, p.226).

Research on Chinese ELLs' motivation to read

Research tailored to the topic of language learning motivation of Chinese L2 learners did not really begin until the 1980's, in spite of the fact that mainland China is, and has long been, a country with millions of people acquiring English as a second language. Chinese scholars (Gui, 1985, 1991; Wang, 1991) first considered motivation as an affective construct and focused on its influence on students'

learning achievement.

With a better understanding of motivational theories, researchers have recently tried to identify Chinese EFL learners' motivation types. Hua (1998) believed earning a certificate (proof of a certain level of English proficiency required by employers) to be the major source of motivation of Chinese learners. He also believed that motivation is changeable and this "acquiring certificate" motivation is specific and unique to Chinese learners. Recently, Meihua Liu (2007) based a study on Gardner's theory and identified the sources of motivation for 202 Chinese college students. Her questionnaire was based upon three constructs: Integrative Orientation, Instrumental Orientation and Travel Orientation. One of the major findings of Liu's study was that most of the students were much more instrumentally oriented than integratively oriented to learn English because they believed that English would be crucial to their future. According to Liu (2007), most of the students were not integratively oriented because they had little contact with native speakers of English in their daily lives. Wei (2007) and Wu Man-Fat (2007) reported similar findings that the Chinese L2 learners possessed instrumental rather than the integrative orientation.

Qin and Wen (2002) tried to develop an internal structural model of motivation consisting of 13 variables and also hypothesized a causal relationship amongst the variables. Five hundred university students who were non-English majors were surveyed. The results indicate that past language proficiency has no direct effect on motivation, but has an indirect effect through other variables such as attribution,

interest, self-efficacy, anxiety, and goal setting. Self-efficacy, in addition to its direct influence, also has an indirect influence on motivated behavior through valence and goal-setting. Valence, goal-setting, and purposes in cognitive mediators all have a direct effect on motivated behavior.

Reading in L2 has been viewed as the most important type of literacy for the English teaching in China. The research about the sources of motivation to read is surprisingly lagging behind. There were 178 research papers published in key Chinese journals between 1995 and 2004. The research primarily addressed two domains; one is the reading process and the other is reading instruction. Only 14 papers have studied the influence of the Chinese learners' individual experience and affective factors upon reading comprehension (Luo, 2007).

Yongfang Yuan (2003) divided the motivation to read into an instrumental orientation and an enjoyment orientation and studied 76 second year college students. The results indicated that the motivation to read is a strong predictor of reading comprehension, which was assessed by a standard reading test with most Chinese college learners instrumentally motivated to read in L2. Wen Quifang and Wang Haixiao (1996) proposed three levels of reading comprehension: literal comprehension, inferential comprehension and critical comprehension. The three levels are characterized as: understanding the literal meaning, inferring the underlying meaning and giving comments on the written text. This framework is very similar to Barrett's taxonomy of reading comprehension, which includes literal comprehension, reorganization, inferential comprehension, evaluation, appreciation

(Affective Domain) (Barrett, 1976).

Lin, Wong & McBride-Chang (2012) studied relationships between eight reading motivational factors with Chinese as a first language (L1) and with English as a foreign language (EFL) respectively with one hundred four Hong Kong Chinese fifth graders. It was found that instrumentalism was strongly correlated with EFL reading comprehension, whereas recreation was highly associated with L1 reading comprehension.

In summary, motivational studies conducted in the realm of L2 education in Mainland China can be viewed as a process of introducing foreign theories to begin an understanding of motivation. Thereafter, Chinese researchers are working to validate, modify, or adapt these theories in a more specific Chinese context. Eccles and Wigfield (2002, p.130) argued that theories of motivation need to integrate contexts because "it is difficult if not impossible to understand students' motivation without understanding the contexts they are experiencing." Even though there have been some studies which have addressed Chinese students' motivation to learn and to read in L2, it is far from providing a clear understanding about how such motivation is developed and the nature and extent of its influence. Even fewer research studies have been conducted regarding the relationship between the various motivational variables to read and the depth, or thoughtfulness, of reading comprehension. A review of the published work reveals a problematic tendency in the study of motivation to focus more upon theoretical studies than empirical ones. Researchers have constructed some "grand" theories of motivation, which have not yet been

supported by empirical findings. Although Wen and Wang (1996) has attempted to construct a framework of reading comprehension for Chinese learners, no study has yet been performed to validate her idea. Therefore, the relationship between motivation to read and level of reading comprehension has not been clearly established. In addition, methodologically, the reliability and validity of the measurement tools have yet to be established. Since sample sizes for the few studies previously conducted have been relatively small.

Thoughtful Literacy

What it means to be literate has changed along with the demands of the personal and civic life of Americans. Myers (1996) reviewed the development of literacy in United States stating that the requirements of literacy have been raised from "signature literacy" in 18th century (the ability to read and write one's name) to "recitation literacy" in 19th century (the ability to memorize texts such as Bible verses demonstrated by oral recitation of memorized texts such as Bible verses) to the "decoding/analytic literacy" of 20th century (the ability of decoding individual words and comprehending literal text). At present, to be considered as reading comprehensively one must have a command of more than the ability for word recognition, phonemic awareness, fluency and vocabulary. The image of a passive, solitary reader as recipient fails to accurately describe a comprehensive reading schema. To be thoughtful or meaningful, reading must include a dynamic interactive process which requires a level of skills and mental processes which are complex. Reading comprehension must now include reciprocal interactions between readers,

the text, and an application of a reader's perspective in the context of personal experience and prior exposure to text. Such reading includes the dynamic interaction of the reader's background knowledge, the information inferred by the written language, and the reading situation context (Dutcher, 1990). This is the thoughtful creation of meaning. A reader should be able:

> To demonstrate an overall understanding of the text, providing inferential as well as literal information…to extend ideas in the text by making inferences, drawing conclusions, and making connections to their own experiences and to other readings…to summarize and apply information. (Grigg, Daane, Jin & Campbell, 2003, pp. 11-13)

Bruanger & Lewis (2006) illustrated:

> At the advanced level, readers should be able to generalize about topics in the reading; apply critical standards to texts, analyze both meaning and form; develop a perspective on a text and explain the reasons for it; and analyze, synthesize, and evaluate points of view. (pp. 4-5)

Luke (2000) describes reading as involving four distinct skills: code-breaking, participating in text, application of this text for individualized purposes; and analyzing the text. He considers reading as a dialectic exercise of readers as both listeners and responders.

Luke (2000) suggests that code-breaking is primarily a listening activity but if a reader is to become a participant, a response is required. The meaning in the text and the meaning brought to the text by the reader synergize to create new and unique

meaning. Readers as participants will engage with text drawing upon their own experience and for their own purposes. Truly engaging in thoughtful reading, they need to participate in reconstructing meaning from the texts.

With a deeper understanding of reading and the development of literacy, reading is now viewed as "an active process that requires an intentional and thoughtful interaction between the reader and the text" (Report of the National Reading Panel, 2000, pp. 4-5). Allington (2012) defined Thoughtful Literacy as the ability of "engaging the ideas in the text, challenging those ideas, reflecting on them, and so on" (p. 151). In fact, "we are entering the arena called 'Thoughtful Literacy'…represents something different from the narrow, remembered-focused tasks that have dominated school comprehension lesson" (Allington, 2012, p.129). Many state governments in the United States have developed achievement goals that reflect the new appreciation that all students should be attaining Thoughtful Literacy. Schools should be preparing our students by providing them basic literacy skills: the ability to read and recall, to write well and spell correctly. They must also be providing Thoughtful Literacy skills, including the ability to read, write and think in complex and critical ways.

Students who do not think about what they read are not really reading at all. Thoughtful Literacy requires the ability to think about text and the ability to link the text with one's existing knowledge as well as the ability to recall details. Students who are actively engaged in thoughtful reading display higher levels of motivation and academic achievement (Guthrie & Anderson, 1999). Guthrie, Van Meter,

Hancock, Alao, Anderson & McCann (1998) found that students reporting higher intrinsic motivation (participation from the pleasure one gets from the task itself) are likely to read more often and widely than students with stable or lower intrinsic motivation. Wigfield and Guthrie (1997) reported research that showed a positive correlation between amount of reading and the variety of reading with increased reading achievement. Antony Applegate and Mary Applegate (2010) conducted research on Thoughtful Literacy and motivation. They sampled 442 students from grade two through grade six and adopted the Motivation to Read Profile developed by Gambrell et al (1996) described earlier. It yields measures of both reading self-efficacy and task value of reading. One of their findings indicated that the inclination to respond thoughtfully to text is related to motivation to read. These findings open doors to many issues such as causal and reciprocal problems between motivation to read, Thoughtful Literacy and effective instruction in classroom.

Reading in L2 has also been regarded as a passive process to decode the text in order to get the writer's intended message. "Reading research was traditionally focused on reading primarily as a vehicle for examining perceptual processes such as eye movement, field of vision, perceptual span, and word recognition" (Hudson, 2007, p.32). Theories of L2 reading comprehension have experienced a change from focusing on product to process. The studies, in 1960s, on L2 reading tended to regard reading as a passive process. The "bottom-up process" is a model of taking in letters, words, phrases, clauses and sentences to reconstruct the authors' meaning in a linear manner and without assistance from higher-level knowledge. It focuses on how

readers decode information from the printed words. However, Goodman (1971) proposed a top-down psycholinguistic model to treat reading as an active process "in which the reader brings to bear not only knowledge of the language, but also internal concepts of how language is processed, past experiential background, and general conceptual background" (Hudson, 2007, p.37). This model asserts that a skilled reader would use cues from the language to predict meanings, "and most important, confirms them by relating them to his or her past experiences and knowledge of the language" (Carrell, 1988, p. 2-3). In most circumstances, bottom-up and top-down processes work together to ensure the accuracy and efficacy of information processing.

An interactive reading model (Rumelhart, 1977) was proposed to recognize the interaction of the text and the reader in the reading process. It "acknowledges a great deal of communication between the differing bottom-up and top-down process" (Hudson, 2007, p.39). It attempts to take into account the strong points of the bottom-up and top-down models, and tries to avoid the criticisms leveled against each, making it one of the better approaches to the theory of reading today. (McCormick, 1988)

Other interactive theories on reading in English as a first language were also found to be useful by the L2 reading community: Stanovich's (1980) interactive-compensatory model, Kintsch and Van Dijik's (1978) text comprehension model and Anderson and Pearson's (1984) schema-theoretic model. The application of these theories of L1 reading to L2 reading demonstrates that the ESL reading

research community has accepted that reading is an interactive process. A process where readers can and do actively participate in interpreting meanings. The building of meaning is based on textual clues together with a readers' background knowledge and prior experience.

Despite the perceived validity of these interactive models describing the L2 reading experience, there has been no research found which seeks to apply Thoughtful Literacy considerations to our understanding. Thoughtful Literacy accurately considers reading as an interactive process. Any research done in the discipline of L2 reading must, necessarily, be conducted in a manner which includes those conclusions as assumptions.

After a review of the literature in the field, one comes to the conclusion that L2 reading research is not fundamentally rooted in Second Language Acquisition experience, but instead has grown out of research conclusions regarding L1 reading. Most of the major research findings explaining reading comprehension depend upon research with learners reading in English as their first language. However, "…the basic comprehension process is one that generalizes across L1 and L2 contexts, even if local processing details might vary across different L1s and across L1 and L2 context" (Grabe, 2009, p. 1). L2 reading is a "cognitive extension" of the L1 (Nakada, Fujii, & Kwee, 2001). The progress of L2 reading research has been dependent on the theoretical work of academics researching reading in English as L1. The reason for such dependence might be due to the fact that the L2 research community is

usually of the opinion that the L2 reading process is virtually the same as in English as a first language (Bernhardt, 2003).

L2 theorists seem to agree about the importance of thoughtful reading as a process. Reading in L2 should not be considered as merely a sequential display of isolated words and sentences. Instead, it is visual communication of the author's intended message to the reader. As early as Gray (1960), reading comprehension was described to include three major aspects: reading lines of text, reading between the lines, and reading beyond lines. This description is far more than merely linking sentences. Chall (1983) also proposed that beginning reading was different in kind from mature reading. She found that children first learn to read and then read to learn.

Thoughtful Literacy needs to be understood as it applies to English students in China. L2 learners are qualified to enroll in colleges and it is assumed that they have acquired adequate vocabulary, sufficient reading skills in L1 and L2 and competent cognitive development. However, one of the major problems of L2 readers is that they may view texts as samples of English language rather than a means of communication or as a means of conveying information (Stanley, 1984). The orientation to read in L2 still remains in the stage of learning to read. However, we are beginning to appreciate just how much "learning to read and reading to learn" are interwoven into the whole reading process instead of separate stages. The L2 readers who integrate language acquisition and thinking beyond the language itself benefit far more from the reading and therefore, are more likely to engage in reading. Nuttall

(1982) and Coady (1997) assert that the active interaction between literacy skills, reading engagement and language learning could be seen as a "virtuous circle". If L2 readers engage in reading they acquire more target language proficiency and skill. The engagement and pleasure they derive from reading motivates them to read more and better, experiencing more growth of L2 literacy development.

The L2 research on higher-level reading comprehension is mainly focused on discourse processing and the unique factors affecting text comprehension. Dijk and Kintsch (1983) proposed mental-model theory identifying three distinct levels of comprehension: surface form, propositional text base, and situation model. It indicates that the reading comprehension in L2 is multi-leveled and goes well beyond the literal meaning of the printed text. Moreover, comprehension, beyond only language proficiency, requires the reader's ability to visualize, connect and apply his/her own analysis to real world situations generalized from that text. A considerable number of studies have investigated coherence awareness (Danner, 1976; Garner, Alexander, Slater, Hare, Smith, & Reis, 1986), general knowledge of the world (Anderson & Pearson, 1984) and transfer of L1 skills (Maeng, 2005; Koda, 1993) and established that they are significant influential factors to L2 reading comprehension.

Nevertheless, there is a lack of L2 research using sophisticated modeling frameworks to delineate the relationship between motivations and the development of L2 Thoughtful Literacy as above explained. The present study attempts to shed new light on relationships among reading motivations, engagement and inclination to

response thoughtfully to text in a L2 context instead of relying upon what has been previously obtained through studies in L1.

Summary

As we can see, a great deal of research on L2 learning motivation has been conducted based on a variety of theoretical approaches and traditions (Gardner, 1985, 2001a; Deci & Ryan, 1985; Dörnyei, 1994, 2000, 2001a; Crookes & Schmidt, 1991; Csizér & Dörnyei, 2005) The social-educational model proposed and validated by Gardner and his associates has been followed for decades. The concepts of integrativeness and instrumentality have created a theoretical approach by which we can begin to understand the elements of motivation of L2 learners. Researchers have long toiled to identify the most important motivational constructs in L2 learning generally, rather than motivation for specific areas, such as reading.

Since the 1990s, various theories of motivation have been widely studied in research projects and educational practice in order to promote reading motivation in L1 (Guthrie et al., 1998; Guthrie & Wigfield, 2000; Wang & Guthrie, 2004; Wigfield & Guthrie, 1997; Eccles, et al., 1983; Pintrich & De Groot, 1990; Chapman & Tunmer, 1995;). A review of the literature in this field indicates that "many of the concerns for second language reading have evolved from initial research into first language model building" (Hudson, 2007, p. 31). However much research has been undertaken in the field of L1 reading motivation, research on L2 reading motivation is surprisingly meager.

Reading engagement in L1 has been found to have a positive association with readers' motivation, the amount of reading and reading achievement as measured by standardized tests (Guthrie & Anderson, 1999; Guthrie et al., 2007; Wigfield & Guthrie, 1997; Gottfried, 1990) In 2001, Richard Allington conceptualized engaged reading as Thoughtful Literacy and speculated that reading thoughtfully may improve reading comprehension and motivate L1 learners. His theory was validated in research done by Anthony and Mary Applegate (Applegate & Applegate, 2010). While several academics have explored how aspects of Thoughtful Literacy instruction have an impact on students' achievement and motivations (Guthrie, et. al., 2000; Nystrand, 2006; Taylor, Pearson, Peterson & Rodriguez, 2003; Hoffman, McCarthy, Elliott, Bayles, Price, Ferree & Abbott, 1998), none have explored whether it can assist us to appreciate the motivation to read in L2 and how differentiated motivations are related to reading thoughtfully in L2.

Chapter 3 Research Design and Methodology

The literature review provided a sizable body of information about previous scholarship on L2 motivational theories and the current research on motivation to read in L1 and L2. Reading motivation can explain the factors that affect whether students read or not, why some students read more than others and also what engages students in reading (Guthrie & Wigfield, 2000). Without this motivation, students will be less likely to use prior knowledge, analyze the text, generalize the theme and apply the content of their reading to various contexts of their own personal experience. In this sense, motivations, from such sources as self-efficacy and task value, significantly influence the level of students' reading engagement. Although engaged readers are more likely to acquire higher achievement in reading (Campbell, Voelkl, & Donahue, 1997), the relationship between motivation and the depth of reading has not been adequately clarified through research. "Depth of reading" in this research is used interchangeably with "Thoughtful Literacy", which has been defined by Applegate (2012) as remembering, understanding, recognizing, analyzing, generalizing and applying the reading's continuum. Further inquiry needs to be conducted in order to produce a better understanding of these two important constructs and how they interact.

In this chapter, the research methods used in this study are discussed in detail. Topics addressed in Chapter 3 are research design, instrumentation, quantitative data collection and data analysis. The questionnaire was developed for use in this study is

presented (Appendix A) as well as instruments that were adopted to investigate Thoughtful Literacy (Appendix B).

Research Population and Samples

The study was conducted within a prominent comprehensive university in China with approximately 32,400 students. It is located in southern part of China. The participants in the study were newly enrolled college students at the university. Given that millions of Chinese L2 learners are enrolled in Chinese universities, random sampling of all freshmen students would be extremely difficult. Therefore, convenience sampling was used. Nevertheless, to preserve a degree of reliability in the sample, care was taken to insure that only students who had matriculated through the mainland Chinese education system were in the population of the sample. This precaution was taken because there are many students from outside China i.e. Philippines, Indonesia and Hong Kong who attend universities in China and have had widely differing exposures to English.

The samples for the research were drawn from five classes with variety of students from 13 different majors of five different colleges, which are College of Chinese and Culture, College of Science and Engineering, College of Pharmacy, College of Journalism and Communication and Medical School. None of these classes included students who were majoring in English. All of the participants had passed the rigorous College Entrance Exam (CEE) in order to be accepted for enrollment at their university. Participants' English scores on the College Entrance

Exam (CEE) ranged from 49 to 143 out of a possible score of 150. Although the samples were chosen from five classes of five different colleges, they were not selected on the basis of their English achievements but rather by their total scores in five different subjects tested in CEE. Consequently, the classes included a mixture of low to high English proficiency students. Since this major university is located in the capital of Guangdong province, the universe of possible participants comes from various geographic locations within China and from different socio-economic backgrounds. Given these measures, the researcher assumed that the participants of the study were a valid and representative selection of the general university-level L2 learners in any of the other metropolitan cities in China.

The sample size was determined in accord with the general guidelines established for multiple regression analysis --- the statistical procedures which were chosen to be used in this study to investigate the questions the researcher set out to answer. Green (1991) suggested a formula for determining regression sample sizes: $N>50 + 8m$ (where N is the sample size needed and m is the number of independent variables included in study) for testing the multiple correlations. In the current study, it was determined that a minimum of 90 participants was needed to investigate the effect of the reading motivation variables on Thoughtful Literacy. A total of 179 L2 learners of English participated in taking the study's questionnaire. The gender of the subjects was asked.

For participants, to be included in the study, they had to meet two criteria. First,

the respondent had to be between the ages of 18-21, which ensured that the sampled respondents possessed a similar and adequate cognitive developmental level. A comparatively high cognitive development is a prerequisite to process the higher order thinking. Most adolescents in this stage have gained the cognitive abilities for abstract thinking, practical problem-solving skills, test hypotheses, and drawing conclusions about events they have not experienced firsthand. ("Cognitive Development: Age 12–19", n. d.) Children as a rule tend to define themselves by their physical traits whereas adolescents, more frequently define themselves based on their values, thoughts and opinions. (Carlson & Heth, 2010) The second criteria was that they had to be originally from mainland China and therefore have all been required to complete the same EFL curriculum which is uniformly implemented in Chinese K-12 English education.

Research Design

A survey questionnaire was constructed in the research to learn more about L2 learners' reading motivation, some general profile data of the participants and their learning experience related to their L2 acquisition. The questionnaire allowed the researcher to collect data about Self-Efficacy of English Reading and Task Value, which includes the Intrinsic Value of English Reading assigned to the act of reading, Extrinsic Value of English reading, and Importance of English Reading and Willingness to Pay Cost to Reading for a convenient sample of L2 Chinese learners. The questionnaire offered the prospect of obtaining descriptive and inferential

statistics for further analysis of the research questions.

At the beginning of the fall semester of 2012-2013 academic year, this researcher distributed the questionnaires for the study during the participants' regular English classes after having distributed and collected the Informed Consent Form in which the purpose of the study, the confidential nature of the research, and the participants' role in the data collection process were specified. These Consent Forms were signed and collected prior to the subjects completing the Questionnaire. The administration of the Questionnaire was conducted during a single class period. The usual class teacher was not present during the Questionnaire administration to encourage an honest response from the participants on motivational items (Mills, 2004). The researchers explained the directions for the Questionnaire and encouraged the participants to ask questions. Upon the completion of the Questionnaire, they were collected and retained personally by the researcher until they were secured to preserve confidentiality.

Subsequent to the administration of the reading motivation questionnaire, two English reading passages were distributed to all participants in order to investigate Thoughtful Literacy, the depth of their reading. Two narrative passages adopted from The Critical Reading Inventory (CRI) (Applegate, Quinn, & Applegate, 2008) were given to participants to measure their higher order thinking and thoughtful responses. The participants were required to read silently and encouraged to take as much time as they needed to read these passages. Since the purpose of the study is to assess

their thinking rather than their English speaking proficiency, the participants were allowed to use Chinese to answer the questions in writing permitting them to more accurately articulate their thoughts and understandings. The researcher followed the guidelines for scoring comprehension questions in CRI to give a credit (10 points), partial credit (5 points) or no credit (0 points) to participants' answers. The descriptive and inferential statistics were used to analyze across the subjects and questionnaires, which makes this a quantitative study.

Instrumentation

A two-part questionnaire was used to acquire the quantitative data needed for this study. The first part was designed to collect and record individual background information for each participant such as his/her gender, age, year in college, major, age at which they began formal instruction in English, number of years spent in English learning, instruction by native speaking English teachers, international experience, self reported English efficacy and English scores on their College Entrance Examination. The second part included 35-Likert-type items (Appendix A). Participants were asked to rate each statement by their level of agreement on a 6-point scale: 1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *slightly agree*, 5 = *agree*, 6 = *strongly agree*. The questionnaire was designed to investigate the motivation to read based on the rationale of Expectancy Value theory. There are five constructs in the questionnaire, which are Self-efficacy of Reading (SLE), the Intrinsic Value of Reading (INV), Extrinsic Value of Reading (EXV), Importance of

Table 2

Distribution of Questionnaire Items to Five Motivation Constructs

Construct	Number of Items
Self-efficacy of Reading	1 to 8
Intrinsic Value of Reading	9 to 16
Extrinsic Value of Reading	17 to 23
Importance of Reading	24 to 29
Willingness to Pay Cost to Reading	30 to 35

Reading (IMV) and Willingness to Pay Cost to Reading (WCost). The distribution of items to five motivational constructs in the questionnaire is presented in Table 2.

Rating scales of items for all factors were totaled for measurement after negatively worded items were reversed so that higher scores on each item reflected the more desirable response to the statement. As participants of the current study were all Chinese students, in order to ensure the participants' understanding of the survey questions, the questionnaire was presented in both English and Chinese.

The questionnaire used in this study was adopted and modified from three questionnaires used in previous research. One was a 30-item survey developed by Mori (2002) with .93 Cronbach's Alpha. Mori's questionnaire items were primarily based on the theory of reading motivation proposed by Wigfield and Guthrie (1995, 1997). Question numbers 1, 2, 8, 9, 10, 11, 13, 15, 17, 24, 25, 27 and 28 from the questionnaire used in this study were adopted or modified from Mori's (2002).

The Motivation to Read Profile (MRP) reading survey (Gambrell et al., 1996) was the second reference source. MRP was constructed based on Eccle's exceptional value theory which focuses on two important motivational components - task value and self-efficacy. The shared theoretical foundation with this research makes

questions more adaptable. Questions number 5, 7, 9 and 15 pertaining to importance of reading and self efficacy are referred and modified into the questionnaire of this study to better fit the setting of L2 contexts and the local educational system. MRP had a moderately high reliability for both third grade (.70) and fifth grade (.76). Some additional items were added to incorporate the constructs of Extrinsic Value of Reading, Importance of Reading and Willingness to Pay Cost to Reading which are included in the Expectancy Value Theory. The questionnaire investigating the thoughts and beliefs of English learners about English learning was the primary reference (Dörnyei, 2002, p. 149-173). Since Dörnyei's questionnaire was designed to study English learners' beliefs about learning English. Questions number 10, 22, 28 and 42 from Dörnyei's questionnaire were used with modifications. Some newly designed items were used to take into account the differences in the characteristics of Chinese learners and the Chinese educational system. The fact that this will be the first such test in China with Chinese subjects, which in itself presents a researcher with several important issues, the researcher thought it wise to stick close to tested and reliable instruments to take measurements in this study.

Controlling measurement error is always a major concern in quantitative research, so establishment of validity and reliability were a focus for this study. Content validity refers to whether the questionnaire actually measures what it is intended to measure. It is "determined by expert judgment. There is no formula or statistic by which it can be computed, and there is no way to express it quantitatively"

(Gay, Mills & Airasian, 2009, p.155). First, the questionnaire was based on several well-developed instruments of proven validity. Second, a panel of three experts (see Appendix C) reviewed the suitability and clarity of the questionnaire to confirm the content validity.

Reliability of an instrument refers to "the degree to which a test consistently measures whatever it is measuring" (Gay, Mills & Airasian, 2009, p.158). For this study, the internal consistency of the instrument was measured for each factor of the Likert-type scale using the Cronbach's alpha, which estimates "internal consistency reliability by determining how all items on a test relate to all other test items and to the total test" (Gay, Mills & Airasian, 2009, p.161). After the expert panel reviewed the questionnaire and established the content validity for the instrument, the Cronbach's alpha of each construct in the questionnaire was calculated to ensure the internal consistency of the items. A Cronbach's alpha rating of .70 or higher is considered acceptable in most social science research, so for the purposes of this research, the Cronbach's alpha of each construct must meet a minimal standard of .70 for reliability.

Principal Component Analysis (PCA) was used to reduce the dimensionality of data and to extract principal constructs out of multiple items. In this research, there were 35 items in the questionnaire pertaining reading motivation; this statistical procedure can generate linear combinations of the original data set in order to identify the hidden patterns, also known as principal components or factors.

Additionally, after the factors were identified, "factor scores were calculated for each one, and were used in the follow-up multiple regression analyses to investigate the reliability of each of the factors in predicting selected reading and writing skills" (DeStefano, Zhu & Mindrila, 2009, p. 2). It is another approach which was used as a means to ensure the reliability of the questionnaire in assessing motivation to read.

Test-retest reliability, also called stability, is another important reliability index. To establish the reliability, the questionnaire was administered twice to the same group of participants with an interval of three weeks between administrations. The researcher computed the Pearson correlation coefficients of five constructs with the two sets of scores and evaluated the results with .00 indicating a lack of reliability and 1.00 indicating perfect reliability. It was found that test-retest reliability of the five constructs range from .71 to .88 with a mean of .79 for all samples combined. A reliability coefficient of at least .70 is typically considered to be acceptable (Leong & Austin, 2006). The results of coefficients were presented in Table 3.

Another instrument used in this research study was the Critical Reading Inventory (CRI). "This is the only reading inventory on the market to support the treatment of reading as a thinking process through questions and assessments that measure not only readers' ability to recall facts, but also whether they can draw

Table 3

The Test-Retest Reliability Coefficients of Motivation Constructs

	Self-efficacy of Reading	Intrinsic Value of Reading	Extrinsic Value of Reading	Importance of Reading	Willingness to Pay Cost to Reading
Coefficients	.74	.84	.88	.77	.71

Note: n=179

logical conclusions about those facts and respond critically to those conclusions" (Critical Reading Inventory, n. d., para. 1). The instrument is well developed and thoroughly field-tested and "would be a good fit for reading professionals concerned with thoughtful response and higher-level thinking" (Nilsson, 2008, p. 535). For these two narrative passages used in the study, there are ten questions for each passage: four text-based, three inference and three critical response items. "Test-based questions require the readers to recall what they have read. Inference questions need readers to link experience with the text and to draw a logical conclusion. Critical response questions require readers to express and defend an idea related to the content of the passages" (Applegate et al., 2008, p. 57). The instrument evaluated Thoughtful Literacy in three different types of levels, which were text-based, inferential and critical. Text-Based Reading (TBR) including text based questions and Higher Order Comprehension (HOC) including inferential and critical questions were assessed.

CRI provides three narrative passages for each grade from K-12. The two narrative passages were drawn from fifth grade level of the CRI. They are *Getting What You Want* and *The Player* (Appendix B) with readability levels of 5.6 and 5.4 respectively, calculated using the Flesch-Kincaid Formula. It was a major concern to ensure the reading passages were a good fit for the L2 Chinese readers given the fact that the CRI was designed for L1 readers. All the participants have taken the College Entrance Exam in China through which they are expected to demonstrate their ability

to meet the requirements for admission to colleges. The researcher randomly chose 30 reading passages from previous Chinese College Entrance English examinations from the year of 2006 to 2012 and, as done in the Critical Reading Inventory, calculated their readability using the Flesch-Kincaid Formula. The built-in Flesch-Kincaid Formula in Microsoft Word software (2007) was used in the calculation of the readability of these selected reading passages. The mean average readability of selected reading passages in College Entrance Examination is 5.5 with a range of 4.3, which provided the researcher with a guideline for choosing the reading passages. A field test was conducted with twenty freshmen, from the same population but not subjects included as the part of the research samples, to verify and establish the appropriate readability of the chosen reading passages as well. Based on that field test and analysis, the two passages from the CRI were judged to have a readability level that was appropriate to the participants' level of English proficiency.

"Reading in a L1 shares numerous important basic elements with reading in a second or foreign language, the processes also differ greatly" (Singhal, 1998). In the L2 contexts, the reading becomes even more complex and involves more variables, which are not relevant to L1 reading.

In an L2 context, the schema that L1 and L2 readers have is significantly different because it is believed that "every act of comprehension involves one's knowledge of the world as well" (Carrel & Eisterhold, 1983, p. 553). To facilitate L2 reading, some attention must necessarily to be given in the selection of passages.

Putting it this way, a researcher must be aware of how much cultural differences will influence or affect the results.

There are two main types of schema. One is referred to as formal schemata, which is background knowledge of rhetorical structure. The second is referred to as content schemata, which is background knowledge of the world (Carrell, 1983). To minimize the influence of different cultural formal schemata, this research used narrative texts as the reading texts because they have been found to contain a causal-temporal structure familiar to readers. The logical structure of expository texts has been revealed to result in an additional level of difficulty (Cote, Goldman, & Saul, 1998). Narrative texts are also selected because they often contain topics familiar to readers. Human relationships or texts dealing with interpersonal problem are often the focus of such works. Expository texts can usually be found to explore novel topics which are less familiar. Readers of narrative texts find it natural to create primal, causal and connective reference to the text. On the other hand, a very different sort of connect to the text is required in processing expository texts (Graesser, McNamara, & Louwerse, 2003; Van den Broek, Virtue, Everson, Tzeng, & Sung, 2002). Considering the influence of content schemata on participants of this study, a Chinese folk tale was selected from the CRI to activate the background knowledge of the participants. Another passage in the CRI includes a childhood experience familiar to the participants in order to facilitate the interaction between these L2 readers and the passages written by western authors.

It is recommended that the CRI be administrated through a one-to-one interview with readers, who are in grades K through 12 in order to investigate their thoughts on various questions. Since the participants in this study were all adults, who had acquired a higher level of L1 writing literacy, the CRI was conducted in writing. To ensure the reliability of the CRI in this different form, alternate forms reliability was used.

> It is one method for estimating the reliability of test scores. By obtaining scores from two different forms of a test, test users can compute the correlation between the two forms and may be able to interpret the correlation as an estimate of the test's reliability. (Furr & Bacharach, 2007, p. 105)

In this study, ten participants were selected randomly from the participants' pool. Five participants had one-to-one interviews with the researcher following the administration guide of the CRI. With a 10 days interval, the five participants took the CRI in writing. Another five participants finished the CRI in writing first and were interviewed by the researcher ten days later. The rater followed the guidelines for scoring comprehension questions and discovered that the scores that students achieved on the written and oral response tests were very similar (see Appendix D). The findings in this reliability test of alternate forms (written response and scored interview) revealed that five of the ten students had scores slightly higher for the written form (5 -15 higher in 200 full scores) than they achieved on the scored interview while three out of ten students scored slightly lower on the same form (10 -

15 in 200 full scores). The scores for two students were identical in both methods. The written answers exhibited the same understanding that the one-to-one interview revealed. It ensured the reliability of the CRI in a written administration form, at least in college level population.

The researcher conducted the one-to-one questioning of the participants after they had indicated they were finished with the reading. The questions were asked in both Chinese and English. Participants were asked to answer the questions in Chinese. A digital audio recorder was used to keep track of the answers of participants. This also gave the rater the opportunity to review and modify the scores of the participants' responses at a later time, especially answers to reading questions assessing the depth of reading.

Data Analysis

Data analyses were done utilizing the Statistical Package for Social Sciences (SPSS 21) to test this study's hypotheses.

To describe the characteristics of the Chinese college L2 learners who participate in this study by gender, age, major, years spent in English learning, native English teachers, international experience, self reported English proficiency and English scores in College Entrance Examination, the report included an analysis with examinations of frequencies, percentages, means, and standard deviations.

To delineate the motivation to read of Chinese L2 learners, frequencies and percentages, central tendency measures (mean), and variability measures (range and

standard deviations) were used. Since the summated scales of 35 Likert items in the questionnaire are interval, a mean score was calculated for each variable. The mean of all the participants will also be calculated.

To determine whether variables of English reading motivation are correlated with Thoughtful Literacy and to analyze the weight of English reading motivation, multiple regression analyses were conducted. According to Field (2009), "Regression Analysis enables us to predict future outcomes based on the predicator variables" (p.198). The multiple regression analysis calculates the contributions of each of the predictive variables by looking at the significance value of the t-test for each predictor. If the predictor meets the removal criterion (i.e. if it is not seen to be making a statistically significant contribution to how well the model predicts the dependent variable) it is removed from the model (Field, 2009, p.213). Multiple regression analysis was utilized to determine the degree to which each of the variables of reading motivation can influence Thoughtful Literacy (dependent variable). The independent variables in the regression model are Self-Efficacy of English Reading, Intrinsic value of English Reading, Extrinsic Value of English Reading, Importance of English Value and Willingness to Pay Cost to English Reading. Separate bivariate analyses were conducted to answer the research question 1, 2 and 3. Multiple regression analyses using methods of "enter" and "stepwise" were utilized to explore the research question 4 more thoroughly.

Summary

As discussed in this chapter, the study adopted the quantitative design. In this approach, quantitative data were collected through questionnaires and a test of Thoughtful Literacy including two narrative passages. The profile data of participants were included within the quantitative data to provide descriptive data for the research. The participants for both the motivation survey questionnaires and for thoughtful literary tests were selected using the convenience sampling method. After collecting the completed motivation survey questionnaires, the researcher identified and contacted the participants to arrange the Thoughtful Literacy test.

Using the research questions as the guiding principles, quantitative data from two instruments were measured and analyzed. Quantitative data analyzed with descriptive statistics and multiple regression analyses. After the quantitative data from the two instruments were aggregated and analyzed, the findings were extracted.

Chapter 4 Results

This chapter presents the quantitative results of responses to the study's questionnaire. First, the demographic characteristics of the participants are described. The procedures used in the statistical analysis of the questionnaire dealing with motivation to read included descriptive statistics, factor analysis and Cronbach's Alphas to guarantee the reliability of the data gathering instruments. Reading scores of two narrative passages chosen from the CRI are reported later. A multiple regression analysis was conducted to examine for the purposes of investigating the relationship between reading motivation and Thoughtful Literacy. The results are presented in the order of the research questions of the study.

Demographic Characteristics of Participants

One hundred and seventy nine newly enrolled Chinese college students responded to the questionnaire. Students completed the questionnaire and the reading of an English text passage during a 50-minute instructional period which took place in the third week of instruction of the students' first semester in college. The names of the participants were not used in order to maintain confidentiality and assure anonymity. Fifty-five (31%) of these students were male, and 124 (69%) were female. The 179 participants were between the ages of 18 and 21: 90% (n = 161) of the students were 18 or 19, and 10% (n =18) of the students were 20 or 21.

The survey participants also provided information about whether they had had any experience living overseas. None of the participants had travelled or studied in

an English speaking country for more than three months. About 50% participants had had a native English speaker as their teacher. The category of rural or urban childhood home environment was not included in analysis due to the difficulties of correctly grouping them due to the inadequate specificity of the information received through the questionnaire.

Participants were also asked to quantify how long they had been actively learning English. Table 4 presents the number of years of English study students reported prior to beginning their first year of college. Eighty-one percent of participants reported nine years or more of previous English study, which meant for that group, English learning had begun in grade four at age of 11 or earlier.

Questionnaire participants represented a wide distribution of majors available to students at the university. As shown in Table 5, the participants were enrolled in 13 different majors; 39% were from the arts programs (Chinese as a Foreign Language, Chinese, Broadcasting and Hosting Arts), and the rest were from the Science programs (Information Management and Information Systems, Pharmacy, Food Quality and Security, Chemistry, Applied Physics, Dentistry, Clinical Medicine, Architecture, Environmental Engineering, Materials Science and Engineering).

Questionnaire participants also had an opportunity to assess their own perceived

Table 4

Years of Learning English of Participants

Years	6	7	8	9	10	12	13
Number of participants	21	6	6	54	57	28	6
Percentage	13%	3%	3%	30%	32%	16%	3%

Table 5

Academic Majors of Participants

Major	No. of Students
Arts Programs	
Chinese as a Foreign Language	26
Chinese	42
Broadcasting & Hosting Arts	2
Sciences Programs	
Information Management and Information system	2
Pharmacy	16
Food Quality and Security	25
Chemistry	16
Applied Physics	4
Dentistry	5
Clinical Medicine	23
Architecture	3
Environmental Engineering	8
Materials Science and Engineering	7

Table 6

Participants' Self-assessed English Proficiency

Self-assessed English Proficiency	Number of Students	Percentage
Beginner Level	2	1.00%
Post-beginner Level	7	4.00%
Lower Intermediate Level	56	31.30%
Intermediate Level	108	60.30%
Upper Intermediate Level	6	3.40%

level of English proficiency using a benchmark scale the questionnaire had prescribed. Table 6 illustrated that a vast majority (91.6%) of participants assessed their English proficiency at an intermediate or lower intermediate level.

Table 7 presented a comparison of the Reading Motivation of the survey participants according to various grouping, i.e., male students versus female students; students from the arts programs versus students from the science programs; and students who had learned English more than nine years versus those who had learned

Table 7

Descriptive Statistics of Questionnaire to Reading Motivation between Different Groups

Variable	N	Minimum	Maximum	Mean	S.D.
Years of Learning					
Nine or less	78	105	150	126.41	9.22
More than Nine	101	102	161	127.10	10.99
Program					
Arts	71	103	149	127.56	8.95
Sciences	108	102	161	126.30	11.01
Gender					
Female	124	102	161	126.92	10.52
Male	55	103	146	126.53	9.66

English nine years or less. The results showed that there are no significant differences between any of two groups.

Refinement of Questionnaire to Motivation to Read

Two approaches were adopted for refining the instrument and ensuring the reliability of the survey instrument. First, the Cronbach's Alpha was used to determine internal consistency of individual items within constructs. Second, principal component analysis (PCA) was employed to find optimal ways of combining variables of the questionnaire into a small number of subsets.

Cronbach's Alphas

Table 8 presented the reliability of selected items utilizing a Cronbach's Alpha coefficient. As mentioned in Chapter 3, a Cronbach's Alpha rating of .70 or higher is thought to be an acceptable level of reliability in most research in the social sciences. For the purposes of this research then, the Cronbach's Alpha of each construct was required to meet a minimal standard of .70 for reliability. As shown in Table 8, Construct Self-Efficacy of Reading, Intrinsic Value of Reading and Importance of

Table 8

Cronbach's Alphas of Motivation Constructs in the Questionnaire Pertaining to Motivation to Read Before and After Items Removal

Construct	Before Removal		After Removal	
	Items No.	Alpha	Items No.	Alpha
Self-efficacy of Reading (Item 1-8)	N. A.	.78	N.A.	.78
Intrinsic Value of Reading (Item 9-16)	N. A.	.82	N. A.	.82
Extrinsic Value of Reading (Item 17-23)	20	.62	20	.72
Importance of Reading (Item 24-29)	N. A.	.87	N. A.	.87
Willingness to Pay Cost to Reading (Item 30-35)	32, 35	.59	32, 35	.72

Note: N.A.= Not Applicable

Reading have met the Cronbach's Alphas requirement. Before deleting any items from the questionnaire, the Cronbach's Alphas were not high enough in the constructs of Extrinsic Value of Reading (EVR) and Willingness to Pay Cost (WCost).

In Extrinsic Value of Reading construct, Cronbach's Alpha was .62 with original 7 items, and increased to .72 after removing one item of the lowest correlation with the total, which was Item 20, "Having a passing score in class is all what I want in English reading."

Since Item 32 had the lowest corrected item-total correlation, it was similarly determined the best candidate for elimination. To ensure an acceptable Cronbach's Alpha for construct WCost, the researcher reran the reliability analyses process without item 35. Crobach's Alpha without item 32 was .69. It still did not meet the

acceptable Alpha score for reliability. It was found that item 35 had the second lowest corrected item-total correlation in construct WCost analysis. Examining the item content of item 32 and item 35, a decision was made to run the reliability of these two items to determine whether they were strongly correlated. It was found that their Cronbach's Alpha was .39, which was low for internal consistency. As a result, it was seen as not being worthwhile to include items 32 and 35 in the WCost construct.

The reliability procedure was rerun without item 32 and item 35. The results showed that the Cronbach's Alpha had been increased to .72, which has met the reliability requirements of the study (see Table 8).

Principal Component Analysis (PCA)

Constructs are usually defined as unobservable latent dimensions. In this research, the construct of motivation to read was measured by Self-Efficacy and the variables of Task Value, which includes the Intrinsic Value assigned to the act of reading, Extrinsic Value of Reading, and Importance of Reading and Willingness to Pay Cost to Reading. Since the questionnaire was composed of 32 refined items after the Cronbach's Alpha analysis, Principal Component Analysis (PCA) was used to determine an appropriate number of factors and the pattern of factor loadings.

PCA is a multivariate statistical method used to reduce the dimensionality and to extract few latent components. It identifies principal components in order to aggregate information contained in the original data set. The number of generated

components is therefore smaller than the number of variables contained in the original data. The extracted components represent direct combinations of the original variables, while the loadings denote the directions along which the original variables influence the extracted components. These loadings can either be positive or negative. The identification of such underlying components simplifies the understanding and description of complex constructs. It can be used to reduce the number of questions or variables down to principal components that will account for most of the variance. (O'Rourke, Hatcher & Stepnaski, 2005).

In SPSS, PCA is listed under the heading factor analysis. PCA is the default extraction method for factor analysis. Even though PCA is not an actual method of factor analysis, it is nevertheless widely used as an extraction method. PCA seeks a linear combination of variables such that the maximum variance is extracted from the variables. Minimum eigenvalues should be 1.0 in PCA (also a default).

In order to decide which rotation should be used in conducting the PCA, a simple Pearson correlation was conducted on the saved component (factor) scores. As Appendix E illustrated, there was no relationship between the components. An orthogonal rotation strategy had to be used since it assumed that the factors produced were uncorrelated. Varimax was selected because it was the most commonly used method of orthogonal rotation. This method maximizes the variance of factors across all of the variables, which makes the pattern of loadings clearer, or more specific. This process is designed to create a simpler structure. Fabrigar, Wegener,

MacCallum, & Strahan (1999) described that simple structure "means that each factor has a single subset of variables with high loadings, and the rest with low loadings, and that each variable has high loadings on only some factors and low loadings on all the others" (as cited in Conway & Huffcutt, 2003, p.152).

The Descriptive Statistics table (see Appendix F) simply reports the mean, standard deviation, and number of cases for each variable included in the questionnaire. The Kaiser-Meyer-Olkin (KMO) measure (see Appendix G) of sampling adequacy was .85, well above the commonly recommended value of .6, and Bartlett's test of sphericity was significant (χ^2 (496) = 2841.12, $p < .05$). Finally, as shown in Appendix H, the communalities (h^2) were all above .40. If a particular variable has communalities lower than .4, then that variable will struggle to load significantly on any factors (Stevens, 2002). In the study, no variables had been considered for possible removal up to this point. Given these overall indicators, PCA was deemed to be suitable with all 32 items.

In the reporting of the PCA conducted in this study, the factors were selected, interpreted, and evaluated; subsequently factor correlations and reliability estimates were discussed.

Because principal components analysis is intended to focus on a few principal components versus many variables, namely reduction of dimensionality, three criteria have been used for determining how many and which principal components should be investigated and how many and which components should be ignored. In

order to ensure practical significance, Kaiser's eigenvalue criteria were used. Kaiser's rule states that "only those factors with eigenvalues over 1.00 should be considered in the analysis" (Brown, 2009, p. 20). The initial analysis of the data indicated that eight factors had an eigenvalue of 1.00 or higher (see Table 9 which is taken directly from the initial SPSS analysis output). Note in Table 9 that factors 1, 2, 3, 4, 5, 6, 7, and 8 (labeled in the first column) have eigenvalues of 8.20 to 1.05. Thus all eight were above Kaiser's cut-point of 1.00. Factors 9 to 31 were below that cut-point with values of .94 down to .13. The eight components extracted with eigenvalues over 1 represented 67.23% of the variance observed in the 32 items.

The components extracted should account for as low as 50% of variance in social science studies (Beavers, Lounsbury, Richards, Huck, Skolits & Esquivel, 2013). Based on the criteria, the first four components should be extracted to account for 51.76% of the total variance in the original scales.

Moreover, Parallel Analysis (PA) was conducted to help determine the number of principal components to be retained. Table 10 presented the eigenvalues of raw data, the mean eigenvalue and the 95th percentile eigenvalue. The components from the raw data with eigenvalues greater than the corresponding eigenvalue from the mean or the 95th percentile eigenvalue should be retained. (Hayton, Allen & Scarpello, 2004). Thus, based upon that criterion, the first four components should be retained. There were at least four factors lying above the lines representing the mean and 95th percentile line. It was also a possibility that there was a fifth factor because

its raw data eigenvalue was as same as in value to its mean and 95th percentile eigenvalue. Wood, Tataryn & Gorsuch (1996) found that over-extraction generally led to greater accuracy than did under-extraction. Of course, extracting the correct number of factors is the best possible solution, but it might be a preferable strategy to lean towards over-extraction in order to avoid the greater possibility of error found with under-extraction. Taking Kaiser criterion, variance explained criteria and PA into account, the researcher decided to extract five components (factors) in this study

Factor loadings on extracted components that were larger than 0.32 is conventionally regarded as a "meaningful loading" to be reported (Tabachnick & Fidell, 1996). However, after initial examination, component loadings of .32 produced several complex items that loaded on more than one component, a loading of .45 or above was chosen as the criterion for interpretation. Any item that did not load on one of five factors at >.45 was eliminated. Consequently, items SLE6_6, INV1_9, INV2_10, INV4_12 and WCost1_30 were removed. After reliability test of Cronbach's Alpha and PCA, the 35-item questionnaire has been refined into 27 items.

Structure and contents of the five constructs extracted

Table 12 presented the questionnaire items according to the five extracted components.

Table 9

Results of Principal Component Analysis with 32 Item Questionnaire

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	8.21	25.64	25.64	8.21	25.64	25.64	4.43	13.84	13.84
2	4.11	12.83	38.48	4.11	12.83	38.48	4.07	12.70	26.54
3	2.59	8.11	46.58	2.59	8.11	46.58	2.95	9.20	35.74
4	1.66	5.18	51.76	1.66	5.18	51.76	2.76	8.61	44.35
5	1.52	4.73	56.50	1.52	4.73	56.50	2.69	8.42	52.77
6	1.26	3.92	60.42	1.26	3.92	60.42	2.03	6.33	59.10
7	1.13	3.53	63.95	1.13	3.53	63.95	1.32	4.12	63.21
8	1.05	3.28	67.23	1.05	3.28	67.23	1.29	4.02	67.23
9	0.94	2.95	70.18						
10	0.79	2.46	72.64						
11	0.73	2.27	74.91						
12	0.69	2.15	77.06						
13	0.67	2.08	79.14						
14	0.60	1.88	81.02						
15	0.56	1.74	82.76						
16	0.52	1.63	84.39						
17	0.50	1.56	85.95						
18	0.46	1.43	87.38						
19	0.44	1.38	88.75						
20	0.42	1.32	90.08						
21	0.39	1.21	91.29						
22	0.36	1.13	92.42						
23	0.35	1.09	93.50						
24	0.32	1.01	94.51						
25	0.30	0.93	95.45						
26	0.27	0.84	96.29						
27	0.27	0.83	97.12						
28	0.25	0.77	97.88						
29	0.19	0.60	98.49						
30	0.18	0.57	99.05						
31	0.17	0.55	99.60						
32	0.13	0.40	100.00						

Note: Extraction Method: Principal Component Analysis.

Table 10

Raw Data Eigenvalues, Mean Eigenvalue & 95% Percentile Random Data Eigenvalues of Parallel Analysis

Questionnaire Items	Raw Data EValues	Means EValues	Percentile Random Data EValues
1	8.21	1.89	2.00
2	4.11	1.77	1.85
3	2.60	1.67	1.75
4	1.66	1.59	1.66
5	1.52	1.52	1.58
6	1.26	1.46	1.51
7	1.13	1.40	1.45
8	1.05	1.34	1.39
9	0.94	1.29	1.33
10	0.79	1.24	1.28
11	0.73	1.19	1.23
12	0.69	1.14	1.18
13	0.67	1.09	1.13
14	0.60	1.05	1.09
15	0.56	1.01	1.05
16	0.52	0.97	1.00
17	0.50	0.93	0.96
18	0.46	0.89	0.92
19	0.44	0.85	0.88
20	0.42	0.81	0.85
21	0.39	0.77	0.81
22	0.36	0.74	0.77
23	0.35	0.70	0.74
24	0.32	0.67	0.70
25	0.30	0.63	0.67
26	0.27	0.60	0.63
27	0.27	0.57	0.60
28	0.25	0.53	0.56
29	0.19	0.49	0.53
30	0.18	0.46	0.49
31	0.17	0.43	0.46
32	0.13	0.37	0.41

Note: EValue=Eigenvalue.

Table 11

Factor Loadings and Communalities for Principal Component Analysis and Varimax Rotation of Five Factors

Question Item	Components					Communalities
	1	2	3	4	5	(h^2)
IMV2_25	0.73					0.66
IMV3_26	0.85					0.78
IMV4_27	0.84					0.79
IMV5_28	0.82					0.73
IMV6_29	0.65					0.60
WCost2_31	0.53					0.66
EXV6_22	0.49					0.64
SLE1_1		0.75				0.68
SLE2_2		0.78				0.70
SLE3_3		0.53				0.49
SLE4_4		0.84				0.75
SLE5_5		0.73				0.63
SLE8_8		0.78				0.72
SLE7_7			0.54			0.53
INV8_16			0.77			0.71
IMV1_24			0.80			0.75
WCost_33			0.64			0.64
WCost5_34			0.58			0.68
INV3_11				0.73		0.65
INV5_13				0.66		0.67
INV6_14				0.64		0.55
INV7_15				0.80		0.76
EXV1_17					0.51	0.63
EXV2_18					0.74	0.60
EXV3_19					0.82	0.75
EXV5_21					0.72	0.61
EXV7_23					0.64	0.59

Note: Extraction Method: Principal Component Analys; Rotation Method: Varimax with Kaiser Normalization; SLE = Self Efficacy of Reading; INV = Intrinsic Value of Reading; EXV = Extrinsic Value of Reading; IMV = Importance of reading; WCost = Willingness to Pay Cost to Reading;

Factor 1 obtained high loadings from seven items. It was clear that five out of six Importance of English Reading (IMV) items were clustered together. Another two items were expected to split into two components, but, in fact, loaded together on this factor. A close examination of the two items (WCost2_31 and EXV6_22) revealed that the communality might reflect the importance of English reading. Therefore, the construct underlying these seven items was labeled as Importance of English Reading (IMER).

Five items load onto a second factor related to students' self-perceptions about knowing how to read in English. As previously assumed, these items all loaded in this component, which was "the belief in one's capability to read well and to understand hard parts in books" (Guthrie et al., 2007, p. 295). This factor was labeled as Self Efficacy of English Reading (SEER).

Five items loaded onto the third factor. Those included items that were expected to split into four components, but, in fact, loaded together on this factor. Closer examination of the items, however, reveals that with items grouped under Intrinsic Value of Reading such as "I do not have any desire to read in English even if the content is interesting." and "It is a waste of time to learn to read in English" under Importance of Reading seem to better fit the description of Willingness to Pay Cost to English Reading. Therefore, Factor 3 was named Willingness to Pay Cost to English Reading (WCOER).

The four items that load onto Factor 4 identify the intrinsic value of reading English as expected. This was labeled as Intrinsic Value of English Reading (IVER).

Factor 5 obtained high loadings from five items, most of which were concerned with extrinsic gains. These Items originally were grouped under the heading of Extrinsic Value. Thus, Factor 5 was labeled Extrinsic Value of English Reading (EVER).

Descriptive statistics have portrayed a picture of what participants' reading motivation was like. Table 13 presented the means and standard deviations of five

Table 12

27 Questionnaire Items Arranged According to Factors with Means and Standard Deviations

Factors	Mean	SD
Factor 1		
25 Learning to read in English is important because it makes me a more knowledgeable person.	5.06	0.92
26 Learning to read in English is important to me because I would like to communicate with people from many countries.	5.33	0.78
27 The reason why I learn to read in English is because it will broaden my view.	5.24	0.82
28 Learning to read in English is important to me because I want to know about the lives and opinions of people in the western countries such as America.	5.24	0.84
29 It is very important to me to be a good reader in English.	5.01	0.81
31 I am prepared to spend a lot of effort in English reading.	4.68	0.97
22 I am learning to read in English because I want to pursue an education in an English speaking country.	4.06	1.34
Factor 2		
1 I am good at reading in English.	4.02	0.93
2 My grades for English reading classes at middle and high schools were not very good.	4.67	1.09
3 When I am reading English books outside of school, recommended by teachers or friends, I understand most of what I read.	3.97	1.13
4 I can always get a good score in English reading comprehension.	4.16	1.04
5 Reading English is very easy for me.	3.43	1.12
8 English reading is my weak subject.	4.53	1.20
Factor 3		
7 I believe that I will be capable of reading and understanding most texts in English if I keep studying it.	5.34	0.90
16 I do not have any desire to read in English even if the content is interesting.	5.22	0.91
24 It is a waste of time to learn to read in English.	5.70	0.70
33 If I have a choice, I will spend none of my time reading in English.	5.44	0.77
34 I would rather spend more time on learning other subjects rather than reading English.	5.35	0.76
Factor 4		
11 I tend to get deeply engaged in the text when I read in English.	4.46	1.08
13 I like reading English novels.	3.74	1.17
14 I like the rhythm of English.	4.15	1.27
15 I get immersed in interesting stories even if they are written in English.	4.31	1.08
Factor 5		
17 I am learning to read in English because I want to get good grades in English class.	2.60	1.37
18 I am learning to read in English because I think it will help me to find a job.	4.06	1.41
19 I am learning to read in English primarily because I want to get an English certificate.	2.78	1.38
21 I am learning to read in English because it can help me to get a scholarship.	2.47	1.29
23 I am learning to read in English because I want others to think that I am a good English reader.	3.27	1.36

components generated from PCA. Since each component has a different number of question items, the components' means should be used to explain the component better than summed scores. As displayed in Table 13, EVER had the lowest mean

(M= 3.04, SD=4.86) while WCOER had the highest mean and the least deviation (M = 5.41, SD = 3.09) in a 6-point Likert scale.

Descriptive Statistics of Thoughtful Literacy of English Reading

One hundred and seventy nine newly enrolled Chinese college students took the Critical Reading Inventory (CRI), which measure Thoughtful Literacy of English Reading. The two narrative passages used in the study included 20 questions; there were eight text-based, six inference and six critical response items. The researcher followed the guidelines for scoring comprehension questions in CRI to give a credit (10 points), partial credit (5 points) or no credit (0 point) to participants' answers. Table 23 reveals that the mean scores of text-based questions was as high as 9.21 while mean of inferential questions is 6.40 and mean of critical questions is 6.44.

Table 13

Item Means and Standard Deviations of Motivation Constructs from PCA

Motivation Construct	Item Mean	SD
Importance of English Reading	4.94	4.77
Self-efficacy of English Reading	4.13	5.11
Willingness to Pay Cost to English Reading	5.41	3.09
Intrinsic Value of English Reading	4.17	3.57
Extrinsic Value of English Reading	3.04	4.86

Table 14

Minimum, Maximum, Item Means and Standard Deviations of Thoughtful Literacy of English Reading

Type of Questions	No. of Items	Item Mean	SD	Minimum	Maximum
Text-based	8	9.21	4.78	7.50	10.00
Inference	6	6.40	8.66	2.50	10.00
Critical	6	6.44	8.62	2.50	9.17
Total THL	20	7.55	17.15	5.25	9.50

Note: THL = All 20 Thoughtful Literacy questions including text-based, inferential and critical questions.

Out of 179 participants, no student achieved the maximum number of points or a perfect score in the section of critical responses (see Table 14).

Separate Bivariate Regression Analysis

Before the regression analysis was conducted, Pearson correlations (see Table 15) were computed to determine the relationship between factors scores generated from PCA (Factor 1 to 5) and the dependent variable---Thoughtful Literacy (THL) represented as the total scores of 20 questions in narrative passages and its subcomponents.

After the PCA was conducted, factor scores were generated as the scores of a subject on each principal component. The newly created independent variables are linearly uncorrelated and independent (Rummel, 1988). "Factor scores can be used in a wide variety of subsequent statistical analyses. For instance, they can be correlated with measures of different constructs to help clarify the nature of the factors or they can be entered as predictor variables in multiple regression analyses" (Grice, 2001, p. 430). In this research, factor scores created from the PCA were used in the follow-up multiple regression analyses investigate the capability of the factors

Table 15

Pearson's Correlations of Motivation Constructs and Thoughtful Literacy

THL	IMER	SEER	WOCER	IVER	EVER	THL
THL total	.41**	.24**	.01	.51**	.31**	–
Text-based	.41**	.26**	-.12	.34**	.45**	.72**
Inference	.19*	.16*	.00	.25**	.20	.75**
Critical	.39**	.18*	.08	.57**	.35**	.84**

Note: *p<.05, ** p<.01.

in predicting Thoughtful Literacy, which includes text-based, inferential and critical questions.

The results of the correlational analyses were shown in Table 15. The correlation table presents the correlations, with asterisks (**) indicating whether a particular correlation is significant at the .01 level. As shown in Table 15, four out of five components, which were Importance of English Reading (r= .41, n = 179, p< .01), Self-efficacy of English Reading (r= .24, n = 179, p< .01), Intrinsic Value of English Reading (r= .51, n = 179, p< .01) and Extrinsic Value of English Reading (r= .31, n = 179, p< .01), were positively associated with Thoughtful Literacy respectively. These results supported self-expectancy theory and also echoed the previous research findings about Intrinsic Value, which was a strong predictor in task performance in various contexts. The output has indicated that IMER, SEER, and IVER have a fairly positive correlational relationship with Thoughtful Literacy. However, it was found that there was no correlation between WCOER and Thoughtful Literacy (r= .01, n = 179, p= .93).

The motivational factor, EVER, has the strongest positive association with text-based questions compared to all other factors (r= .45, n = 179, p< .01) while IVER has the strongest association with critical questions among all other factors (r= .57, n = 179, p< .01).

According to Cohen's (1988) rule of thumb for correlation coefficient, a correlation coefficient of .10 is thought to represent a weak or small association; a correlation coefficient of .30 is considered a moderate correlation; and a correlation

coefficient of .50 or larger is thought to represent a strong or large correlation. The data in Table 15 showed that Intrinsic Value of English Reading (r= .51) had the strongest positively association with Thoughtful Literacy, particular critical questions (r= .57), which means that the enjoyment and satisfaction that one gains from engaging in English reading has a strong predictive power to Thoughtful Literacy.

After the correlation coefficients between the five factors and Thoughtful Literacy were clarified and the descriptive statistics of Thoughtful Literacy were presented, five separate bivariate (simple) regression analysis were conducted to evaluate how strongly each of the five independent variables influence the level of Thoughtful Literacy (THL).

The results of the five separate bivariate regression analyses revealed that IMER, SEER, IVER and EVER had an impact on Thoughtful Literacy except WCOER (see Table 16). That is to say, each one of the four independent variables was either a weak, moderate or strong predictor of Thoughtful Literacy assuming that an r of .10, .30, and .50 are interpreted as weak, moderate, and strong coefficients respectively. Those participants with a stronger Intrinsic Value of English Reading, Importance of English Reading and Extrinsic Value of English

Reading achieved higher levels of Thoughtful Literacy. The r with IMER as a predictor was .41, with $F(1, 177) = 34.91$, $p< .01$; r using SEER as a predictor was .24, with $F(1,177) = 10.96$, $p< .01$; r using IVER as a predictor was .51, with $F(1, 177) =61.54$, $p< .01$; and r using EVER as a predictor was .31 , with $F(1, 177)$

Table 16

The Predictive Power of Each Motivation Construct to Thoughtful Literacy in Separate Bivariate Regression Models

Motivation Construct	R^2	Adjusted R^2	Standardized Coefficients Beta (β)	Sig.
IMER	.17	.16	.41	.00**
SEER	.06	.05	.24	.00**
WCOER	.00	-.01	.01	.93
IVER	.26	.25	.51	.00**
EVER	.10	.09	.31	.00**

Note: *p<.05, ** p<.01; Dependent Variable: Thoughtful Literacy.

18.54, p< .01. WCOER has no predictive power on Thoughtful Literacy with r= .007, p= .93.

Since Thoughtful Literacy was assessed through three different types of questions, which were text-based, inferential and critical, these questions measured two kinds of English reading, Text-Based Reading and Higher Order Comprehension including inferential and critical questions. To further investigate the predictive power of each component in differentiated reading processes, separate bivariate regression analyses were conducted to evaluate by what extent each of the five independent variables influence the level of Text-Based Reading (TBR), which includes text-based questions in two narrative passages. Analyses was also conducted to evaluate by what extent these variables influence Higher Order Comprehension (HOC), which includes inferential and critical questions from those same passages.

As displayed in Table 17 and Table 18, the results of these bivariate regression analyses indicate the standardized coefficients beta between IVER and Higher Order Comprehension (HOC) (β= .58, p < .01) while IVER had much less impact on Text-Based Reading (TBR) (β= .34, p< .01). The beta value is a measure of how

strongly each predictor variable influences the dependent variable. The higher the beta value, the greater the impact of the predictor variable on the dependent variable. In this case, the IVER had stronger predictive power on higher order comprehension than Text-Based Reading. It was also the strongest predictor on higher order comprehension. As shown through these the results, EVER had a greater influence on TBR (β= .45, p< .01) when compared to HOC (β= .32, p< .01). In addition, WCOER had no impact on either TBR or HOC.

After the predictive power of the independent variables to the dependent variables had been established in isolation, a multiple regression analysis was undertaken to measure the relationship of the five independent variables to the dependent variable in a single multiple regression model. In the research, IMER, SEER, WCOER, IVER and EVER were entered as the independent variable in our multiple linear regression model and the THL as the dependent variable. The default method for the multiple linear regression analysis is 'Enter', in which case, all variables are included to be in the model. All the specified variables are included in the regression equation regardless of whether they are statistically significant or not. The order of variables is not important in terms of the modeling process. Factor scores were used in regression analysis.

Table 19 showed the multiple linear regression model summary and overall fit statistics. It was found that the adjusted R^2 of our model was .56 with the R^2 = .58.

Table 17

The Predictive Power of Each Motivation Construct to Higher Order Comprehension in Separate Bivariate Regression Models

Motivation Construct	R^2	Adjusted R^2	Standardized Coefficients Beta (β)	Sig.
IMER	.19	.18	.43	.00**
SEER	.05	.05	.22	.00**
WCOER	.01	.00	.09	.25
IVER	.34	.34	.58	.00**
EVER	.10	.10	.32	.00**

Note: *p<.05, ** p<.01.

Table 18

The Predictive Power of Each Motivation Construct to Text-Based Reading in Separate Bivariate Regression Models

Motivation Construct	R^2	Adjusted R^2	Standardized Coefficients Beta (β)	Sig.
IMER	.17	.17	.41	.00**
SEER	.07	.06	.26	.00**
WCOER	.02	.01	.12	.01*
IVER	.11	.11	.34	.00**
EVER	.20	.20	.45	.00**

Note: *p<.05, ** p<.01.

Table 19

Model Summary of Multiple Regression Analysis

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.76	.58	.56	11.33

Note: Predictors: (Constant), EVER, IVER, WCOER, SEER, IMER

This indicated that the linear regression model with the independent variables accounted for approximately 58% of the variance of the Thoughtful Literacy.

The F-Test, or ANOVA is a test of significance of the multiple linear regression. The F-test uses the null hypothesis that there is no linear relationship between the variables (R^2=0). The model was highly significant with $F(4, 174) = 59.05$, $p < .01$. Therefore, a linear relationship was shown to exist between the variables in the model.

Multiple Regression Analysis

As illustrated in Table 20, The Bs, as labeled on the output, were the weights associated with the regression equation. Since it was found that WCOER was not statistically significant ($p>.05$), it was excluded in the linear regression model. Based on the B weights, the regression equation was as follows:

THL= 6.96IMER + 4.14SEER + 8.71IVER + 5.28EVER + 151.03

As displayed in Table 20, the beta weight and statistical significance were analyzed and examined. Based on the weights, four of the five predictive variables were showed significance since we used p (α)<0.05 as the indicative measure of statistical significance. The results of analysis were IMER β= .41 ($p< .01$), SEER β= .24 ($p< .01$), IVER β= .51 ($p< .01$) and EVER β = .31 ($p< .01$). When evaluating the standardized beta values, the greatest influences upon the dependent variable were in the following order: IVER, IMER, EVER and SEER. WCOER was a small predictor of Thoughtful Literacy in bivariate regression analysis, but it became insignificant predictor of Thoughtful Literacy (β = .01, p = .89) in the linear regression model. It was also found that the most accurate predictor of Thoughtful Literacy in separate bivariate regression was IVER (R^2 = .25, $p< .01$), but it was a significant improvement in the prediction of using all 4 factors (R^2 = .58, $p< .01$).

Multiple Regression Analysis between Text-Based Reading and Motivation Constructs

To explore the impact of different motivational components on different levels of reading, a multiple regression analysis was employed to investigate the

Table 20

Coefficients of Multiple Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% CI	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	151.03	0.85		178.814	.00	149.37	152.70
IMER	6.96	0.85	0.41	8.22	.00	5.29	8.63
SEER	4.14	0.85	0.24	4.89	.00	2.47	5.81
WCOER	0.12	0.85	0.01	0.136	.89	-1.56	1.79
IVER	8.71	0.85	0.51	10.287	.00	7.04	10.39
EVER	5.28	0.85	0.31	6.236	.00	3.61	6.95

Note: Dependent Variable: THL

relationships between Text-Based Reading (TBR) (dependent variable) and five motivational components (independent variables). TBR includes eight text-based questions in two reading passages. The results were shown in Table 21.

The results of analysis were R of .75 with an adjusted R^2 of .57, F (5, 173) = 45.41, $p < .01$, which meant that nearly 60% of the variances of Text-Based Reading were significantly explained by the multiple regression model with the retained four independent variables as predictors. EVER was a significant predictor of Text-Based Reading (TBR) with a standardized slope (β) of .45; IMER, SEER and IVER had a fair powerful impact on TBR. WCOER had a little predictive power on TBR.

The rank order of the most significant predictive variables relative to their beta weights and statistical significance to the dependent variable TBR is: (a) EVER (B = 2.14, t = 8.96, $p < .01$), (b) IMER (B = 1.97, t = 8.26, $p < .01$), (c) IVER (B = 1.61, t = 6.74, $p < .01$), (d) SEER (B = 1.25, t = 5.21, $p < .01$) and (e) WCOER (B = -.59, t = -2.47, p < .05).

Table 21

Multiple Regression Analysis Predicting Text-Based Reading From Motivation Constructs

Motivation Construct	Standardized Coefficients Beta	Sig.
IMER	.41	.00**
SEER	.26	.00**
WCOER	-.12	.01*
IVER	.34	.00**
EVER	.45	.00**
R^2	.57	
Adjusted R^2	.56	

Note: *p<.05, ** p<.01; Dependent Variable: Text-Based Reading.

Multiple Regression Analysis between Higher Order Comprehension and Motivation Constructs

After the multiple regression analysis was conducted with five independent variables and Thoughtful Literacy, a further examination was conducted to assess the predictive power of each of five independent variables on Higher Order Comprehension (HOC) as a dependent variable while the other four independent variables were held constant (controlled). HOC included 6 inferential questions and 6 critical questions in two reading passages in the research. The results were shown in Table 22.

The analysis resulted in R of .83 with an adjusted R^2 of .69, F (5, 173) = 76.26, p< .01, which meant that nearly 70% of the variances of Higher Order Comprehension were significantly explained by the multiple regression model with the retained four independent variables as predictors. IVER was a significant predictor of HOC with a standardized slope (β) of .58; IMER, EVER and SEER had a fair predictive power of HOC. WCOER had a little influence on HOC.

The rank order of the most significant predictive variables relative to their beta weights and statistical significance to the dependent variable HOC is: (a) IVER (B =

Table 22

Multiple Regression Analysis Predicting Higher Order Comprehension From Motivation Constructs

Motivation Construct	Standardized Coefficients Beta	Sig.
IMER	.43	.00**
SEER	.22	.00**
WCOER	.09	.04*
IVER	.58	.00**
EVER	.32	.00**
R^2	.69	
Adjusted R^2	.68	

Note: *p<.05, ** p<.01; Dependent Variable:Higher Order Comprehension

8.85, t = 13.72, p< .01), (b) IMER (B = 6.54, t = 10.15, p< .01), (c) EVER (B = 4.90, t = 7.61, p< .01), (d) SEER (B = 3.40, t = 5.28, p< .01) and (e) WCOER (B = 1.31, t = 2.03, p < .05).

The multiple regression results between five motivational components and Text-Based Reading has shown that EVER is the most influential predictor out of five components. Meanwhile, between the five motivational components, IVER was found to be the strongest predictor of HOC in multiple regression analysis. EVER is far less important in HOC. In addition, IMER has been revealed to be the second most influential factor on both TBR and HOC.

Stepwise Model Multiple Regression on HOC and TBR

Although a simultaneous entry of all variables multiple regression was conducted, in order to find the best predictors at each stage, a stepwise model was used between five components and Higher Order Comprehension (HOC). This procedure builds a model by successively adding predictors according to t-statistics of their estimated coefficients. Through this process it can be decided which

independent variable is statistically the best predictor.

As Table 23 illustrated, there were five models with different variables having increasing R^2 values with HOC as dependent variable. Model A had only one predictor with an adjusted R^2 of .34 while Model B had two predictors with an adjusted R^2 of .53. The variance of HOC was increased about 55% variance from Model A. Model C had three predictors with the sequence of IVER, IMER and EVER. It can account for 63% of variance of HOC. The increased variance is about 20% from Model B. However, the increased variance of HOC flattens out in Model D and Model E. The increased R^2 were about 8% and 1% from the former Model. The details of each Model have been demonstrated in Appendix J.

Following the step model multiple regression on HOC, the same statistic procedure was conducted on TBR as well. As Table 24 illustrated, there were five models with different variables having increasing R^2 values with TBR as dependent variable. Model A had only one predictor with an adjusted R^2 of .20 while Model B had two predictors with an adjusted R^2 of .37. The variance of TBR was increased about 80% variance from Model A. Model C had three predictors with the sequence of EVER, IMER, IVER. It can account for 48% of variance of TBR. The increased variance is about 33% from Model B. Model D included EVER, IMER, IVER and SEER accounting for 54% of variance of TBR. The increased variance is about 13% from Model C. However, the added predictor, WCOER, only increased the adjusted R^2 from .54 to .56. The details of each Model have been demonstrated in Appendix I.

Table 23

Model Summary of Stepwise Multiple Regression Predicting Higher Order Comprehension From Motivation Constructs

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
A	.58[a]	.34	.34	12.36
B	.73[b]	.53	.52	10.51
C	.80[c]	.63	.62	9.31
D	.83[d]	.68	.67	8.67
E	.83[e]	.69	.68	8.60

a. Predictors: (Constant), IVER
b. Predictors: (Constant), IVER, IMER
c. Predictors: (Constant), IVER, IMER, EVER
d. Predictors: (Constant), IVER, IMER, EVER, SEER
e. Predictors: (Constant), IVER, IMER, EVER, SEER, WCOER

Table 24

Model Summary of Stepwise Multiple Regression Predicting Text-Based Reading From Motivation Constructs

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
A	.45[a]	.20	.20	4.29
B	.61[b]	.37	.36	3.81
C	.70[c]	.48	.48	3.46
D	.74[d]	.55	.54	3.24
E	.75[e]	.57	.56	3.19

a. Predictors: (Constant), EVER
b. Predictors: (Constant), EVER, IMER
c. Predictors: (Constant), EVER, IMER, IVER
d. Predictors: (Constant), EVER, IMER, IVER, SEER
e. Predictors: (Constant), EVER, IMER, IVER, SEER, WCOER

Assumptions of Multiple Regression Analysis

An important requirement in a multiple research analysis is to ensure that the assumption of no multicollinearity has been met. Multicollinearity is a statistical condition that exists when two or more predictive variables are highly correlated in a multiple regression model (Meyers, Gamst & Guarino, 2013). It defines the condition of high correlations among two or more independent variables. It

threatens an accurate ranking of the effects of the independent variables used in a regression analysis.

The factor scores can serve as a solution to multicollinearity problems in multiple regression. Since the orthogonal (uncorrelated) factor scores produced in the PCA (see Appendix E) and since they have also been used to replace the original independent variables in the research, multicollinearity had been completely removed with a tolerance value of 1.

Other statistical assumptions of multiple regression were identified and assessed as well. First, the assumption of linearity and homoscedasticity were checked by visual inspection of residual scatter plots error terms. The error variances were equally spread across all levels of the X axis. A residual histogram displayed normal distribution of the residuals. Thereby it was determined that the assumptions for multiple regression were not violated.

Summary

This chapter has reported the questionnaires' findings. Principal Component Analysis (PCA) revealed that newly enrolled Chinese university students generally believe that that they are willing to make great efforts to read in English with mean of 5.41, and English Reading is very important with mean of 4.94. but their reading in English is least motivated by its Extrinsic Value of English Reading with mean of 3.04 on a 6-point rating scale. Their Intrinsic Value of English Reading is surprisingly higher than Extrinsic Value of English Reading with mean of 4.17. Chinese L2 learners do not have high self-efficacy on their English reading with

mean of 4.13. Significantly, the PCA also enhanced instrument reliability by inducing the researcher to reconstruct the original questionnaire and regroup the question items. The results of Thoughtful Literacy displayed evidence that students perform better on the text-based questions (9.20 out of 10) than on inferential (6.40 out of 10) or critical questions (6.44 out of 10). Results of the bivariate regression analysis showed that the intrinsic value factor has more impact on higher order thinking questions (explaining 34% variance of THL) than on Text-Based Reading questions (explaining 11% variance of THL). Extrinsic value factor was opposite having more impact on Text-Based Reading questions (explaining 20% variance of THL) than higher order thinking questions (explaining 10% variance of THL). The results of a multiple regression analysis found that the factor on the Intrinsic Value of English Reading and Importance of English Reading were two strong indicators of Higher Order Comprehension while EVER is the most influential predictor out of five components on Text-Based Reading. The willingness to spend time and effort to read English had no impact on Thoughtful Literacy

Chapter 5 Discussion

Introduction

This chapter presents the findings, generated conclusions, discussion and interpretations based on an analysis of the results of the study, as well as recommendations for future consideration of the topic. A brief rationale for the study will be presented, a summary of the several variables of motivation to read, the investigative process selected for this study, as well as the exactitude of postulated hypotheses and efficacy of the theoretical approach. The discussion of findings will focus on whether the results from the current study confirmed the specified hypotheses. The results will also be discussed in relation to all four research questions that were initially specified. Finally, the recommendations for future research will be presented, followed by the conclusion.

The primary aim of this study was to determine the nature of the relationship between motivation to read and Thoughtful Literacy in an L2 context. Eccle's Expectancy Value Theory formed the theoretical basis of this study. Accordingly, Expectancy Value Theory informs us that motivation to read is composed of five motivational constructs: self-efficacy, intrinsic value, extrinsic value, importance of task and cost. For the purposes of this study self-efficacy is to be defined as "…the belief in one's capability to read well and to understand hard parts in books" (Guthrie et al, 2007, p. 295). Intrinsic Value of Reading English is the enjoyment and satisfaction that participants gain from reading English. Extrinsic Value of Reading English is the perceived instrumentality that is determined by the practical gains such as school grades or money that participants would acquire in the process of reading.

Wigfield and Eccles (2000) defined attainment value as "the importance of doing well on a given task" (p. 72). Cost is defined as how the decision to engage in English reading limits a participant's choices to engage in other activities and willingness of spending effort and time to accomplish English reading.

The main hypotheses were considered regarding the relationship between motivational variables and Thoughtful Literacy. In my first hypothesis it was supposed that there are positive correlations between self-efficacy, intrinsic value, extrinsic value, importance of task and cost (independent variables) with Thoughtful Literacy (dependent variable), respectively. This means that a scaled increase in these motivational variables is associated with an increase in Thoughtful Literacy. In my second hypothesis, it was postulated that intrinsic value is the dominant predictor of Thoughtful Literacy. Finally, it was hypothesized that each of the motivational variables has different predictive power on Texted-Based Reading (TBR) and Higher Order Comprehension (HOC) which is the core of Thoughtful Literacy.

Principal Component Analysis, Cronbach's Alpha, and test-retested reliability were used to guarantee the reliability of the instruments. Separate bivariate multiple analysis and multiple regression analyses were run through SPSS, evidencing the relationships of dependent and independent variables. Bivariate analysis examined the empirical relationships between two variables, which are, in this research, five motivational variables with Thoughtful Literacy respectively. Multiple regression analysis was employed to determine the extent to which motivational variables are able to predict Thoughtful Literacy. However, be advised that no inferences about

causality between the variables are intended. The focus of this study is regarding the strength of the relationship between motivation to read and Thoughtful Literacy.

The descriptive statistics on Thoughtful Literacy have shown students scoring higher on Text-Based Reading than Higher Order Comprehension for all the participants. It is consistent with findings in the L1 context that students outperformed on text-based comprehension when compared to higher order comprehension no matter how much they were motivated to read (Applegate A. & Applegate, M., 2010). Based on the research, Chinese L2 learners do not perform well on questions requiring deep thought. Regarding American students, in a study by the National Assessment of Educational Progress (NAEP), it was also found that in an L1 context fewer were considered as proficient readers from the perspective of Thoughtful Literacy when compared to testing for literal comprehension (Applegate, Applegate, McGeehan, Pinto, & Kong, 2009).

In the analysis of the data in this research the applied multiple regression model included four predictors:(a) Importance of English Reading, (b) Self-efficacy of English Reading, (c) Intrinsic Value of English Reading and (d) Extrinsic Value of English Reading. They were each found to be significant predictors of Thoughtful Literacy accounting for 58% of the variance in Thoughtful Literacy and 68% of the variance in Higher Order Comprehension. However, the Importance of the Intrinsic Value and Importance of English Reading predictor's contribution was much greater by value.

In addition, instruments designed to measure readers' Thoughtful Literacy are

important for the evaluation of students' learning, our approach to instruction and for research in an L2 context. It was while searching for instruments specific for L2 student assessment that the Critical Reading Inventory (CRI) was discovered. However, since its application in an L2 context was unprecedented, the researcher aimed to validate these previously tested instruments in an L2 research context. The intent of this study has been to contribute to the continuing efforts of educators in the development of trustworthy measurement methods and instruments of the L2 learner's reading comprehension. Since the CRI had been originally designed to test L1 readers, this research used readability and alternate forms reliability to validate the instrument for usage at a college level in an L2 application.

Intrinsic Value of English Reading and Thoughtful Literacy

Intrinsic Value of English Reading (IVER) was the most significant predictor of Thoughtful Literacy and Higher Order Comprehension on the narrative passages in an L2 context. The results of this study showed that this motivational variable had a positive relationship with Thoughtful Literacy. It also answered the first part of second research question. The finding is consistent with the literature in the L1 context. Schiefele(1991), in assessing comprehension, discovered that university students who considered the subject matter of a text intrinsically motivating and interesting did markedly better than their less interested classmates. Intrinsic motivation factors have been substantially associated with reading comprehension, when all other variables are controlled (Wang & Guthrie, 2004). Guthrie et al (1998) inform us that readers with higher intrinsic motivation (reading because of the

pleasure one derives from the task itself) are likely to read more often than those with lower intrinsic motivation. However, all the previous research was limited to an L1 context. The current study was conducted to better understand the motivational components and their relationship to depth of reading for Chinese students learning English.

Although there was little research on the relationship between the reading motivation and Thoughtful Literacy, I could find no scholarship in any of the Chinese literature nor in any articles on the subject about Chinese learners. However, there were many studies of Chinese L2 learners' motivation (Liu, 2007; Wei, 2007; Wu Man–Fat, 2007; Lin, Wong & McBride-Chang, 2012). The findings of some of these studies, performed in the university or high school environment, indicated that the Chinese L2 students are more extrinsically motivated since English is mostly emphasized as a tool to acquire practical gains. Lin, Wong & McBride-Chang (2012) found that the instrumentalism of Hong Kong Chinese fifth graders was particularly strongly correlated with their EFL reading comprehension. However, the reading measurement they used did not focus on in-depth of understanding.

Although research indicates that L2 learners are extrinsically motivated, my findings indicate that intrinsic motivation had the most powerful influence on how thoughtfully students would respond. Besides the positive predictive link between intrinsic motivation and Thoughtful Literacy in an L2 context, Intrinsic Value of English Reading was also found to have more predictive power on Higher Order Comprehension than Text- Based Reading. The difference between that predictive

power on Higher Order Comprehension and Text-Based Reading is significant. These results have expanded the findings of previous studies, confirming that intrinsic motivation greatly facilitates a readers' engagement in reading (Guthrie & Wigfield, 2000; Wigfield, 1997; Wigfield & Guthrie, 1997). Intrinsically motivated readers attain higher levels of achievement in reading (Guthrie & Wigfield, 1997). Student engagement is "generally considered to be among the better predictors of learning performance and personal development" (Carini, Kuh & Klein, 2006, p. 2). The conclusion to be drawn seems all too obvious, even self-evident. When learners are engaged, they tend to think and learn more productively. Therefore, if intrinsic motivation facilitates engagement and engagement contributes to more favorable outcomes in learning, it is consistent with the findings of this study: the predictor of Intrinsic Value of Reading English has a significant impact on L2 students' Higher Order Comprehension.

Intrinsic motivation not only encourages students to complete assigned tasks, to acquire better grades and obtain social approval, but also, more importantly, it increases involvement in learning, the intensity of student concentration, the enjoyment of knowing and interest expressed. Understanding is by no means the direct consequence of motivated behavior, one can find ample research which reveals that students are motivated to invest a great deal of energy and time in created rituals, procedure and study routines without developing any substantive understanding of the subject matter (Powell, Farrar, & Cohen, 1985; Newmann, 1992; Pascarella & Terenzini, 2005). Nevertheless, as was found in my research data, intrinsic

motivation (IVER) can in fact be a predictor of deeper comprehension.

In an L2 context, when learning objectives are primarily to require phonetic awareness, vocabulary, proper sentence structure and discourse organization, the motivational variables, including intrinsic motivation, influence students to complete passive reading assignments, mechanistic drills and information recall assignments. But these learning tasks provide little opportunity for students to use their minds well or to develop in-depth comprehension and think critically. Motivation variables work together to encourage accomplishment of daily learning tasks in and out of the classroom. However, when the performance measure focused on Higher Order Comprehension, the influence of intrinsic value as a predictor of accomplishment became the essential factor motivating learners to recognize complex relationships, generalize to the world and apply observations from reading. Intrinsically motivated L2 learners are more likely to employ cognitive effort in making accurate judgments and relevant references while obtaining the meaning of the text. Higher Order Comprehension is more likely to be achieved as well. These findings confirm the simple premise discussed above: learners who are engaged as result of intrinsic motivation, tend to enjoy the reading and respond to the reading more thoughtfully.

In the requisite requirement that L2 learners' must acquire adequate L2 proficiency in the fundamentals as well as a full understanding the reading, L2 reading could be considered as no different from learning any other particular subject, it is an act of meaning creation and becomes an example of thoughtful learning just as reading in L1. The findings of this study confirm the hypotheses that the

satisfaction and enjoyment acquired from L2 reading can engage L2 learners and make them to think deeper about written text in L2. They are also more likely to respond more thoughtfully while reading in L2.

Importance of English Reading and Thoughtful Literacy

There is a statistically significant correlation between Importance of English Reading and Thoughtful Literacy. The variable Importance of English Reading (IMER), defined as the importance of doing well on a given task (Eccles et al., 1983), significantly predicated L2 learners' Thoughtful Literacy. It is the second strongest predictor in the depth of reading multiple regression model. This finding is consistent with previous research where Wigfiled and Asher (1984) noted that children who did not value reading highly might be less motivated to read well.

Eccles and colleagues conceptualized attainment value (importance of reading) in terms of personal interests, needs and values that an activity fulfills. English reading will be highly valued if an L2 learner has a positive valuation of English reading ability or he/she thinks being a good English reader is associated with his/her understanding of who he/she is. In this research, the variable Importance of English Reading has been measured from various perspectives such as ideal images of what one should be like (question 25, 29, 27) and stable personal interests (question 26, 28). All of these interacted with IVER to motivate and encourage L2 learners to engage in English reading. My research confirms that the thoughtfulness that learners demonstrate from the reading task is reinforced since it resonates with the deepest value, confirms the capabilities, captures and holds the interest and is compatible

with learners' positive self-images. It also shares the findings in an L1 context that a participant's performance can be understood by an examination of his/her beliefs about how successful he/she will be in his/her engagement with the activity and the degree to which he/she values the activity (Eccles, et al., 1993; Wigfield, 1994).

To understand the motivation to read thoughtfully, the results of stepwise regression multiple analysis indicated that the combination of IVER and IMER accounted for 52% of the variance in Higher Order Comprehension, which is a significant increase from 34 % of variance with IVER alone. IMER that L2 learners attach to English reading predicated their performance in Higher Order Comprehension, particularly the Importance of English Reading measured from the perspective of inner self-beliefs in the research. It underpins interest expressed and engagement. More importantly, it has an impact on in-depth comprehension of English reading.

Extrinsic Value of English Reading and Thoughtful Literacy

The motivation to read has been described as a multifaceted construct containing many constituent factors. The research in L1 (Wigfield & Guthrie, 1997; Guthrie, Wigfield, Metsala, & Cox, 1999; Guthrie, Wigfield & Von Secker, 2000; Guthrie et al., 2007) reveals that learners may simultaneously possess intrinsic and extrinsic motivational goals while pursuing their own interests and educational requirements. In L2 settings, it has been found that extrinsic motivation was more influential among Chinese students (Chen, Warden & Chang, 2005; Liu, 2007; Wei, 2007; Wu Man–Fat, 2007). Lin, Wong & McBride-Chang (2012) claimed instrumentalism was

a significant and unique predictor in L2 reading comprehension. However, the analysis of reading comprehension in previous research primarily focused on the general reading process or information recall. Thoughtful Literacy was not measured or even considered as an important indicator of reading comprehension.

According to the findings of my research, extrinsic motivation has more predictive power on the desire and success in text-based reading text than on higher order comprehension of meaning. In another words, extrinsic motivation predicted the improvement in reading comprehension, but it was a weak contributor to the depth of reading. If the assessment is to measure decoding, vocabulary recognition and information recall, the extrinsically motivated L2 learners are likely to perform better. However, these learners are likely to fail on a reading test of deep understanding and critical mastery. This is an intriguing finding that has not been found in any previous research. Extrinsic motivation was found as a dominant reason for L2 learners to master the language and accomplish learning tasks including reading. However, the advantages are likely to be merely practical and utilitarian. The advantages derived from learning the language are likely to only facilitate the reading "of the lines" rather than "between the lines."

The stepwise multiple analyses demonstrated that the factor of Extrinsic Value of English Reading (EVER) together with the factors of Importance of English Reading (IMER) and Intrinsic Value of English Reading (IVER) accounts for 63% of Higher Order Comprehension. The variance when extrinsic value is accounted for was an improved 10%. This informs us that extrinsic motivation is also an important

predictor in Higher Order Comprehension even as it has been positively associated with success in testing for comprehension in Text-Based Reading.

Self-Efficacy of English Reading and Thoughtful Literacy

In past decades, ample research has demonstrated that efficacy beliefs are one of the most important predictors of academic performance (Bandura, 1977, 1982, 1989; Zimmerman, Bandura, & Martinez-Pons, 1992; Pajares, 2002). Lately, some research evidence has shown that self-efficacy beliefs positively relate to language acquisition in an L2 context (Mori, 2002; Magogwe & Oliver, 2007; Chen, 2007; Mahyuddin, et. al., 2006). The influence of self-efficacy on Thoughtful Literacy, however, received no research attention in the L2 context.

Initial hypotheses in this study postulated that there would be a positive correlation between self-efficacy and Thoughtful Literacy, which corresponds to first research question. Acquired in this study, a summary of statistically significant correlations between self-efficacy and the overall THL score, Texted-Based Reading (TBR), and Higher Order Comprehension (HOC) from all four analyses reveals:

- There is a statistically significant positive correlation between Self-Efficacy of English Reading (SEER) and the overall THL score.
- There is a stronger positive impact of self-efficacy on TBR than HOC.
- In the multiple regression analysis, self-efficacy was found to be one of the predictors of Thoughtful Literacy when reading narrative passages from the Critical Reading Inventory (CRI).

As evidenced by the data in this research, self-efficacy has a positive impact on

the depth of reading. The findings are consistent with Eccle's claims and previous research that students' perceived self-efficacy predicts their subsequent academic performance. However, it is intriguing that, considering this specific factor, self-efficacy may predict better to TBR rather than HOR. While my prediction of a positive association between perceived self-efficacy and Thoughtful Literacy was validated, compared to the other three motivational constructs, it has proven to have weaker predictive power on Thoughtful Literacy and Higher Order Comprehension than expected.

Willingness to Pay Cost to English Reading and Thoughtful Literacy

In Eccle's expectancy theory, cost was defined as the perceived consequences of pursuing a valued task including anxiety, fear of failure, the time spent, effort expended and inability to do an alternative (Eccles et al., 1983). Cost is the participant's assessment of consequences insofar as the decision to engage in an activity, in this case English reading, limits one's options to engage in other activities and the associated willingness to expend the time and effort to accomplish the task. In the present study, the cost to the participants is primarily the effort and time Chinese L2 learners would be willing to expend on English reading.

The question of to what extent these Chinese participants were willing to accept the cost of learning to respond thoughtfully while studying English constitutes the third research question in this study. The hypotheses suggests that Willingness to Pay Cost to English Reading would have positive relationship with Thoughtful Literacy since it is assumed that L2 learners would see the advantages of thinking deeply

about a text and therefore willingly spend the time and extra effort required. The results showed that the mean of WCOER is 5.4 out of 6 points (see Table 13). It explained that all the participants had a strong willingness to expand effort and time on English reading. However, their Thoughtful Literacy was achieved in different levels. The data indicated that WCOER couldn't predict Thoughtful Literacy in an L2 context. WCOER is a deficient motivational indicator, that is to say not helpful in demonstrating what the student actually understands about a text and comprehends about its meaning. It provides information that has little relationship to success beyond reading factual information.

L2 learners may be willing to complete the reading in order to succeed, but the tasks they master or are trained to accomplish often involve those rituals, recall of information acquired through rote repetition (a skill required in Chinese education), and the ability to understand that trivializes the importance of students using critical thinking or to create meaningful understanding and creative mastery. Therefore, while it looks like the Chinese L2 learners would be motivated to expand their effort and expend the time necessary to satisfactorily perform a reading task, the resulting investment would not guarantee engagement, active interest or activate their connections to personal experience in the process. In another words, WCOER cannot predict Thoughtful Literacy.

Implications

The main findings of this study indicate that intrinsic motivation was the single most important factor in predicting accomplishment for the L2 Chinese learners'

Thoughtful Literacy at a university level, suggesting that the learners' performance in Higher Order Comprehension in reading English text would increase substantially if they are motivated intrinsically. Importance of English Reading enforces and interacts with the Intrinsic Value of Reading to influence how deeply they think while they are reading. Motivational variables like self-efficacy, extrinsic value and cost were found to be associated with Thoughtful Literacy, however, their impacts were limited. Intrinsic motivation has proved to be not only a significant predictor of Thoughtful Literacy but also a strong influence in determining L2 learners' performance on Higher Order Comprehension.

The main findings of the current study indicate that although L2 learners were found to be more extrinsically motivated in previous research, extrinsic motivation seems to operate to encourage and assist learners to achieve better in a lower order comprehension level of reading. Intrinsic motivation, reflecting the sense of genuine interest and satisfaction in reading, was positively and uniquely important for higher order comprehension in the L2 context design of this research. Such motivation promotes the students' inclination to attempt an understanding of the hidden meanings in the words, to make connections between facts, to act upon them and apply them in a new way. To obtain the most from reading English text it must be more than merely about recognizing vocabulary, destructuring the sentences, and memorizing facts to answer the questions on a standardized test, but also about cultivating thoughtfulness and creative thinking.

If L2 educators are to realize that linguistic content should not be the only focus

of their educational lessons, it will be of pedagogical importance for educators to re-consider emphasizing and inspiring intrinsic motivation in their learners, such as cultivating engagement and encouraging reading for joy. Additionally, reading assessments should be adjusted to ascertain whether L2 learners are being sufficiently stimulated to think thoughtfully and creatively. Only in this way will they be prepared for the complexities of globalization and the rapidly changing circumstances of our modern world.

Value for instruction

The English reading teaching practices in contemporary China focus primarily on identifying words and destructuring sentences. It has for too long been doctrinaire that if you convey to students the mechanics of the English language, recognizing and decoding vocabulary and sentences, the meaning of a text can be naturally understood. L2 learners may come to understand every single word, but they still have difficulties understanding or taking meaning from the text, making connections with it, evaluating it and applying it to their own lives or in different circumstances. Literacy instruction for ELLs in the United States is facing similar problems insofar as lower level reading lessons have become a dominant component in L2 reading instruction. Fitzgerald (1995) reported that even in American L1 reading instruction there is a pervasive emphasis on word recognition, oral reading, and lower level reading skills. Therefore, it is not surprising that on assessments these students perform better on Text-Based Reading and achieve less in Thoughtful Literacy.

As indicated by the findings of this research, the influence of intrinsic

motivation can significantly predict the outcome of Higher Order Comprehension. It is important to affect an increase of the intrinsic motivation of L2 learners not withstanding that they be highly extrinsically motivated. The instrumentalism of learning L2 language such as good grades, chances to attend colleges and the possibility of high paying jobs have constituted the whole of motivation in every L2 learning setting in China. The instructional plans of Chinese L2 educators accentuates the instrumental importance of reading English, which requires of learners only to finish the reading assignments to be considered successful. There is no attempt to encourage application of their learned English in new contexts forming relations between ideas or any thoughtful consideration of the content knowledge which the text delivered.

As pointed out in Chapter 2, "engagement is viewed as student motivated behavior that can be indexed by not only behavioral, but also cognitive and affective indicators" (Guilloteaux, 2007, p.94). Such engagement is also an important and direct indicator of the existence of intrinsic motivation. Recognizing the evidence of a learner's engagement in learning activities is critical, particularly for L2 language learning as these learning activities tend to be the only opportunity, certainly the best and most consistent opportunity, for many to actually use the language. Littlewood (2004) best defines engagement as "the learners' active personal involvement with the task, whatever the nature of that task may be" (p. 323). The educational pedagogies that intrinsically motivate and engage students should be found, developed and be employed. The tool of Thoughtful Literacy as a motivator of

reading ought to find its way into every L2 curriculum design.

Previous research has suggested useful and tested reading instruction to improve the engagement of L2 learners. Guthrie et al. (2004) claimed that motivation and engagement in reading correlate highly with reading comprehension. They also found that an integrated reading instruction program combining motivation support and strategy instruction would improve this engagement and reading comprehension. Guthrie and Humenick (2004) analyzed 22 studies on how to support intrinsic motivation and summarized four instructional practices: (a) clear content goals for instruction, (b) choice and autonomy support for learners, (c) selection of interesting texts, and (d) collaboration during the learning process. Successfully applying these elements to reading instruction resulted in an increase in motivation for reading and additional text comprehension.

Guthrie and Humenick (2004) have provided good suggestions on how to help learners to develop intrinsic motivation, which comes from personal pleasure and interest and is also powerfully affected through certain instructional practices. The selection of interesting texts, which students perceive to have valuable information and relevance to their life experiences promises one of the most important contributions to intrinsic motivation a teacher can provide. Cho, Xu, and Rhodes (2010) confirmed that how desirable the content is to a student means much more than whether it is easy to read.

Clear content goals increase the likelihood that a reader will focus on meaning, acquire knowledge from the text, and come to a deeper understanding. They also

direct L2 learners to the path of thoughtfulness without losing the chance to give external reinforcement. The interaction between these value factors means that readers, when considering the task, will tend to select the one requiring more than skills to master, finding in it more satisfaction in succeeding, rather than merely a grade to obtain. This conclusion may seem self-evident to anyone who has spent time with a teenager who has access to challenging Internet gaming options.

Empowering a reader by allowing them to choose reading materials during instruction permits them to direct their own learning toward subject matter of interest and enhances perceived self-efficacy which creates the sense of autonomy. However, the findings of the research do not suggest self-efficacy is as large a contributor to Thoughtful Literacy as expected.

Collaboration during the learning process provides various interactions among learners and/or teachers to enhance personal interest and enjoyment. The communications and sharing during collaborative learning provides opportunities to elicit a learners' knowledge from their own life experiences, develop understanding and enhance the relevance of the learning task for meaning that is personal to the learner. It is this enhanced relevance attributed to learning tasks that initiates intrinsic motivation.

Value for L2 reading assessment

While L2 educators use different pedagogy to encourage and motivate students intrinsically, well-designed assignments and assessments can direct students to explore hidden meaning and develop deep thinking. Learners do not find motivation

in abstractions. However, interesting content engages them and problem solving motivates them. Higher Order Comprehension activates reading involvement and increases students' sense of control over ideas. Deep thinking and reading are more appealing than memorizing. Meece and Miller (1999) explored elementary level students' motivations with different assignments. They found the students were less motivated to accomplish the assignments if they involved primarily factual recall. Students were more motivated to do the thoughtful work. These challenging assignments can be designed and selected to direct the students' time and energy towards assessment information, identifying the learners' ability to find deeper meaning and raising questions and/or creating communication between teacher and learners.

Most of L2 reading comprehension assessments require students to demonstrate their linguistic proficiency and reading comprehension by filling in the blank or choosing the best answer among multiple alternatives about a given text. In this way reading skills and language ability are assessed in the L2 student. However, "…, L2 reading assessment traditionally places much more weight on linguistic elements – for example, text length, syntactic complexity, and lexical familiarity – as stronger determinants of comprehension difficulty than nonlinguistic factors such as background knowledge and conceptual complexity" (Koda, 2005, p. 247). By design these tests have a limited usefulness. They can only measure the knowledge accumulated and examine isolated elements of reasoning. They are clumsy tools for assessing Thoughtful Literacy involving creative and integrated thinking.

Chinese L2 assessment on the college level, as discussed in chapter one, not surprisingly "mirrors the prevailing definition of L2 proficiency" (Koda, 2005, p.227). It is also the current situation in L1 reading assessments in many U.S. states. Although challenging standards targeting to higher order comprehension have been created and are in evidence nationwide, corresponding assessments lag behind as they were not designed to evaluate to these standards, instead often assessing mostly lower levels of thinking (Lane, 2004; Allington, 2001).

The current L2 test assessment practice tends to "measure information extraction and integration only in conceptually neutral texts, requiring meaning construction of familiar content alone" (Koda, 2005, p. 253). It totally fails to measure, much less to motivate, the L2 learners' ability to read text materials analytically, critically and thoughtfully.

One of the inescapable implications of my findings here is that intrinsically motivated L2 learners perform better on Higher Order Comprehension. If L2 reading assignments and assessments are designed to motivate readers in an effort to understand deep textual material and help them use what is comprehended in a class-related task or find application in their daily lives, readers will reach more understanding and better enjoy the pleasure of being involved in English reading. Therefore, learning through stretching learners' reading capacity with challenging texts and questions that require reader to make connections with should be incorporated in the mainstream L2 reading assessments. It is worthwhile reevaluating the current L2 reading practice and incorporating alternative modes of assessments to

direct L2 learners' learning, to cultivate Thoughtful Literacy and also to evaluate how effective our teaching methods are. Perhaps it might be practical to strike a balance between traditional methods of assessment and the alternatives I refer to in measuring the nature of the abilities we seek to teach.

Recommendations for Future Research

This study showed that motivation to read in the L2 context was complex and multi-dimensional. The relationship between L2 learners' reading motivation and Thoughtful Literacy was investigated in the current study by using multiple regression analysis, providing predictive powers of the independent variables to the dependent variable. Intrinsic motivation, as one of the motivational constructs, was found to have strong predictive power on Thoughtful Literacy of L2 learners. The current research is limited to Chinese newly enrolled college students at one university. No causal relationships can be concluded using this method and this sample. Further research developing a model including structural relationships among and between motivational factors and Thoughtful Literacy might be helpful. Replications of this study including different groups of L2 learners would be needed to validate, or challenge, the present findings.

It would be worthwhile to investigate whether the predictive power of intrinsic motivation on Thoughtful Literacy is reciprocal. In other words, if intrinsic motivation can predict success in assigned texts requiring Thoughtful Literacy, would L2 learners who think deeply about text prove to be more intrinsically motivated? Would L2 learners who performed better in an assessment of Thoughtful

Literacy be found to have higher motivation than those with lower scores? If so, what sorts of motivational factors were involved?

Another direction worth exploration could be whether different genres of text would bring about different a performance when focus of the testing is Thoughtful Literacy. As the measurement used in the research, narrative passages tend to be more familiar to readers with divergent reading preferences insofar as interpersonal relationships are the primary focus of such text. However, if the reading texts are exploratory or argumentative, the individual intrinsic motivation might be found to differ significantly because of different reading interests. Research such as this would help illuminate the nature of intrinsic reading motivation, further isolating factors and quantifying the effects to continue into the investigation of the connection between reading motivation and it's influence on Thoughtful Literacy.

Conclusions

Initially, four main research questions were specified for the study. Positive predictive powers were expected between five motivational constructs based on Expectancy Value Theory and Thoughtful Literacy. A reading motivation questionnaire was used to measure L2 learners' Self-Efficacy of English reading (SEER), Intrinsic Value of English Reading (IVER), Extrinsic value of English Reading (EVER), Importance of English Reading (IMER) and Willingness to Pay Cost to English reading (WCOER) while two narrative passages adopted from the Critical Reading Inventory were used to measure Thoughtful Literacy. It was hypothesized that each of the motivational constructs would have a positive

association with Thoughtful Literacy. The research also studied, which, of the five variables of motivation, is the dominant source of English reading motivation impacting the Thoughtful Literacy for L2 learners in China.

Multiple regression analyses were run through SPSS to test the hypotheses relating to the relationships between SEER, IVER, EVER, WCOER, IMER and Thoughtful Literacy, which was categorized into Text-Based Reading (TBR) and Higher Order Comprehension (HOC). The hypotheses were tested with 179 participants. Results showed that L2 learners scored higher on text-based comprehension than higher order comprehension. Bivariate multiple regression analysis demonstrated that IVER was the dominant predictor on Thoughtful Literacy. It was also found that IVER had more powerful prediction upon HOC than TBR. The multiple regression model included four predictors: IVER, IMER, SEER and EVER. They were found to be significant predictors of Thoughtful Literacy. Intrinsic value and Importance of English Reading were found to be the two most significant predictors in the model.

The relationship between the five motivational constructs and HOC were also examined. For the overall sample, a statistically positive relationship was found between all five motivational constructs and HOC. However, Intrinsic Value and Importance of English Reading contributed most significantly to the model. Extrinsic Value of English Reading (EVER) was found to have more predictive power on Text-Based Reading than Higher Order Comprehension. An extrinsically motivated L2 learner would have a tendency to achieve when assessed on a lower level reading

process, but was not likely to accomplish similar achievement on assessment of HOC.

Findings from this study may contribute to the body of research on the connection between reading motivation and Thoughtful Literacy in an L2 context, certainly one involving Chinese students. In addition, these findings may help explain L2 reading motivation and how its factors influence the depth of L2 reading. It would subsequently help L2 educators to reevaluate their instruction and to inspire and motivate students differently.

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Appendix A：Questionnaire of Motivation to Read of English Language Learners (English and Chinese)

Questionnaire on Motivation to Read of English Language Learners
英语语言学习者阅读动机问卷调查

I would like to ask you to help us by participating in a survey conducted by Heng Xu, a doctoral candidate enrolled at the University of Minnesota-Duluth, to better understand the motivation to read of learners of English in China. This questionnaire is not a test. There are no "right" or "wrong" answers. We are interested in your personal opinions. The results of this survey will be used only for research purposes so please give your answers sincerely to ensure the success of this project. Thank you very much for your help.

本人是美国明尼苏达大学德卢斯分校的博士研究生。我诚挚地邀请你参加这次调查问卷。本问卷旨在深入了解中国英语学习者的阅读动机。此问卷非测试题无对错之分，只用于了解你的个人想法。问卷结果**仅用于学术研究**，你的意见将会严格保密，希望你认真如实填写，多谢参与！

Please provide the following information by checking (✔) in the box or writing your response in the space provided. 请在方框内打勾，或在空白处写上相应的答案

Name 姓名: _____

Phone number 电话号码: _____

QQ Number　QQ 号: _____

Email Address 邮箱: _____

Student Number 学号: _____

Gender 性别:　　Male 男 ☐　　Female 女 ☐

Where do you come from?　你来自哪里？

_____ Province (省) _____ City / County (市) / 地区

Age 年龄:　　18 ☐　　19 ☐　　20 ☐　　21 ☐　　other: _____

Year of study in the College 大学年级:

1st ☐　　2nd ☐　　3rd ☐　　4th ☐　　other: _____

✧ What is your current Major (if you have one)? 你目前所学专业是？

✧ How long have you studied English? 你学英语多长时间了？

✧ Have you ever had or do you have now a native English-speaking teacher?
你是否曾有过或现在有英语为母语的教师？
Yes. 是 ☐ （曾经 / 现在）　　No. 否 ☐

✧ Have you spent a long period (at least three months) in an English-speaking country (e. g., travelling, studying)?
你是否曾在英语国家呆过一段时间（至少三个月）如学习、旅游等？
Yes. 是 ☐ No. 否 ☐

✧ What was your English score in the College Entrance Examination?
高考英语单科分数是？ _____

English ability 英语能力:
Please rate your current overall proficiency in English by checking one box.
请评估你目前英语综合能力，并在相应的描述上打勾。

☐ Upper Intermediate level and over --- Meaning you are able to converse about general matters of daily life, topics of one's specialty, grasp the gist of lectures and broadcasts. Able to read high-level materials such as newspapers and write about personal ideas.
中级水平以上——能就日常生活、本专业话题、讲座和报道的主旨等一般事物进行交流；能阅读高级资料如英文报纸；能抒发个人观点

☐ Intermediate level ---- Meaning you are able to converse about general matters of daily life. Able to read general materials related to daily life and write simple passages.
中级水平——能就日常生活中的一般事物进行交流；能阅读日常生活中常规资料；能写简单的英语短文。

☐ Lower Intermediate level --- Meaning you are able to converse about familiar daily topics. Able to read materials about familiar everyday topics and write simple letters.
中级水平偏低——能就熟悉的日常话题交流；能阅读熟悉的日常话题的相关资料；能写简单的英语信件。

☐ Post-beginner level ---- Meaning you are able to hold a simple conversation such as greeting and introducing someone. Able to read simple materials and write a simple passage in elementary English.
初学阶段后期——能进行诸如问候、介绍等简单会话；能阅读简单材料；能用基本词汇写简单段落。

☐ Beginner level ---- Meaning you are able to give simple greetings using set words and phrases. Able to read simple sentences, grasp the gist of short passages, and to write a simple sentence in basic English.
初学阶段——会简单问候语；能阅读简单的短句，理解短篇文章的大意；能用简单词汇写短句。

In this section, we would like you to tell us how much you agree or disagree with the following statements by simply checking the box under a number from 1 to 6. Please do not leave out any of the items.
在此部分我想了解您对如下陈述赞成或反对的程度，在表格内勾出相应数字，注意避免漏答，谢谢合作。

1 Strongly disagree　　2 Disagree　　3 Slightly disagree
4 Slightly agree　　5 Agree　　6 Strongly agree

1　强烈反对　　2　反对　　3　轻微反对
4　轻微赞同　　5　赞同　　6　强烈赞同

1.	I am good at reading in English. 我擅长英语阅读。	1	2	3	4	5	6
2.	My grades for English reading classes at middle and high schools were not very good. 我初中高中英语阅读成绩不好。	1	2	3	4	5	6
3.	When I am reading English books outside of school, recommended by teachers or friends, I understand most of what I read. 我能读懂大部分老师或者同学推荐的课外英语书和其他英语资料。	1	2	3	4	5	6
4.	I can always get a good score in English reading comprehension. 我英语阅读理解的分数一直很不错。	1	2	3	4	5	6
5.	Reading English is very easy for me. 对我来说，阅读英语很容易的。	1	2	3	4	5	6
6.	Reading English is easier for me than speaking, listening and writing in English. 对我来说，英语阅读比英语听说写容易。	1	2	3	4	5	6
7.	I believe that I will be capable of reading and understanding most texts in English if I keep studying it. 我相信如果我坚持学习英语就能阅读和理解大多数英语资料。	1	2	3	4	5	6
8.	English reading is my weak subject. 英语阅读是我的薄弱科目。	1	2	3	4	5	6
9.	I enjoy the challenge of difficult English passages. 我喜欢高难度英语阅读中的挑战。	1	2	3	4	5	6
10.	It is fun to read in English. 英语阅读很有趣。	1	2	3	4	5	6
11.	I tend to get deeply engaged in the text when I read in English. 当我阅读英语的时候，我能够沉浸到故事情节或文章	1	2	3	4	5	6

讲述的内容中去。						
12. Reading English is what I like to do. 阅读英语是我喜欢做的事情。	1	2	3	4	5	6
13. I like reading English novels. 我喜欢阅读英语小说。	1	2	3	4	5	6
14. I like the rhythm of English. 我喜欢英语的韵律。	1	2	3	4	5	6
15. I get immersed in interesting stories even if they are written in English. 即使是英文故事，我也能进入故事，享受阅读的过程。	1	2	3	4	5	6
16. I do not have any desire to read in English even if the content is interesting. 即使文章内容很有趣，我也不会阅读英语，。	1	2	3	4	5	6
17. I am learning to read in English because I want to get good grades in English class. 我学习英语阅读是为了英语考高分。	1	2	3	4	5	6
18. I am learning to read in English because I think it will help me to find a job. 我现在学习英语阅读是因为它对我将来找工作有帮助。	1	2	3	4	5	6
19. I am learning to read in English primarily because I want to get an English certificate. 我学习英语阅读主要是为了能获得一个英语证书。	1	2	3	4	5	6
20. Having a passing score in class is all what I want in English reading. 对我来说，只要能通过英语阅读考试就足够了。	1	2	3	4	5	6
21. I am learning to read in English because it can help me to get a scholarship. 我学习英语阅读是因为它能够帮助我获得奖学金。	1	2	3	4	5	6
22. I am learning to read in English because I want to pursue an education in an English speaking country. 我学习英语阅读是希望以后能去英语语言国家继续求学或者进修。	1	2	3	4	5	6
23. I am learning to read in English because I want others to think that I am a good English reader. 我学习英语阅读是因为我希望其他人认可我在英语阅读方面很不错。	1	2	3	4	5	6
24. It is a waste of time to learn to read in English. 我认为学习读英语就是浪费时间。	1	2	3	4	5	6
25. Learning to read in English is important because it makes me a more knowledgeable person. 我认为学习阅读英语很重要，因为它能让我成为一个知识渊博的人。	1	2	3	4	5	6

26. Learning to read in English is important to me because I would like to communicate with people from many countries. 我认为学习英语阅读很重要，因为我希望能和不同国家的人交流。	1	2	3	4	5	6
27. The reason why I learn to read in English is because it will broaden my view. 我学习读英语是因为它能开阔我的眼界。	1	2	3	4	5	6
28. Learning to read in English is important to me because I want to know about the lives and opinions of people in the western countries such as America. 我认为学习英语阅读很重要，因为我希望了解西方国家的人，例如美国人，的生活和对事物的不同观点和看法。	1	2	3	4	5	6
29. It is very important to me to be a good reader in English. 对我来说，英语阅读非常重要。	1	2	3	4	5	6
30. I don't mind looking up new words in the dictionary while I am reading. 我不介意阅读过程中查字典。	1	2	3	4	5	6
31. I am prepared to spend a lot of effort in English reading. 我愿意在英语阅读方面花更多的时间和精力。	1	2	3	4	5	6
32. I get nervous and confused when I read in English. 你在阅读过程中会紧张和困惑。	1	2	3	4	5	6
33. If I have a choice, I will spend none of my time reading in English. 如果允许，我不愿在英语阅读上花任何时间。	1	2	3	4	5	6
34. I would rather spend more time on learning other subjects rather than reading English. 我宁愿把读英语的时间用来学习其他科目。	1	2	3	4	5	6
35. For me, it is frustrating to read in English 对我来说，读英语总是给我挫败感。	1	2	3	4	5	6

Appendix B： Two Narratives Adopted from The Critical Reading Inventory

Directions： Please read the following two passages and answer 20 open-ended questions. You are allowed to use **Chinese** to answer the questions. Please indicate your answers and give reasons to support them.

(请阅读下面 2 篇短文并回答 20 个开放性问题。请你用**中文**回答问题。在你回答问题的时候，请尽可能的阐述出支持你答案的原因。)

Passage A

The Player

Rasheed was excited to be playing on his first basketball team. He hadn't played much basketball but he had always been big and fast and a good athlete. But this time things were different. The first time he had the ball, Rasheed dribbled it off his foot and out of bounds. The next two times, a quicker player stole it away from him. Finally Rasheed had his first chance to shoot the ball but he missed everything, even the backboard. Soon his teammates stopped passing the ball to him, even when he was open under the basket. His team lost the game badly and Rasheed went home angry with his team and angry with basketball.

That night, Rasheed went to his father and told him that he wanted to quit the basketball team. "I'm no good at basketball and the team is no good either," he said.

"Well, if you want to quit, that's your decision," said Mr. Singer. "But I think if you really want to, you can become a whole lot better and so can your team. Maybe you shouldn't just do things that are easy for you." Rasheed had to think this one

over. Rasheed knew that whenever his father said "It's your decision, but…" he really meant that he'd like Rasheed to think it over very carefully. Down deep, he knew that his father would be disappointed if he never tried to become a better player.

Rasheed knew that his father wouldn't be much help at teaching him basketball but he had heard stories about their new neighbor, Mr. Armstrong, being named to the all-state team in high school. When Rasheed asked Mr. Armstrong if he could teach him basketball, Mr. Armstrong's eye lit up. He said, "You stick with me, kid, and you'll be the best basketball player ever!" Rasheed laughed as the two of them took turns shooting baskets in Mr. Armstrong's back yard. But soon Rasheed was sweating and breathing hard as his new teacher put him through one basketball drill after another. Finally, Mr. Armstrong said, "Time to call it a day! But be here same time tomorrow and we'll do it again." Rasheed worked hard and even after just a few days, he could feel himself becoming more confident in his ability. When it was time for the next game, Rasheed scored eight points, grabbed five rebounds and didn't lose the ball once. His team still lost the game, but his teammates couldn't believe how much better he had become.

After the game, Mr. Singer put his arm around his son and said, "I'm really proud of the decision you made, Rasheed. You worked awfully hard and it really showed."

"Thanks, Dad. Thanks for not letting me quit the team."

"Who told you that you couldn't quit? It wasn't me!"

Rasheed just smiled.

Comprehension Questions:

1. Why was Rasheed angry after his first game with the basketball team? (Must identify one.)

   跟篮球队打了第一场后，为什么 Rasheed 生气了？

2. How do you know that Mr. Armstrong really wanted to help Rasheed become a better player? (Must identify one.)

   你是怎么知道 Mr. Armstrong 是真的想帮助 Rasheed 成为一个更加优秀的球员？（至少陈述一条理由）

3. What kind of player was Rasheed expecting to be when he first started to play basketball? Why?

   Rasheed 第一次开始打篮球的时候，他认为（期待）自己是哪一种球员？为什么？

4. Why do you think that Mr. Armstrong would spend so much time and energy on a neighbor's son?

   为什么 Mr. Armstrong 愿意在邻居孩子身上花如此多的时间和精力？

5. Why would Rasheed's father think he should stay on the team, even if he wasn't very good?

   为什么 Rasheed 的父亲认为即使 Rasheed 表现不好，还是应该留在篮球队里？

6. Why didn't Rasheed quit when Mr. Armstrong made him work so hard on basketball drills?

Mr. Armstrong 安排的篮球训练非常辛苦，为什么 Rasheed 没有放弃？

7. At the end of the story, Rasheed's father insisted that he hadn't told his son that he could not quit the team. Why do you think he did that?

   在故事结尾处，Rasheed 的父亲坚持说他此前并没有告诉 Rasheed 他不能退出篮球队，为什么父亲要这么做？

8. How did Rasheed's teammates react to him after the second game?

   第二场比赛后，Rasheed 的队友们是什么反应？

9. Who do you think helped Rasheed more, Mr. Armstrong or his father? Explain.

   Mr. Armstrong 和 Rasheed 的父亲，谁对 Rasheed 的帮助更大？请解释。

10. Do you think it would have been wrong if Rasheed had quit the team? Why or why not?

    如果 Rasheed 退出了篮球队，你觉得会是错误之举吗？为什么？

Passage B

Getting What You Want

Many years ago a young woman named Winnie Yua lived in a small Chinese village where her family kept a few rice paddies. Winnie's family was very poor. Winnie was the oldest of five girls and she would help her father take the rice to the city and sell it on market days. Her parents had always hoped to have a son who would help her father take the rice to the city and sell it on market days. Her parents had always hoped to have a son who would be able to go to school and perhaps work

in the city for better pay. They never had their son, but their daughters were all good and kind and worked hard on the farm with their parents.

One day in the marketplace, Winnie heard news from the province that the emperor had announced a counting contest. This was exciting news because the winner would get a valuable, secret prize. Winnie knew no one who was nearly as good at counting as she was. But when she asked about how to enter the contest, Winnie learned that only boys were permitted to participate.

"Father, I wish I were a boy. I know that I can count very well. It isn't fair that only boys can compete."

"Winnie, you really need to stop wishing you were a boy. Sometimes I think it is our fault that you feel that way. You are a young daughter and a great help to us. I know it isn't fair that the emperor is only allowing boys to participate but that is the way it is. Perhaps one day things will change but you must accept your fate for now."

Winnie honored and respected her father, but she still wanted a chance to win a valuable prize and help her family. Helping at the market had made her an excellent counter. She could calculate bills and change without an abacus. And she never made a mistake. So Winnie vowed to win the prize and immediately set out to make for herself a special suit of boy's clothing. On the day of the competition, Winnie disguised herself as a young man and entered the contest. As the day went on, Winnie became more and more excited. The others were failing, one by one, but Winnie knew her numbers well. At the end of the contest, she was the only one left. She had achieved her goal!

Now the emperor's minister came forward to award the prize. Winnie's heart was pounding. It seemed as if everyone in the entire city was there to hear the announcement. She prayed that no one would recognize her. All she wanted was to take the money, go home to her own village, and surprise her family, especially her father.

Then the crowd hushed at a signal from the town's guard. Then the minister spoke in a loud voice, "The emperor has decreed that the winner of this contest is the man who will marry his only daughter!"

Comprehension Questions:

1. What skill did Winnie have that that helped her father on market days?

   赶集的时候， Winnie 用什么技能帮爸爸忙？

2. What did Winnie have to do to get into the counting contest?

   为了参加计算比赛，Winne 必须怎么做？

3. Why would Winnie's father think it was his fault that his daughter wished to be a boy?

   Winnie 希望自己是个男孩子，为什么她爸爸觉得是他的错？

4. Was the emperor really unfair to allow only boys in this counting contest? Explain.

   国王只让男孩子参加计算比赛，真的不公平吗？请解释。

5. Do you think it was right for Winnie's father to wish that he had a son? Explain.

   Winnie 的爸爸希望他有个儿子，你觉得合理吗？请解释

6. What advice did Winnie's father give her when she said that she wished she were a boy?

   Winne 说她希望她是个男孩子，她爸爸给了她什么意见？

7. Why would Winnie be especially eager to tell her father that she had won the contest?

   为什么 Winnie 非常急切地想告诉她爸爸，她赢得了比赛？

8. Why did Winnie enter the contest?

   为什么 Winnie 要参加比赛？

9. Would you describe Winnie more as a creative person or a dishonest person? 你认为 Winnie 是一个具有创造性的人还是不诚实的人？为什么？

10. What do you think Winnie should do now that she knows what the prize is? 你觉得 Winnie 知道奖品是什么之后，她会怎么做？

Appendix C：Panel Information

Aydin Y. Durgunoglu, PhD, is professor of Psychology at the University of Minnesota Duluth. Her research addresses literacy development in both adults and children, literacy development in first and/or second languages, bilingualism and knowledge acquisition. She has made significant contributions to the improvement of our understanding of processes underlying bilingual language acquisition and literacy development.

Dr. Jean Stevenson has been working as an associate professor and researcher at the University of Minnesota Duluth since 2002. Her research focuses on literacy and children's literature. She has published abundant articles in peer-reviewed journals and has made presentations at various regional and national conferences. She also services as president of Kerlan Friends Board since 2009.

Dr. Anthony Applegate serves as a professor on the faculty of Holy Family University in Philadelphia, PA. He is an expert in reading and literacy development. He is one of the co-authors of the Critical Reading Inventory. He has published numerous articles on topics related to Thoughtful Literacy.

Appendix D: Scores of Participants on Thoughtful Literacy Questionnaires in Written and Interview Administration Forms

(Full points = 200 points)

Performance	No. of Participants	Writing Score	Interview Score	Difference between Written and Interview Forms
Higher Score in Written Form	5	165	160	5
		165	150	15
		175	160	15
		160	155	5
Lower Score in Written Form	3	175	160	15
		165	175	10
		155	170	15
		145	160	25
Identical Score in Written and interview Forms	2	190	190	0
		170	170	0

Appendix E：Pearson Correlation between Eight Extracted Factor Scores from PCA

		Factor score 1	Factor score 2	Factor score 3	Factor score 4	Factor score 5	Factor score 6	Factor score 7	Factor score 8
Factor score 1	Pearson Correlation	1.00	.00	.00	.00	.00	.00	.00	.00
	Sig. (2-tailed)		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Factor score 2	Pearson Correlation	.00	1.00	.00	.00	.00	.00	.00	.00
	Sig. (2-tailed)	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Factor score 3	Pearson Correlation	.00	.00	1.00	.00	.00	.00	.00	.00
	Sig. (2-tailed)	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Factor score 4	Pearson Correlation	.00	.00	.00	1.00	.00	.00	.00	.00
	Sig. (2-tailed)	1.00	1.00	1.00		1.00	1.00	1.00	1.00
Factor score 5	Pearson Correlation	.00	.00	.00	.00	1.00	.00	.00	.00
	Sig. (2-tailed)	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Factor score 6	Pearson Correlation	.00	.00	.00	.00	.00	1.00	.00	.00
	Sig. (2-tailed)	1.00	1.00	1.00	1.00	1.00		1.00	1.00
Factor score 7	Pearson Correlation	.00	.00	.00	.00	.00	.00	1.00	.00
	Sig. (2-tailed)	1.00	1.00	1.00	1.00	1.00	1.00		1.00
Factor score 8	Pearson Correlation	.00	.00	.00	.00	.00	.00	.00	1.00
	Sig. (2-tailed)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Appendix F: Descriptive Statistics of 32 Items Questionnaire

	Mean	SD
Self Efficacy of Reading 1_Item 1	4.02	.93
Self Efficacy of Reading 2_Item 2	4.67	1.09
Self Efficacy of Reading 3_Item 3	3.97	1.13
Self Efficacy of Reading 4_Item 4	4.16	1.05
Self Efficacy of Reading 5_Item 5	3.43	1.11
Self Efficacy of Reading 6_Item 6	4.43	1.17
Self Efficacy of Reading 7_Item 7	5.34	.90
Self Efficacy of Reading 8_Item 8	4.53	1.20
Intrinsic Value of Reading 1_Item 9	3.45	1.38
Intrinsic Value of Reading 2_Item 10	4.39	1.09
Intrinsic Value of Reading 3_Item 11	4.46	1.08
Intrinsic Value of Reading 4_Item 12	3.92	1.10
Intrinsic Value of Reading 5_Item 13	3.74	1.17
Intrinsic Value of Reading 6_Item 14	4.15	1.27
Intrinsic Value of Reading 7_Item 15	4.31	1.08
Intrinsic Value of Reading 8_Item 16	5.22	.91
Extrinsic Value of Reading 1_Item 17	2.60	1.37
Extrinsic Value of Reading 2_Item 18	4.06	1.42
Extrinsic Value of Reading 3_Item 19	2.78	1.38
Extrinsic Value of Reading 5_Item 21	2.48	1.29
Extrinsic Value of Reading 6_Item 22	4.06	1.34
Extrinsic Value of Reading 7_Item 23	3.27	1.37
Importance of Reading1_Item 24	5.70	.70
Importance of Reading 2_Item 25	5.06	.92
Importance of Reading 3_Item 26	5.33	.78
Importance of Reading 4_Item 27	5.24	.82
Importance of Reading 5_Item 28	5.24	.84
Importance of Reading 6_Item 29	5.01	.81
WCost1_30	4.60	1.25
WCost2_31	4.68	.97
WCost4_33	5.44	.77
WCost5_34	5.35	.76

Appendix G: KMO and Bartlett's Test 32 Items Questionnaire

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.85
Bartlett's Test of Sphericity	Approx. Chi-Square	2841.12
	df	496
	Sig.	.00

Appendix H: Communalities of 32 Items Questionnaire

	Initial	Extraction
Self Efficacy of Reading 1_Item 1	1	.68
Self Efficacy of Reading 2_Item 2	1	.70
Self Efficacy of Reading 3_Item 3	1	.49
Self Efficacy of Reading 4_Item 4	1	.75
Self Efficacy of Reading 5_Item5	1	.63
Self Efficacy of Reading 6_Item 6	1	.68
Self Efficacy of Reading 7_Item 7	1	.53
Self Efficacy of Reading 8_Item 8	1	.72
Intrinsic Value of Reading 1_Item 9	1	.66
Intrinsic Value of Reading 2_Item 10	1	.65
Intrinsic Value of Reading 3_Item 11	1	.70
Intrinsic Value of Reading 4_Item 12	1	.75
Intrinsic Value of Reading 5_Item 13	1	.67
Intrinsic Value of Reading 6_Item 14	1	.55
Intrinsic Value of Reading 7_Item 15	1	.76
Intrinsic Value of Reading 8_Item 16	1	.71
Extrinsic Value of Reading 1_Item 17	1	.63
Extrinsic Value of Reading 2_Item 18	1	.60
Extrinsic Value of Reading 3_Item 19	1	.75
Extrinsic Value of Reading 5_Item 21	1	.61
Extrinsic Value of Reading 6_Item 22	1	.64
Extrinsic Value of Reading 7_Item 23	1	.59
Importance of Reading1_Item 24	1	.75
Importance of Reading2_Item 25	1	.66
Importance of Reading3_Item 26	1	.78
Importance of Reading4_Item 27	1	.79
Importance of Reading5_Item 28	1	.73
Importance of Reading 6_Item 29	1	.60
WCost1_30	1	.78
WCost2_31	1	.66
WCost4_33	1	.64
WCost5_34	1	.68

Note: Extraction Method: Principal Component Analysis.

Appendix I: Coefficients of Stepwise Multiple Regression with Dependent Variable as Text-Based Reading

	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% CI	
		B	Std. Error	Beta			Lower Bound	Upper Bound
A	(Constant)	73.69	.32		230.04	.00	73.06	74.32
	EVER	2.14	.32	.45	6.66	.00	1.51	2.77
B	(Constant)	73.69	.29		258.58	.00	73.13	74.25
	EVER	2.14	.29	.45	7.49	.00	1.58	2.70
	IMER	1.97	.29	.41	6.90	.00	1.41	2.54
C	(Constant)	73.69	.26		284.82	.00	73.18	74.20
	EVER	2.14	.26	.45	8.25	.00	1.63	2.65
	IMER	1.97	.26	.41	7.60	.00	1.46	2.49
	IVER	1.61	.26	.34	6.21	.00	1.10	2.12
D	(Constant)	73.69	.24		304.77	.00	73.21	74.16
	EVER	2.14	.24	.45	8.83	.00	1.66	2.62
	IMER	1.97	.24	.41	8.14	.00	1.49	2.45
	IVER	1.61	.24	.34	6.64	.00	1.13	2.09
	SEER	1.25	.24	.26	5.14	.00	.77	1.72
E	(Constant)	73.69	.24		309.23	.00	73.22	74.16
	EVER	2.14	.24	.45	8.96	.00	1.67	2.61
	IMER	1.97	.24	.41	8.26	.00	1.50	2.44
	IVER	1.61	.24	.34	6.74	.00	1.14	2.08
	SEER	1.25	.24	.26	5.21	.00	.77	1.72
	WCOER	-.59	.24	-.12	-2.47	.01	-1.06	-.12

Note: Dependent Variable: Text-Based Reading

Appendix J: Coefficients of Stepwise Multiple Regression with Dependent Variable as Higher Order Comprehension

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% CI	
		B	Std. Error	Beta			Lower Bound	Upper Bound
A	(Constant)	77.01	.92		83.34	.00	75.19	78.84
	IVER	8.85	.93	.58	9.55	.00	7.02	10.67
B	(Constant)	77.01	.79		98.06	.00	75.46	78.56
	IVER	8.85	.79	.58	11.23	.00	7.29	10.40
	IMER	6.54	.79	.43	8.31	.00	4.99	8.10
C	(Constant)	77.01	.70		110.72	.00	75.64	78.38
	IVER	8.85	.70	.58	12.68	.00	7.47	10.22
	IMER	6.54	.70	.43	9.38	.00	5.17	7.92
	EVER	4.90	.70	.32	7.03	.00	3.53	6.28
D	(Constant)	77.01	.65		118.78	.00	75.73	78.29
	IVER	8.85	.65	.58	13.60	.00	7.56	10.13
	IMER	6.54	.65	.43	10.06	.00	5.26	7.83
	EVER	4.90	.65	.32	7.54	.00	3.62	6.19
	SEER	3.40	.65	.22	5.24	.00	2.12	4.69
E	(Constant)	77.01	.64		119.84	.00	75.74	78.28
	IVER	8.85	.64	.58	13.73	.00	7.57	10.12
	IMER	6.54	.64	.43	10.15	.00	5.27	7.82
	EVER	4.90	.64	.32	7.61	.00	3.63	6.17
	SEER	3.40	.64	.22	5.28	.00	2.13	4.68
	WCOER	1.31	.64	.09	2.03	.04	.03	2.58

Note: Dependent Variable: HiOrder; HiOrder = Higher Order Comprehension.