

# TUTORING CHINESE ENGLISH-AS-FOREIGN-LANGUAGE LEARNERS TO READ: AN EXPLORATORY RESEARCH OF CUSTOMIZED READING SCAFFOLDING INSTRUCTION

By

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Xiaochen Hua

Ph.D., University of Kansas, 2018

M.D., Southwestern College, 2012

B.S., Huangshan University, 2011

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Chair: Manuela Gonzalez-Bueno, Ph.D.

---

Arlene Barry, Ph.D.

---

Paul Markham, Ph.D.

---

Heidi Hallman, Ph.D.

---

Jason Travers, Ph.D.

Date Defended: 02 May 2018

The dissertation committee for Xiaochen Hua certifies that this is the approved version of the following dissertation:

Tutoring Chinese English-as-Foreign-Language Learners to Read: An Exploratory Research of Customized Reading Scaffolding Instruction

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Chair: Manuela Gonzalez-Bueno, Ph.D.

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## **Abstract**

### **Tutoring Chinese English-as-Foreign-Language Learners to Read: An Exploratory Research of Customized Scaffolding Instruction**

Xiaochen Hua

University of Kansas, Lawrence, KS

Given the status quo that Chinese English-as-foreign-language (EFL) learners' reading practice is mainly confined to teach-to-test pedagogy, many of them who are struggling in reading have neither the interest nor the ability to comprehend authentic texts for the purpose of acquiring information rather than answering tests. The creation of Customized Reading Scaffolding Instruction (CRSI) was designed based on the Engagement Reading model (Guthrie, 2000) and aims to solve these students' primary reading problems. This longitudinal study examined the effectiveness of tutoring Chinese EFL students struggling with reading in English by using the CRSI on their reading experience, reading amount and reading comprehension and contributed to a deeper understanding of participants' learning processes and their reflections.

Qualitative data showed that reading materials according to individual's topic interest, prior knowledge, and inter-cultural awareness effectively improved participants' reading experience, but CRSI remained less effective for forming a stable reading habit for some participants. Quantitative data showed that participants' amount of reading time increased in varied degrees during the intervention period compared with their previous reading behavior. Accompanying the increasing of their reading amount, participants' reading comprehension moderately developed during and after the CRSI training.

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## Chapter I

### Introduction

#### Background Statement

There is no doubt that English is the world's primary language; its power and prestige are widely acknowledged. The United States dominates the fields of technology, science, culture, politics, and finance. The United Kingdom, Canada, Australia, and other English-speaking countries are also well-known for their advanced civilizations. Gunderson and Chen (2011) claimed that "English is a language associated with the most powerful country in the world and it is also a major feature associated with access to knowledge, technology, and the internet" (p.17). Anyone who wants better access to the rapidly growing knowledge base in these fields must attain sufficient English ability to read academic literature and understand speeches which are mainly carried by English language media. Furthermore, anyone who wants to contribute their knowledge to the largest possible audience must be able to write and speak English. In this sense, the English language serves as the most valuable language for other speakers to acquire.

Considering this reality, for pragmatic and political reasons, English language classes are mandatory for every Chinese student from elementary school to graduate school. Not just a subject in school, Chinese education policy makers give English equal weight to literacy and math in the National Higher Education Entrance Examination (Gaokao) and the Senior High School Entrance Examination (Zhongkao) and higher than other disciplines. Put another way, if one wants to study in a better college, whether he/she likes English or other foreign languages, whether he/she has talent in acquiring a foreign language or not, and whether his/her major needs English or not, one must earn higher scores in English in the Examination to be admitted to that university.

In recent decades, many Chinese families have sent their children to study abroad — mostly to English speaking countries. Studying abroad seems to allow students not to be subjected

to China's demanding education and testing system, but the requirement of a student's command of English is higher abroad than in domestic schools. As standardized test scores are a fundamental condition to admit students by American, British, and Australian schools, examinations such as AGT, SAT, GRE, TOEFL, IELTS etc. have become a daunting obstacle for students who were driven by their parents to study abroad but have little intrinsic motivation or talent in learning a foreign language.

In a country with a tradition of an education-fetish, English's vital institutional role in encouraging students to be enrolled in a good school (either domestic or international) pushes them to spend a great deal of time and effort in raising English test scores. Guided by this realistic and urgent goal of improving test scores, English pedagogy in public schools is dominated by spiritlessly teaching grammar and vocabulary, and cram schools and tutors mainly teach students utilitarian testing strategies and repeatedly train students to answer test questions. Under training by this pedagogy, students usually focus on learning the grammar that appears in a text or finding out a key word embedded in the text to answer the test question but do not know what the entire article is about. Students who learned the linguistic knowledge but not the content of the text think that English is primarily a subject that should be measured by test questions, not a useful tool to communicate and gain knowledge (Liu, 2014). In this sense, without paying attention to the content, and spending a long time in pure grammar and test preparation, this pedagogy cannot effectively help students improve their command of English.

### **Problem Statement**

Due to the domestic English as a Foreign Language (EFL) education policy, the test requirement for studying abroad, and the distorted EFL pedagogy in China, students who lack intrinsic motivation and talent in acquiring foreign language are artificially designated as struggling EFL students. Research shows that these struggling students commonly lose confidence and feel anxiety in learning English. Even their English ability acquired in China can barely help them

achieve academic success in their chosen majors. Considering the status quo of EFL education in China and the problems of Chinese EFL learners, there is an urgent call for research on innovating curriculums and pedagogy to solve the perennial problems of these Chinese EFL struggling learners.

In examining EFL education in China, there are four factors that contribute to reading's vital role in an individual's EFL development: 1) English Native Speaker (ENS) teachers are too few to teach the enormous number of EFL learners through listening and speaking, and they see audio-video and computer-assisted learning methods as supplemental instruction. 2) Reading comprehension occupies the largest portion of every English standardized test so training students in reading can significantly improve their total English scores. 3) Reading materials are comparatively easy for Chinese people to access, and no matter whether in urban or rural areas it is convenient for students to be exposed to English. 4) Reading is an important skill for students to gain knowledge in English for their future learning (Charrell, Devine, & Eskey, 1988; Gunderson, D'Silva, & Chen, 2011). Based on these four reasons, reading is crucial to solving struggling Chinese EFL students' learning problems.

Due to the EFL teaching status quo, most English texts that Chinese students read are textbooks and readings presented within tests. China's English textbooks are full of western culture-based and prosaic doctrinal content materials such as "Chicken-Soup-for-the-Soul"-like (inspiration) articles, and test readings covering various topics and academic disciplines. These reading materials are good for students to broaden their knowledge, but they cannot stimulate students to read with as much interest as they would with entertaining fiction or sensational news. Reading texts of unfamiliar academic subjects and Western culture also challenges struggling EFL students' English reading comprehension and frustrates their confidence. After a student spends a lot of energy understanding the text, they might find this intense reading experience less relevant to their daily life and future study. For struggling students who have little interest in learning English, who have less confidence in reading English, and who lack knowledge about Western culture or

unfamiliar academic disciplines, these types of texts presented in textbooks and tests would not facilitate their English learning and might also hinder language acquisition as they decrease students' EFL reading experience.

## **Theoretical Background**

Due to the large number of Chinese EFL learners who are struggling with reading, and with a high demand for accommodating their particular needs, I designed the Customized Reading Scaffolding Instruction (CRSI). The CRSI reading model is designed based on Guthrie's (1999) Engagement Reading model and other cognitive learning theories, and aims to solve the Chinese EFL students' specific reading problems. Based on the assumption that struggling students' negative reading experience is a prime reason for the lack of English improvement through in-depth reading practice, psychological factors are considered to improve struggling students' EFL reading experience and attitude at first. A great deal of research has been carried out indicating 1) the positive effects of motivation improving children's first language (L1) reading comprehension (Brantmeier, 2006; Leloup, 1993; Shiefele, 1996) and 2) prior knowledge on facilitating adult's second language (L2) reading comprehension (Chen & Donin, 1997; Chihara, Sakurai, & Oller, 1989; Coady, 1979; Hudson, 1982), and 3) proposals with many teaching implications. However, very little research examined those implications nor investigated the effects of instruction containing both factors -- interest and prior knowledge -- after a long period of teaching adult L2 learners. Group design studies quantitated participants' average performance in large samples but did not reveal specific individual's in-depth and holistic learning experience. Inspired by Guthrie's (1999) engagement theory and other cognitive learning theories, this study attempts to construct a Customized Reading Scaffolding Instruction (CRSI) and to examine its effect on improving Chinese college level struggling students' EFL reading experience with the goal of improving reading comprehension.

## **Research Design**

This reading instruction consists of selecting individualized reading materials tailored to each participant's interests of reading topics and prior knowledge, and followed by a tutor's explanation of reading content, linguistic knowledge, and reading strategies. After a ten-week intervention, participants are expected to gain a positive attitude and confidence toward reading in English, thereby forming an enduring autonomic EFL reading habit, with an increase of vocabulary and language awareness. Their EFL reading comprehension thus will rise and will maintain at an expected level.

Previous group design studies in this field usually quantitated participants' average performance in large samples but did not reveal special individual's in-depth and holistic learning experience. Considering the change of student's reading performance cannot be independently controlled in a laboratory circumstance without taking into account any natural influences, this exploratory research combines a quantitative method and a qualitative method to both examine the CRSI program and to explore how participants reflect on this pilot project. In the quantitative part, a single-case-research-design (SCRD) is adopted to collect several struggling Chinese EFL students' reading scores and reading amount. In the qualitative part, a case study paradigm is applied to investigate participants' personal learning experiences to triangulate their quantitative data and discuss which students will find this intervention project to be more effective.

## **Purpose**

The purpose of this study is two-fold: 1) to examine the effectiveness of tutoring Chinese EFL students who are struggling with reading in English by using the CRSI in ameliorating their EFL reading experience and constructing a durable reading habit, thereby increasing reading comprehension; 2) to explore how participants reflect on this instruction, and how this instruction can be modified

## **Research questions.**

1. How do Chinese college students who are struggling with reading in English adjust their feelings and attitudes about reading in English during and after a customized reading scaffolding instruction?
2. Do Chinese college students who are struggling with learning English as a foreign language form a stable English reading habit measured in autonomous reading time if provided with customized reading scaffolding instruction?
3. Do Chinese college students who are struggling with learning English as a foreign language increase their English reading comprehension measured by tests scores if provided with customized reading scaffolding instruction?

## Chapter II

### Literature Review

#### Overview of Customized EFL Reading Scaffolding Instruction

Having examined the current Chinese EFL students' reading problems, the customized reading scaffolding instruction for struggling EFL students is proposed on a theoretical level. This instruction mainly consists of three parts: 1) selecting and offering students customized EFL readings related to their topic of interest and prior knowledge; 2) giving students enough time to read and helping them understand the content; 3) leading students to talk about their reading reflection and to realize the unique function of EFL reading. Interest in topics can motivate students to want to read and familiar content can decrease the reading difficulty and make it more readable for struggling students. Therefore, this specific-text-related reading training can be a scaffolding that provides students a hierarchy to develop general linguistic knowledge and reading capacity in this program, so they can acquire the knowledge and skills to read articles of other topics.

A tutor's interactive instruction can ensure that participants have a quality reading experience and gain multifaceted positive feelings (e.g., confidence, achievement, and enjoyment assessed by interviewing and calculating the time spent on autonomous reading) toward reading in English. Participants are assisted by tutors through this scaffolding-like chronic instruction to form enduring, frequent, and autonomous reading habits, represented as an increased reading time, frequency, and effort. As the increasing time and effort will have been continuously spent on quality EFL reading, participants' reading comprehension is expected to increase. At last, they can remove this scaffolding and read through non-text-related articles with developed knowledge and skills. The design of this intervention is drawn on educational psychological theories about interest and prior knowledge, and the rationale is inspired by Guthrie's Engagement Reading model and Concept-Oriented Reading Instruction (CORI) pedagogy.

## Selecting Customized Reading Materials

The overarching goal of selecting customized reading materials is choosing a text according to the student's topic interest, prior knowledge, and linguistic knowledge.

### **Multifaceted interest to active reading.**

According to first language (L1) reading comprehension research, motivation plays a crucial role in activating and facilitating learning. Extrinsic motivation for learning consists of anticipation of gaining rewards and social recognition (Deci, Vallerand, Pelletier, & Ryan, 1991), while intrinsic motivation for learning has an emphasis on learner's interest (Hidi, 2001; Krapp, 1999), which can facilitate L2 readers in gaining positive reading experiences (Guthrie, Wigfield, Metsala, & Cox, 1999) and constructing a frequent and durable reading habit. Due to the more powerful effect of intrinsic motivation, in this study I will incorporate interest into the reading intervention instruction.

From the psycho-educational perspective, two types of interest — topic interest and situational interest — have long been studied by psychologists and applied in teaching reading (Harackiewicz, Barron, Tauer, Carter, & Elliot 2000; Hidi, 1990, 2001; Krapp, 1999; Schiefele, 1996; Wade, 1992). Topic interest, “is conceived of as a relatively stable evaluative orientation toward certain topics, while [situational interest or] text-based interest is an emotional state aroused by specific text features” (Schiefele, 1996, p.4). Krapp (1999) argued that topic interest is a long-lasting personality trait of motivational disposition, learners have identified their preference for certain objects, and the related reading activity fulfills their self-intentionality. For example, the topic of medieval history can be someone's topic interest. If this person has a habit of reading chivalric novels, playing historical theme video games, and discussing favorite knights with peers, then she could gain a positive feeling from activities about this topic.

A person's situational interest can be triggered by a visual stimulus such as a toy, or viewing a picture, or an auditory stimulus such as hearing a conversation, or a combination of

visual and auditory stimuli like a TV show (Hidi, 2001). For example, a child who never learned about dinosaurs but then sees a vivid picture of a tyrannosaurus, would be more likely to seek more information about dinosaurs inspired by this situational interest. However, he may or may not form a long-lasting interest on the topic of dinosaurs.

Simply put, topic interest is constructed by an individual's chronic experience related to certain topics, while text-based interest may be temporarily elicited by a visual or auditory stimulus towards a random context. Both topic and situational interest can increase a reader's attention and cognitive functioning in different teaching contexts (Hidi, 2001). Topic interest can inspire the L2 learner to read challenging texts pertaining to their interests. Situational interest can maintain a learner's motivation while they are reading texts in which they are not necessarily interested (Hidi, 2001). Considering the special functions of these two types of interest, teachers can apply both into teaching reading activities.

### **Dimensions of topic interest.**

Based on the framework of a person-object theory of interest (Krapp, 1999), topic interest has three dimensions: curiosity, involvement, and investment. These three dimensions of interest bridge with persons and objects. Students may have one dimension of interest on one topic and may have three dimensions on another topic. The function of these three dimensions is to initiate one's interest and maintain one's attention in reading a text.

Curiosity: Wigfield (1997) defined curiosity as "the desire to learn about a particular topic of personal interest" (p .22). Readers think certain topics or titles are attractive, and they want to know information about personal interest topics. Hence, readers would like to give more effort in seeking related information, applying strategies to decode the text, thereby satisfying their curiosity. For example, a history amateur may raise a strong curiosity to know the history of the Maya kingdom by reading a title: "Why the Mayan civilization was lost?" After finished reading the text, she may

continue to search for related texts about the Mayan culture to satisfy her curiosity about this certain domain.

**Involvement:** Schiefele et al., (2012) defined involvement by describing how readers “get lost in a story, experience imaginative actions, and empathize with the characters of a story” (p. 433). Guthrie (2001) further explained that students feel involved when they can imagine pictures in their mind and by making friends with characters or authors during reading. Furthermore, another type of involvement can be embodied in expository readings. Readers might feel that the topics or titles relate to their own life, and the text, like a mirror, can resonate with readers’ own life experience, identity, or feelings. For example, an Asian student might like to read the Gene Luen Yang’s book “American Born Chinese”, as the story might resonate with an immigrant child’s experience in the U.S. Likewise, another student reading an article referring to bargaining with Mexicans, she suddenly might recall her recent traveling experience in the Yucatan peninsula, and pay more attention in understanding that text.

**Investment:** Schiefele et al. (2012) defined investment by saying that readers want to “build experience that will lead to achieving long-term goals, such as attending college” (p. 433). Readers may not really be curious about the topic nor feel the content relates to their experience, rather they might think that they can still benefit from the useful knowledge after reading the text. For example, a reader may not be curious about a vehicle and its component, nor be a car mechanic, but he might have the need to pick and buy a car at that time. So this reader might have an interest in reading articles introducing different cars’ performances. These readings can provide valuable information that readers may want to acquire. Guthrie (2006) believed that reading for the purpose of knowledge development is a vitally important motivational attribute.

These three dimensions provide teachers with a map to target students’ topic interests and to select reading materials for students.

### **Empirical studies of interest in reading.**

Most previous studies conducted with quantitative approaches have focused on the statistical correlation between a student's interest level and L1 reading comprehension scores. It has been well-documented that topic interest has a positive effect on building reading comprehension (Brantmeier, 2006; Leloup, 1993; Shiefele, 1996). Specifically, students who read for their own enjoyment prefer to understand the text as deeply as possible (Patrick, Ryan, & Pintrich, 1999; Tobias, 1994), are more likely to apply cognitive ability in decoding text information and may spend a long time analyzing the text (Guthrie et al., 1999). Higher-interest readers can also recall the text more clearly than lower interest readers (Craik & Lockart, 1972; Renninger, Hidi, & Krapp, 1992). However, it is also worth noting that some research has indicated that interest alone cannot significantly predict reading comprehension (Carrell & Wise, 1998).

With regards to previous studies, it is worth considering that the effect of interest as an independent variable in a one-time reading test may likely be confined by other variables and hard to control because of limited time, linguistic knowledge, reading skills, and prior knowledge. If students were to not receive any help from teachers or dictionaries, their linguistic knowledge and reading skills might not change just through that one-time reading experience. This kind of experiment has been conducted by many researchers, in which a large group of students were asked to read an article in 10-20 minutes and answer multiple questions to check how deep they understood the reading, while they were also required to rate their topic interests. The time was so limited, students who had higher interest and lower reading proficiency might not have had enough time to spend in understanding, and less motivated, but a higher reading proficiency student might have needed only 10 minutes to skim the reading. Without time and the opportunity to use dictionaries, higher interest but low language ability students cannot understand the text well even though they want to know more, and lower-interest higher-language ability students can still answer correct questions even if they do not care about the reading content. Hence, the contribution of interest to improving one's reading comprehension cannot be fully revealed in a static, one-time test. This contribution should be accounted for in longitudinal training or intervention related to a

reader's behavior. While it can be understood that it is time consuming to prepare reading materials adapted to each participant's interest in this large sample experiment, this may be why the findings from research are controversial and the implications are rarely implemented in school settings (Hidi, 1990). In this sense, Guthrie and his colleagues proposed an engagement reading model and CORI.

### **Engagement reading model.**

With respect to whether interest and other motivational predictors in a long-term teaching period can stably account for a student's achievement in text comprehension, Guthrie et al. (1999) proposed the engagement model of reading comprehension and Concept-Oriented-Reading-Instruction. In contrast with previous studies, this theory emphasizes the indirect relation of interest to reading comprehension.

Guthrie's and Wigfield's (2000) engagement model of reading comprehension development argued that reading comprehension is the consequence of an extended amount of engaged reading. Engaged reading is motivated, strategic, knowledge driven, and socially interactive; it is influenced by the kinds of classroom practices students experience (Guthrie and Cox, 2001).

Early experimental research has demonstrated that reading motivation can strongly predict reading volume and the time spent reading (Ercetin, 2010; Guthrie et al., 1999; Wigfield & Guthrie, 1997), while reading amount can significantly predict achievement in text comprehension (Allen, Cipielewski, & Stanovich 1992; Cipielewski & Stanovich, 1992; Cunnigha & Stanovich, 1997). Based on the substantial evidence provided by these experiments, the engagement model's rationale is that reading comprehension is improved by the increase of reading amount, which in turn is increased by one's motivation to read. Since Guthrie and his colleagues have established the conjunct function of reading amount to explain the effect of motivation on reading comprehension, this causal relation has been examined and confirmed by many subsequent researches (Anmarkrud

& Braten, 2009; Cox & Guthrie, 2001; Gilmore & Jamson, 2011; Guthrie et al., 2004, 2007; Smith, Smith, Guthrie, Klauda, & Ho, 2013; Wang & Guthrie, 2004;).

In brief, first, higher topic interest was proven to be an antecedent factor before the reading process (Guthrie, 1999) to activate reading; during the reading process, topic interest and/or situational interest can drive the student to understand the text more deeply; and afterwards, interest can enhance the student's retention of the content of reading. The function of interest in these three stages thus can help the student gain linguistic knowledge and improve reading proficiency. Secondly, reading with interest can give students quality reading experiences such as having feelings of achievement and enjoyment, which in turn encourage them to read more texts, thereby forming a long-term and frequent reading habit from which they may have more opportunities for accumulating vocabulary and reading strategies.

Although engagement theory and CORI pedagogy, as created and conducted by Guthrie, have proved to be a success in elementary L1 reading classes, moving this model into adult L2 learners might be different. Nevertheless, after analyzing the characteristics of Chinese college level struggling students, prior knowledge and interest might play an equally important role in a remedial reading habit intervention program for adults L2 readers.

### **Prior knowledge makes articles readable.**

Background knowledge, or previously acquired knowledge or experience, can be called the reader's prior knowledge (Carrell & Eisterhold, 1983). It has been conceptualized as a schema, to predict subsequent text comprehension (Alexander, 1997; Dole, Duffy, Roehler, & Pearson, 1991) in schema theory. Schema theory has long been discussed in reading comprehension (Ketchum, 2006). Its model is that, through retrieving prior knowledge or experience, the input is mapped against the learner's existing schemata (Carrell & Eisterhold, 1988). A schema, which functions as a preexisting knowledge structure, can be extended to incorporate new knowledge by bridging it with one's prior knowledge (Alderson, 2000; Alptekin, 2006; Grabe & Stoller, 2002). As schema

theory states, prior knowledge plays the vital role in facilitating the comprehension of new information. Koda (2005) pointed out that “comprehension occurs when the reader extracts and integrates various information from the text and combines it with what is already known” (p.4).

### **Dimensions of prior knowledge in L2 reading.**

In contrast to L1 reading in children, most adult L2 learners have abundant prior knowledge from life experiences, which includes topic knowledge, domain knowledge (Carrell and Wise, 1998) and cultural knowledge (Carrell & Eisterhold, 1983).

Cultural knowledge: Carrell and Eisterhold (1983) stated that: “the background knowledge that second language readers bring to a text is often culture-specific” (p.562). Cultural knowledge could be a common sense for members inside a sociocultural group such as a nation’s lore, customs, history, and geography, but less familiar to outside group members. For example, the story of the three kings and the celebration of the “Reyes de Magos” (The Magi), are well-known in Spain. For a Spanish EFL beginning level learners, reading articles about the “Reyes Magos” might alleviate their frustration as opposed to trying to understand an article about Martin Luther King Jr. day, a topic with which they might not be as familiar.

Real-time Knowledge: Today with the development of global media, electronic social networks, and communication technology, information is rapidly produced and disseminated across the world. Students normally gain a great deal of real-time knowledge (i.e., current information) day by day, but they may forget the information within a week. Due to the characteristics of real-time knowledge, struggling students can feel more familiarity with — and be interested in — reading articles about current information.

Discipline Knowledge: Discipline-related knowledge is one’s academic knowledge or vocational knowledge. For example, if a student has studied statistics in her first language (L1), she can use this knowledge to comprehend English texts that introduce basic knowledge of statistics.

Discipline-related knowledge is known to contribute to EFL students' reading comprehension (Uso-Juan, 2006).

The dimensions of these three types of knowledge can assist teachers in identifying students' prior knowledge and to prepare tailored L2 reading materials for students. It is worth noting that for struggling learners or beginning learners, the content of EFL texts could be a common sense which is too easy for students to understand. With student's EFL reading development, the portion of an unfamiliar part in content could increase.

### **Empirical studies of prior knowledge in L2 reading.**

For some readers who lack L2 linguistic knowledge, such as vocabulary and grammar, L2 reading can frustrate their reading experience and impede their reading development. Thus, educators have proposed utilizing adult L2 learner's prior knowledge to compensate for their linguistic deficiency in reading comprehension (Al-Shumaimeri's, 2006; Chen & Donin, 1997; Chihara, Sakurai, & Oller, 1989; Coady, 1979; Hudson, 1982). To date, research has shown the positive effects of prior knowledge on L2 reading comprehension (Alderson & Urquhard, 1985, 1988; Carrell, 1987, 1998; Ercetin, 2010; Kintsch, 1998; Martinez, 2013; Nunan, 1985; Renninger, 2000). These studies have indicated that prior knowledge related to the L2 reading can enhance the student's self-efficacy and improve their text comprehension by inferencing the meaning of new words and better summarizing the gist of a text (Pulido, 2007). Literature has also revealed that when students were familiar with the theme of the text, they performed significantly better on comprehension tests in comparison with unfamiliar themes (Alptekin, 2006; Chen & Donin, 1997; Johnson, 1982; Lee, 2007). In terms of teaching, it seems that for EFL readers whose immediate goals were to increase vocabulary, learn grammar, and improve general English reading proficiency, prior knowledge-based reading could offer them a scaffold to reduce the load of learning new content and give priority to processing new words and grammar (Gurkan, 2012).

To reveal why prior knowledge can facilitate L2 reading, a great deal of research has been conducted which pinpoints the skill of inferencing. Alptekin (2006) argued that “the more topical familiarity the text displays, the better it is inferentially comprehended in that L2 readers who are familiar with its cultural content are more successful in drawing inferences [...] than those who are unfamiliar” (p. 502). Hammadou (2000, 2002) found that prior knowledge of the topic is a key factor in enabling students to recall what they read and to make more logical inferences. Also, some researchers reported that a lower linguistic threshold level (vocabulary, grammar) may exist, which influenced the compensatory effect contributed by prior knowledge in foreign language reading comprehension (Ridgway, 2003; Uso-Juan, 2006).

Prior knowledge generally can give struggling L2 students positive reading experiences such as having feelings of achievement and confidence. This in turn encourages them to read more texts, thereby forming a long-term and frequent reading habit from which they would have more opportunities for accumulating vocabulary and grammars.

### **Joint effects of applying topic interest and prior knowledge in L2 reading.**

Little attention has been given to the joint effects of topic interest and prior knowledge in L2 reading. Carrell and Wise (1998) found that “students’ prior knowledge of the topics and topic interest are essentially uncorrelated” (p. 297). Other research has reported that the function of topic interest and prior knowledge has a significant interaction which were influenced by some other variables such as gender, language proficiency, and age (Eidswick, 2010; Ercetin, 2010). In experimental research, it is necessary to control and separate the contributing effects of topic interest and prior knowledge (Leloup, 1993), while in regard to teaching or intervening among struggling students in a natural teaching setting, the joint effects of these two factors should be investigated together (Baldwin, Peleg-Bruckner, & McClintock, 1985).

In summary, due to the differences of sample structure and research methodology, not every case of experimental research supports the assumed effect of topic interest and prior

knowledge on L2 reading comprehension. It is critical that the research gap of investigating the joint effects of topic interest and prior knowledge in a longitudinal experiment, and for struggling L2 learners, be addressed and resolved.

### **Reading Pedagogy**

Teachers or tutors should help students understand new words' meanings immediately, and guide students to employ reading strategies to understand the entire article's meaning. Furthermore, tutors need to discuss with students the inter-culture content that might be embedded in articles in order to help them realize the irreplaceable function and the value of reading in a foreign language. Here, reading strategies play an important role in tutoring reading.

Paris (2008) described reading strategies as “deliberate, goal-directed attempts to control and modify the reader's efforts to decode text, understand word, and construct meanings out of text” (p. 15). Over the past decades, reading strategies have been investigated in different models such as “top-down” model, “bottom-up” model, interactive model, interpretive model, and engagement model (Barnett, 1988; Carrell, Devine, & Eskey, 1988; Gough, 1972; Guthrie, 1999; Shrum & Glisan, 2010; Smith, 1971; Stanovich, 1980). In these reading models, a great deal of reading strategies have been created and researched.

Oxford (1990) recommended that L2 learners could use text structure or background knowledge to guess new words without comprehending all the details. The teacher could ask students to paraphrase, explain, or clarify the text to check whether they have rightly understood the content of different cultures and different languages. Park (2010) synthesized thirty reading strategies and examined their relationship with Korean college students' EFL reading comprehension. His research findings suggested that some strategies have significant positive relationships with comprehension ability, and the quality of reading experience (e.g., enjoyment).

To ensure that their prior knowledge and topic interest are engaged during the intervention; and to make sure that the effect of reading strategies is not the main independent variable to account

for the result of intervention. In this study, a limited number of reading strategies will be taught to participants. The four strategies as below were adopted into the CRSI to help students utilize cognitive ability in English reading comprehension.

1. Using prior knowledge to deduce the meaning of new words.
2. Using context clues to deduce the meaning of long sentences.
3. Paraphrasing in one's own words for understanding.
4. Being aware of culture differences to facilitate understanding of the inter-culture content.

### **Summary**

The theoretical framework and rationale of CRSI is designed based on Guthrie's (2000) engagement model of reading comprehension and Concept-Oriented Reading Instruction. To create a reading model suitable for Chinese EFL students struggling with English reading, the CRSI is built grounded on psychological theories of interest, prior knowledge, and reading pedagogies. The joint effect of these factors in teaching Chinese students reading in English is examined in this research.

## Chapter III

### Methodology

#### Introduction

This research aims to investigate the effectiveness of CSRI on the reading behavior of Chinese EFL students struggling in reading; and to explore participants' experiences and problems that emerged in this longitudinal learning process. There are several objective reasons for determining the selection of methodology. (a) There is limited access to a large population of struggling EFL learners in a single site, so there are not enough participants to generate large data for statistical analysis. (b) The limitation of time and financing to prepare customized reading materials and tutor participants leads to recruiting only a small number of participants. (c) For the educational ethical purpose to have participants benefit from the experiment, specifically to improve an individual's reading achievements, a methodology was chosen which can not only explore the scientific inquiry but can also have practical implications for the participants. Considering all of this study's research questions and limitations, a mix-method design was chosen, consisting of: 1) a single-case research design to examine the impact of this intervention on the participant's reading development, and 2) a case study to probe how individuals describe their feelings about reading in English after a customized reading scaffolding intervention.

#### The Philosophical Foundation of Mixed Methods

It has been discussed for decades whether it is reasonable to mix quantitative and qualitative methods, which are two different philosophical beliefs, in one research. Quantitative researchers usually stand on a positivist worldview, they tend to see the world as a cause-effect relationship between finite independent and dependent variables. These variables are controlled and tested in a laboratory environment. Finally, the relationship is explained by statistical data and is formalized under particular conditions. Qualitative researchers, in contrast, normally stand on a constructivist worldview and they tend to see the world as a panorama constructed by discursively

interrelated people, contexts, events, and processes. They observe and probe the holistic and dynamic cases in a natural setting where nothing can be excluded. The relationship that exists in the phenomena is explained by describing or narrating, and ultimately is grounded as a theory (Maxwell, 2004a, 2008, 2011b, 2013; Bromley, 1986).

To conduct this research, I stand on a pragmatic worldview, for which the focus “is on the consequences of research, [and to use] multiple methods of data collection to inform the problems under study” (Creswell, and Plano, 2011, p. 41). Considering the breadth and depth of understanding my research questions, a need of using a combined approach exists because “[one type of data] may be insufficient, results need to be explained, exploratory findings need to be generalized, [...] and an overall research objective can be best addressed with multiple phases” (Creswell & Plano, 2011, p. 8). Hence, the mixed method can offset the weakness of either method and provide a better understanding of research questions than either method alone.

### **Qualitative Method—Case study**

Qualitative research is a paradigm consisting of several approaches such as ethnography, phenomenology, and case study (Merriam, 1992) that seeks to investigate the quality of relationships, situations, or materials (Brantlinger et al., 2005; Fraenkel & Wallen, 2006). Researchers employ literary techniques to depict the event (Wilson, 1979), apply scientific theories to analyze data and subsequently lead to asking research questions or proposing a new theory (Gast & Ledford, 2014).

The case study first selects a research group with realistic problems (Merriam, 1992), which stem from researchers’ “attention on the way particular groups of people confront specific problems” (Shaw, 1978, p. 2). Second, the case study investigates a small scale bounded instance (Creswell, 2007; Duff, 2008; Stake, 1988; Shaw, 1978; Van Lier, 2005) which has a boundary to demarcate each case. Third, the case study entails a detailed, in-depth holistic, and chronological data collection containing multiple sources of information (Creswell, 2007; Merriam, 1988). Yin

(1994) pointed out that the collected data or phenomenon's variables are impossible to separate from their natural context. And forth, the result of a case study is a completed and abundant "description of the phenomenon under study" (Merriam, 1992, p. 30).

According to the paradigm of case study, it is a particularly suitable design to the small number of struggling EFL learners' in this longitudinal intervention program. 1) It can diagnose individuals' specific learning problems (Merriam, 1992). 2) It can track individuals' developing topic interests and prior knowledge for instructors to select reading materials. 3) It can monitor the dynamic learning program (Reichardt & Cook, 1979) to identify any confounding variables that may account for the results of an intervention. 4) Anchored in real-life context, the case study can access the individual's mental activity in the learning processes (Merriam, 1992), and provide an insightful account of the individual's behavior (Gast & Ledford, 2014).

### **Quantitative Method—Single-Case Research Design (SCRD)**

Quantitative researchers seek causal relations between variables, and such relations are sought in the presence of other variables that are known and unknown. Most quantitative research in education refers to a group design paradigm, which collects a large sample's average performance by combining every participant's response, thereby testing hypotheses or revealing the underlying relationship between variables that humans cannot directly observe (Gast & Ledford, 2014). In group design research "not all individuals necessarily respond in the same way to the independent variable" (Gast & Ledford, 2014, p.16), and some "significant information about specific individuals in a study can be obscured" (McCormic, 1990, p. 3). Employing SCR D in quantitative research will help demarcate and analyze each individual's changeable data.

SCR D researchers ask tentative questions and concentrate on the process in single or several subjects rather than test hypotheses by the number of participants. The logic is that the target subject "is repeatedly measured under at least two experimental conditions, baseline and intervention, using direct observational recording procedures" (Gast & Ledford, 2014, p. 15).

Usually, the subject also needs to be monitored and measured after the intervention is done in order to observe whether the impact of the intervention is maintained. In an SCRD, known factors that possibly affect a participant's response are controlled so researchers can rule out alternative explanations for the tentative causality relation and prove that independent variables were responsible for the results of the research (Gast & Ledford, 2014; McCormick, 1990).

The function of baseline data is to identify and predict a participant's "immediate level of functioning to continue absent of an intervention being implemented... [And] to examine the effectiveness of the intervention" (Cihak, 2011, p.420). Baseline data is "gathered for each subject during an initial phase of the research in which all conditions are carefully controlled so that they differ from the later phases in only one way: intervention procedures are absent" (McCormick, 1990, P.5). To measure the effectiveness of the intervention and exclude alternative explanation of a participant's change, researchers must ensure that the stability of baseline data can reflect what participants normally do and will do without the presence of intervention (Cihak, 2011; McCormick, 1990).

Multiple baseline across different participants is a feature of SCRD that will be employed in this research. The reasons are: first, each participant in this research will be given the intervention at different times, because "if all the intervention phases were started at the same time, then some coincidental factor could be responsible for observed changes" (Kucera & Axelrod, 1990, p.50); second, once having achieved certain level of EFL reading proficiency, it may not reverse (Kucera & Axelrod, 1990, p.48), and for the educational ethical issue, the intervention will not be withdrawn until this program is finished.

At the end of this research, each participant's numeric data of their performance (e.g., reading comprehension scores, reading time) will be drawn into graphs to show the levels, trends, and stability in different stages. Researchers will be able to visually analyze these graphs to deduct the effectiveness of an intervention.

## **Summary**

To conclude, it is this researcher's opinion that the philosophic beliefs and research designs of SCRD and Case Study can be mixed. First, SCRD considers that the effectiveness of an intervention is only applicable to particular groups of people; Case Study describes the personal traits of participants, the procedure of treatment, and the occurring context in detail, so investigators or teachers can replicate this intervention or synthesis research of the same topic (Gast & Ledford, 2014). Second, SCRD provides researchers with prescriptive information about the intervention effects on particular students, while case study researchers contribute to our understanding of individuals' experiences and interpretations (Kucera & Axelrod, 1990, p.133); they both desire to know what happened during the intervention. Third, qualitative data such as interview responses, on-site observation, and narrative analyses can be triangulated with numeric data to help identify controlled variables, discover uncontrolled variables in the natural setting, and interpret the underlying relations (Kucera & Axelrod, 1990).

## **Research Design**

### **Participants.**

This study recruited five college-level Chinese students out of thirteen candidates from a single Chinese university. Those candidates who have comparatively higher-class interest, more self-efficacy, and higher linguistic proficiency as assessed by interviews and test scores were excluded from this research. Ultimately, two males and three females were recruited, but as one male quit from the research, four participants' results are reported. These four participants were all non-English speaking major students and were enrolled in the Level C course of the college English class (there being three proficiency levels from low to high: C, B, and A). As reported by their teachers and themselves, the participants had typically expressed lower interest, lower self-efficacy, and had limited linguistic knowledge in reading English texts, but they all wanted to pass the College English Test Band 4 (CET-4). Though the participants had attended cram schools (private

tutoring) in English reading or speaking, they reflected that the impact of such tutoring on their English reading habits and reading comprehension was limited.

### **Reading materials and quiz.**

All customized reading materials were selected from news sources such as BBC, CNN, Washington Post, Newsela, Wikipedia and Quora. Each text has no more than 800 words. The topics had already engaged each participants' interests, and the content was partly known by participants. The estimated reading time was considered to make sure students could finish the reading in 30 minutes in this intervention process, so the procedural fidelity could be ensured.

In terms of selecting reading materials based on individual's interest, prior knowledge, and linguistic knowledge, it is found that topic interest and prior knowledge largely overlap. However, a conflict existed between topic interest, prior knowledge and vocabulary level. As these reading materials are all authentic texts, the vocabulary level was hard to control. To mediate the conflict, tutors prepared the new word translations previously and explained the meaning immediately when participants asked.

Quizzes were randomly extracted from sample tests of CET-4 published by Shanghai Jiao Tong University Press (see Appendix III); each quiz consisted of three texts with 20 single choice items to assess participant's reading comprehension. The content of the text in the quiz had no relevance to each participant's prior knowledge and interest topics to exclude alternative explanations accounted for in the effects of the CRSI.

### **Baseline data collection.**

Four participants took the pre-intervention test in order. Each of them took the quiz in 45 minutes, with totally five quizzes finished in two weeks. Their answers were measured by keys offered by test papers, and scores were documented as baseline data. After the first participant had

shown five consecutive stable data points, the intervention was given to this first participant. Then the baseline data collection was conducted for the second participant.

### **Personal information collection.**

During the baseline stage, participants were interviewed to generate their personal information about topic interest, prior knowledge, EFL learning experience, and problems in EFL reading. Previous studies have pointed out that a semi-structured interview is more flexible and provides direct access to research inquiries (Agar, 1996; Swidler, 2001). Thus, the semi-structured interview was adopted as a major instrument in this section, the interview question list is attached in Appendix I. After the interview, each participant's information was transcribed and documented in a portfolio to give the tutor a guideline for preparing customized reading materials.

### **Intervention procedure.**

During the intervention process, the tutor met individually with the four participants twice per week to instruct them in reading. At the second time in a weekly meeting, participants reported the amount of their weekly autonomous reading time and took a reading comprehension quiz (45 minutes) with three texts and 20 single-choice items. Every intervention process was conducted following the instruction check list (see Appendix II). Some intervention processes were recorded with an audio device, and the audio tape was listened by a monitor to ensure the procedure's fidelity and to check whether the participant's classroom reflection was as the tutor's report.

After the first participant's reading scores improved, the second participant was introduced to this intervention. The total number of tutoring classes was 20 times across 10 weeks.

### **Interview after the intervention.**

At the end of the last class, an individual interview will be conducted by the researcher to assess participant's experiences towards this intervention. The interviewing questions list is attached in Appendix I.

## **Data Analysis**

### **Quantitative data.**

Participants' reading comprehension scores in pre-intervention, during intervention, and after intervention are plotted on graphs as below. Participants' amount of weekly autonomic reading time is drawn as a bar graph in the same graphs.

To visually analyze the graphs, two basic properties of data must be understood: level and trend. The median level of each participant's data series was calculated, then the stability envelop lines were drawn above and below the median level. In terms of level stability analysis, the "80%-20%" criteria were employed, which means if 80% of the data points of a condition fall on or are within a 20% range of the median value of all data point values of a condition, the data would be identified as stable. The total scores of one reading comprehension quiz are 20 points (20 items), and participants' scores usually fall within a middle range of ordinate values. Because 15% is so small and 25% is so large to calculate level stability in this graph, 20% (4 points) is adopted as a criterion. The stability envelop lines are drawn above and below the median line and range across 4 points. That is, if 80% of a participant's points in a condition fall into this range, the participant's reading comprehension is regarded as stable in the condition.

To estimate the trend of a participant's changes, the split-middle method was adopted. Specifically, data within each condition is divided in half, and a line connects the intersections of the mid-rate (middle data point counting up or down the data path) and mid-date (middle data point counting left or right in the data path) for each half to estimate a trend across a condition.

Since there were three conditions in this study, implemented in chronological order (baseline, intervention, and terminating intervention), data in adjacent conditions were directly compared to each other.

Through this comparison, the visualized magnitude and trend of an individual's changes accounted for the functional relation between independent and dependent variables.

### **Qualitative data.**

The qualitative data consisted of interviews and observations. Interviews were conducted in Chinese and recorded directly onto a laptop. Participants' reflections were transcribed into Chinese and then the researcher went through all the data and marks on important narratives. The goal was to make sense of the participants' experiences before, during, and after the reading intervention program.

During each intervention trial, the researcher had opportunities to observe participants' learning and practicing performance such as reading by themselves, discussing things with the tutor, and asking questions. The tutor also sketched in brief notes of their notable behaviors or words during the intervention trial. After each intervention trial was done, the researcher wrote these observations down and checked the reliability between the observation note and the transcript of the audio tape.

After all participants' data were collected, a thematic analysis was applied to reduce the data and induct the codes of their similarities and distinctions (e.g., behavior and narratives) into categories based on recurring phenomena. Ultimately, the only quotations that were used to report the findings were translated from Chinese into English.

### **Reliability.**

Beck and Geer (1957) claimed that long-term participant observation provides substantive data and enables researchers to check and confirm the observations and inferences. Since the

present study lasted four months, all participants' performances were measured repeatedly. Participants' reading comprehension scores were measured once a week in the classroom. Their amount of autonomous reading time and what they've read were also reported to the researcher every week. Thus, the reliability of the effects of the intervention could be ensured by these two frequently measured methods.

### **Procedural fidelity.**

The procedure was ensured by following the tutoring check list. The procedures in the instruction were recorded by an audio device and listened to by a monitor to ensure that the independent variables were implemented regularly.

### **Internal validity.**

Internal validity is "the degree to which the research design controls for extraneous or confounding variables, variables that could support an alternative explanation for the findings" (Gast & Ledford, 2014, p. 4). To maintain internal validity, the dependent variables (reading time and reading scores) were measured by both quantitative and qualitative methods. The amount of time that participants spent weekly on reading in English was self-reported. To ensure the validity of reading comprehension scores, a section of reading tests in Sample Tests of CET-4 published by Shanghai Jiao Tong University Press were randomly selected from databases to measure participants' reading comprehension.

In addition, un-measured environmental factors in participants' daily natural learning environments could have influenced participants' changes of reading scores and reading habit. Those factors were monitored and documented by a qualitative approach. Case study techniques enable me to increase the internal validity by describing individuals' information through interviews and observation by which the intervention was implemented. This qualitative data

assisted me in seeing the panorama of this longitudinal research and in addressing alternative explanations of participants' changes.

One of the most important threats to validity is researcher bias (Massengill, 2002). First, I may be overly optimistic that the CRSI will be successful. Second, as I am both the tutor and the interviewer, participants may perceive the expectation and intention of my interviews, thus they might give positive answers or not feel free to express their true thoughts (Massengill, 2002).

In any intervention experiment, the researcher's actions are always an intervention in some way. Thus, to avoid my presence being a significant independent variable, I tried to minimize the pressure that might inadvertently influence participants' reading behavior by keeping a neutral facial expression and a neutral tone of voice in tutoring.

Member checks is another method I employed to avoid researcher bias. Massengill (2002) claimed that participants can check that the "interpretations not only reflect what they 'said' but what they 'meant'" (p.49). Shenton (2004) pointed out that "findings are the result of the experiences and ideas of the informants" (p.73). Thus, after the whole intervention trial was finished, I shared the transcriptions and my tentative interpretations with each participant. They gave me their reflections to confirm that my interpretation and findings are appropriate. This procedure could identify my biases and misunderstandings of what I observed.

### **External validity.**

External validity is "the number of study participants and how participants are selected" (Gast & Ledford, 2014, p. 4). The four participants in this research were recommended by their English teachers. Then I interviewed them to make sure they met the criteria of recruitment for this study. That is, they encountered problems of lacking motivation and low reading proficiency in learning English texts. Participants' individual trajectories in learning English were described and their background information – such as grade, gender, major, and learning goals – were documented in detail. This information would "make consistent replication of the intervention by other

researchers and educators easier and desired effects more likely” (Bisesi & Raphael, 1995, p. 116). Thus, I believe that the sufficient qualitative data can enable other researchers/teachers to replicate this study/intervention successfully with other students who have similar problems and enable my participants’ experiences to resonate with other readers.

### **Ecological validity.**

Ecological validity is “the extent to which a study has ‘relevance’ and the intervention can be reliably implemented in the ‘real world’” (Kratochwill, 1978, P). Put simply, ecological validity refers to transforming experiment into practice. This research was conducted as a supplemental learning program for participants who are learning naturally in school. My goal is to make this customized reading intervention be applicable in the real world. In enhance the ecological validity of SCRD, I employed case study techniques to detect “the degree to which research findings represent the real world and are not limited to the potentially artificial conditions of a study” (Bisesi & Raphael, 1995, p. 117). My qualitative data bound to the individual in the learning context can provide details that can help researchers identify the effects of customized reading scaffolding in real-world situations.

## Chapter IV

### Results

#### Introduction

The purpose of this study is to examine the effectiveness of Customized Reading Scaffolding Instruction in ameliorating participants' reading experience, constructing a durable reading habit to increase reading comprehension, and exploring unrepresented problems in individual's learning process. Thus, participants' amount of weekly autonomic reading time and reading comprehension scores were assessed and visually analyzed, plus in-depth interviews and observations of their classroom performance were conducted and reported.

At the beginning of this research, five participants (two males and three females) were selected from thirteen candidates. The selection process was followed by an overarching criteria that participants must have problems in English reading comprehension. To be more specific, participants were chosen who have not passed and been identified as less likely to pass the CET Band 4 in a year (by the College English pre-test conducted by their university). During the experiment, one male quit, and one female and another male almost quit but still remained in and finished this research. The information of these four participants' reading scores and amount of weekly autonomic reading time are in Figure 1. and Figure 2.

#### Quantitative Data

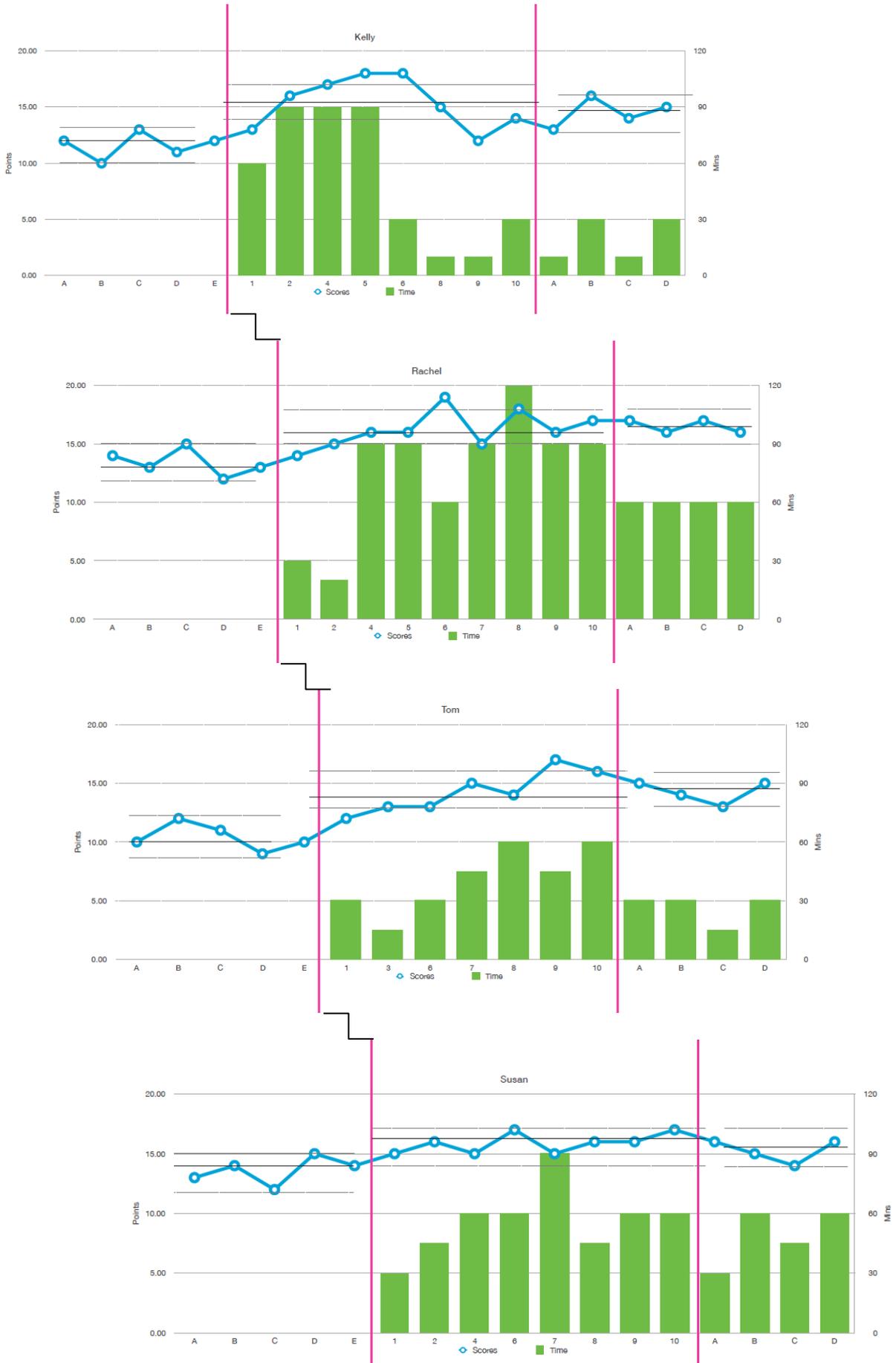


Figure 1.

Kelly				Rachel			
	Scores	Standard Scores	Time /mins		Scores	Standard Scores	Time /mins
A	12	60	0	A	14	70	0
B	10	50	0	B	13	65	0
C	13	65	0	C	15	75	0
D	11	55	0	D	12	60	0
E	12	60	0	E	13	65	0
1	13	65	60	1	14	70	30
2	16	80	90	2	15	75	20
4	17	85	90	4	16	80	90
5	18	90	90	5	16	80	90
6	18	90	30	6	19	95	60
8	15	75	10	7	15	75	90
9	12	60	10	8	18	90	120
10	14	70	30	9	16	80	90
A	13	65	10	10	17	85	90
B	16	80	30	A	17	85	60
C	14	70	10	B	16	80	60
D	15	75	30	C	17	85	60
				D	16	80	60

Tom				Susan			
	Scores	Standard Scores	Time /mins		Scores	Standard Scores	Time /mins
A	10	50	0	A	13	65	0
B	12	60	0	B	14	70	0
C	11	55	0	C	12	60	0
D	9	45	0	D	15	75	0
E	10	50	0	E	14	70	0
1	12	60	30	1	15	75	30
3	13	65	15	2	16	80	45
6	13	65	30	4	15	75	60
7	15	75	45	6	17	85	60
8	14	70	60	7	15	75	90
9	17	85	45	8	16	80	45
10	16	80	60	9	16	80	60
A	15	75	30	10	17	85	60
B	14	70	30	A	16	80	30
C	13	65	15	B	15	75	60
D	15	75	30	C	14	70	45
				D	16	80	60

Figure 2.

From the figures above, it can be noted that each participant was introduced into this experiment a week later than the preceding participant. Kelly was the first participant accepted into the tutoring program by this instructor. Kelly's reading median points during baseline is 12, the level is stable, and the trend is slightly rising. During the intervention, Kelly's median points are 15.5, the level is unstable (4 out of 8 fall, 50% of the data points, within a 20% range of the median value), and the trend is slightly descending. After the intervention, the median point is 14.5.

Kelley's amount of weekly autonomous reading time dramatically increased during the first five weeks. Along with the increasing amount of time she into her reading, her reading scores also gained points. Since the sixth week, she decreased her reading time. According to her report, she was going to travel to Shanghai, and then she was busy at her internship. Her reading scores underwent a decrease since the eighth week, but overall her reading scores were higher than her scores before the intervention.

Rachel's reading median points during baseline was 13, the level was stable, and the trend was slightly descending. During the intervention, Rachel's median points was 16, the level was not quite stable (7 out of 9 fall, 78% of the data points, within a 20% range of the median value), but it is believed would be stable if the intervention lasted for one more week, as the trend was rising. After the intervention, the median point was 16.5.

Since the fourth week, Rachel's amount of autonomic reading time increased from about 15 mins/week to 90 mins/week, and she remained at 90 mins/week on average for 100 days. Along with the increasing of amount of her reading time, her reading scores remained higher, but the quiz did not adequately reflect her performance.

Tom's reading median points during baseline was 10, the level was stable, and the trend was descending. During the intervention, Tom's median point was 14, the level was unstable (5 out of 7 fall, 71% of the data points, within a 20% range of the median value), and the trend was rising. After the intervention, the median was 14.5.

In the first half of the experiment, Tom missed several classes and almost quit from this program. According to his report, he was taking classes to learn driving, which took him away from his time for reading as well as the time he has to spend for the tutoring for this class. After a discussion with the instructor, he was retained in this program, and after reading several articles that strongly engaged his interest, he began to invest more time into autonomous reading. In the meantime, his reading points increased.

Susan's median point during baseline was 14, the level was stable, and the trend is slightly rising. During the intervention, Susan's median point was 16.5, the level was stable (8 out of 8 fall, 100% of the data points, within a 20% range of the median value), and the trend is slightly rising. After the intervention, the median was 15.5.

Susan's reading points and amount of reading time was stable. Her amount of weekly reading time remained at one hour for a long period, and her reading points increased steadily and remained at a high level.

To conclude, every participant's reading comprehension points increased after the intervention. Susan and Rachel had the strongest rise in the amount of weekly autonomous reading time, and their reading time remained stable across a long period of time. Though Kelly and Tom did not sustain a stable amount of weekly autonomous reading time for a long period of time, they increased the total amount of reading time during the intervention. Furthermore, Kelly and Tom's reading scores fluctuated in accordance with the change of the amount of their weekly reading time.

According to the data, the CRSI was effective to a moderate degree because when participants' reading time increased, their reading comprehension also increased; likewise, when their reading time decreases, their reading comprehension also decreased. That is, participants' quiz points and amount of reading time appeared to have a positive relationship. The effectiveness of CRSI on struggling Chinese EFL learners' autonomous reading time and reading comprehension varied at different time periods and depended on participants' engagement. To further investigate

the effect of CRSI, each participant's qualitative data were categorized into individual portfolio and analyzed, as seen in the sections below.

## **Qualitative Data**

### **Kelly's portfolio.**

#### ***Background information.***

Kelly is a senior student major in early education; she transferred from a technical college (similar to a community college in the United States) to the H University one year ago. The topics Kelly is interested in reading include education, tourism, and current affairs. Kelly's English learning attitude was highly dependent on whether she liked the instructor and reading topics. She thought the English education she received was impractical, uninteresting, and lacked interaction:

I don't like my English teacher in junior high school. She had a bad temper and physically punished students. In her class, she would make us read the text and translate it word by word. I did not listen to her lectures, so my counter-strategy was reading the translation from reference books I bought by myself.

Kelly reported that she only read English text in class, and in most cases, she could not understand the reading materials completely. After class, she almost never read any English articles. Kelly complained that the English vocabulary she learned in college was useless, the content of text was boring, and that she could not transfer the knowledge she learned from school into real life. To change this situation, she went to an exam-prepare school to resort to improving her language skills, but the experience in cram school was also filled with exercise practice, which she thought was dull.

Although Kelly had a many negative experiences while learning English, she also shared a story where her interest in English was strongly motivated by communicating in English with Russian people:

Nine months ago, I participated in a chorus competition with my school in Nizhni Novgorod, Russia. When the competition was over, there was a banquet. Everyone was holding glasses of wine and talking with each other. However, we Chinese students stuck together because we could not speak English well, let alone Russian. There was a Russian boy who came to chat with me, but his English was not good, either. We only had a brief and awkward conversation and then said good-bye to each other. After that, I realized English is very useful as it can help you make foreign friends.

Kelly reflected that she has a desire to learn English well but that she had so many things to do every day she could not focus on learning English exclusively. As a consequence, she preferred to read English texts only occasionally. Finally, she made an admission, stating that “I don’t like memorizing new words, because they would not be used in daily life, and I will forget them anyway. That might be the reason I still have not passed CET-4 yet.”

### ***During the Intervention.***

At the first five weeks of the intervention, Kelly showed a strong interest and enthusiasm in reading customized English articles with reading strategies. For example, when reading an article on a mobile game, *King of Glory*, she said: “This game is really fun with a good-looking interface and is easy to play. I am one of the players.” Taking advantage of her personal experience and reading strategies, she could guess the meaning of new words and managed to comprehend long sentences without a teacher’s explanation. When reading an article on Chinese people traveling to Denmark just to taste the fresh oysters there, she frequently consulted a dictionary to learn new words. She said, “ignoring new words would not impede my understanding of the whole article because the Chinese media has already reported this news. But I want to learn these new words out of improving my vocabulary.”

Because Kelly is majoring in early education, the instructor tutored her with an article on the application of the Montessori Method, and she thought the content was interesting and it aroused

her confidence in English learning. She also commented that as she forgot the meanings of words easily, she preferred to read an article twice rather than be asked to read new passages all the time.

Kelly was also interested in reading articles on topics of island tourism, so within a couple of weeks, the instruction guided her to many articles that introduced islands, such as Hawaii, Saipan, Santorini, and Tahiti. She thought that these introductory articles to islands and tourist sites did not have too many new words and the content was interesting. She would like to visit those places in the future, using the travel information she learned from the readings.

At the mid-stage of the intervention, Kelly found a few American news articles on CNN, which she brought to read in class and discuss with the instructor. For example, when reading an article on Trump's opposition to the Climate Conference in Paris, she stated, "Trump behaves in a cool manner, and he does not follow rules. I bet he will do whatever he wants even to fight against the whole world. I don't know why Americans don't support Hilary, and what do you think?"

During the second half of the experiment, Kelly traveled frequently to Shanghai, and she reflected that she desired to practice speaking instead of reading: "When I was doing an internship in Shanghai, I saw foreigners all over the city. I wanted to improve my oral skills so that I could chat with them. I once bravely strike up a dialogue with a nice-looking girl, but then all that I could only say was 'yea, yea, yea.'"

After this shift took place, Kelly was less likely to participate in this experiment, which was indicated in her comments: "I don't have anything particular want to read. You can recommend anything. It's all fine with me. I will read whatever you give to me like current affairs, but I'd be too lazy to find them by myself."

### ***Interview after the Intervention.***

#### *Interest and prior knowledge.*

Kelly thought that prior knowledge could help her gain a sense of professionalism and give her more confidence: "For the Montessori article, I have read her story in Chinese, and when I read

the English text, I find it was particular easier for me to understand. I feel that what I learned in college is not useless at all.”

She thought that interest in a topic was an important factor to motivate her in reading: “I was deeply impressed by the articles of island tourism. After that, there were some articles which I was not very interested in, but I did not tell you. Interests topics are the biggest motivation for me.”

*Inter-culture awareness.*

Kelly thought reading English articles broadened her horizon and supplemented her understanding of political events from different angles:

Some current news clearly showed the perspective difference between the Chinese and the Westerners. It made me understand how the foreigners observe and judge an event which taking place in China. Unlike *Tencent* and *Sina* (Chinese popular media) whose news are always written in a uniformly boring tone, the Western media is more inclusive towards different voices. English surely opens a gate to a new world, and it give me different ideas. It is like: ‘Ah, this is a fantastic viewpoint! Then I would sigh and say, yes, studying abroad certainly will give you more chances to learn about different information (with a laugh).’

*Experience improvement.*

Kelly thought that her interests in learning English, her language sense, and vocabulary have been improved during the CRSI intervention: “Now my interest in reading English text has been improved, and I want to read English novels. This tutoring program obviously increased my language sense, that I read much faster now. Also, my vocabulary is enlarged.”

*Habit formation.*

Kelly admitted that she had not formed a useful reading habit, and she explained that the reason is that she lacks time and self-regulation to persist in reading in English:

I insisted on finding articles by myself the beginning of the experiment. After I began my internship in Shanghai, there was so much things to do. In the first few days, I could keep on reading, but later I felt too tired to read any more. Reading English articles requires much

attention, and I could just stay focused for a moment. After that, I would be thinking about my work. I read Chinese news, too, but reading English news is too tiring. I want to have a flexible reading schedule. If I have more time, I like to read more; if I have less time, I will read less. I don't want to read English text daily, but if I have foreign friends, I probably would practice English every day.

*Three months after the experiment.*

Kelly reported that she is now practicing oral English. She occasionally reads in English articles, and when she sees English ads and illustrations on the street, she stops to read them.

**Rachel's portfolio.**

***Background information.***

Rachel is a junior student majoring in Chinese literature at H University. Rachel likes to browse on Chinese news websites such as *Sina Weibo* and *News Headlines*. She is interested in reading current news, exotic culture, and short stories. Rachel told me that she used to read English texts she was interested in, and she once was good at English reading. At present, however, she had lost interest in the English courses offered by her school: "My favorite textbook set is "New Concept English." I read it very carefully in my middle school and my English grade improved very quickly at that time. Now, the English textbook is really boring."

Rachel had attended an English tutoring class after she met with a native English speaker and was strongly motivated by that experience, but she stated that she gained nothing from that tutoring class:

My motivation of learning English stem from traveling abroad. My brother-in-law is a British man. I once took him to a Chinese restaurant to have a BBQ alone, and during that meal, my brother-in-law and I have to communicate by gestures all the time. Therefore, I joined in an English tutoring school. The advertisement of that school was very good, but I gained nothing except making a few friends. As a learner with a limited English vocabulary,

I usually stared at my American teacher with nothing to say, and the whole semester was finished in awkward atmosphere.

Rachel mentioned that the overload of new words was the biggest trouble to her when she was reading in English, and there was no connection between the words she memorized and the articles she read:

I am that kind of person who is really afraid of memorizing words in dictionary like other Chinese students did. I would easily fall asleep after memorizing several words. I read English articles occasionally, and sometimes when I read a long sentence contained just one to two new words, I could not understand the whole sentence. When I encounter such a situation, I will consult a dictionary. But if the whole article is written with long sentences, I would have no interest to read it anymore. Having too many new words is a huge blow to my confidence and deteriorated my reading experience.

### ***During the Intervention.***

Rachel liked the customized reading that engaged her interest and prior knowledge. For example, Zhang Yingying's disappearance in United States was an important news item in China. She read an article about this event carefully under the instructor's guidance, and she commented on it: This news has many new words, but the content is easy. I have been following on this incident recently, so it is relatively easy for me to understand with your assistant." Rachel was also willing to discuss this incident with me: "I think Zhang is dead because she has been missing for over 20 days. It is a pity. Her parents have raised her to be such a well-accomplished girl. It seems it is not safe to stay in the United States, is it?"

Rachel was also interested in the culture and perspective differences between China and Western countries. For instance, she was curious about whether the food in the United States versions of KFC and McDonald's tasted the same as it did in China when she read an article about McDonald's business in China. Another example that she provided regarded Yang Shuping, a

Chinese student from University of Maryland (UM), who degraded China in her graduation speech, and this subsequently became a heavily reported news item in China; Rachel requested that her instructor find reports about this event in Western media. The instructor tutored her to read about this incident, and Rachel felt it was easy to understand. Rachel understood that the air pollution issue in Yang's speech is just a metaphor aimed to introduce her main idea, which was the pursuit of democracy and freedom. Rachel commented, "The rhetorical method is not a problem, the problem is that she devalued China and exaggerated the air pollution issue. Although there is indeed a gap between the living qualities in both countries, it is not all good in America." She expressed meanwhile that she needed to improve her English-speaking skills because she saw that Yang the Chinese student was fluent in speaking English.

Rachel preferred to stay in touch with the instructor when out of class, and while the contact might exceed the procedure requirement of the experiment, she thought this was necessary contact to facilitate her self-regulation in autonomic reading. On one occasion, she asked the instructor to share his story about learning English. She reported being inspired by the story, and she suggested that it changed her habit regarding English learning.

### ***Interview after the Intervention.***

#### *Interest and prior knowledge.*

Rachel agreed that prior knowledge and reading strategies are helpful in understanding English articles, but this could also lead to a superficial understanding of the content:

I really like to read the current news about China wrote in English. Because I have already knew the news in Chinese, the prior knowledge makes English reading relatively easy for me. Although there were some new words I don't understand, they don't impede me from understanding the whole article. On the other side, I did not learn new words carefully from reading.

#### *Intercultural awareness.*

Rachel thought that the articles published by Western media were clearly different from Chinese media's regarding their ideology. She regarded this point as an important value of reading in English: "I have heard a lot of different voices through the English articles from this experiment. Though I do not agree with the Westerns' opinions, they broadened my sight."

*Experience improvement.*

Rachel thought customized reading and the tutoring helped her increase her vocabulary and ameliorated her reading experience:

Before the intervention, reading in English was equal to doing exercise, now I can thoroughly enjoy the process of reading, and I feel reading English text is very meaningful. My vocabulary is limited, but I can guess the meaning of the article according to my prior knowledge. If I want to read carefully and collect information in detail, I still need to consult a dictionary in order to understand the accurate meaning of each word. In the CRSI classroom, teachers' immediate explanation made my reading process smoothly and increased my vocabulary. However, when I read alone after class, some articles full of new words still frustrated me, which prevented me to read through them.

*Habit formation.*

According to her self-reflection, Rachel joined in an online reading program after she heard about the instructor's experience in learning English, and this on-line reading app on her smartphone helped Rachel to develop an ongoing reading habit:

At first, I doubt the effect about your experiment, I felt it might not be successful (with a laugh). Then I was inspired by your personal story of English learning, I thought this is not just your experiment, but also an opportunity for me to improve my English skills. After listening to your experience, I saw one of my friends posting an advertisement of an on-line English reading program on *WeChat* (A Chinese facebook-like social APP on smartphone) which is called "Mint Reading", then I joined it immediately. "Mint Reading" requires its members to keep on reading 6-10 minutes a day for 100 days and post personal reading

achievement on *WeChat* daily making our English learning status exposure to our friends. The daily passages "Mint Reading" sent to members are coherent in the plot which took from a novel. As the articles in "Mint Reading" have a clear story line and new words appeared repeatedly, it decreases the difficult of understanding a story in English and is helpful for me to increasing of my vocabulary. In "Mint Reading", there is also an on-line *WeChat* tutoring group, where the teachers lead students to read stories and explain words and grammar points. In the *WeChat* group, a dozens of members proposed and discussed questions day and day, which made me feel a sense of involvement and be monitored and be motivated by an on-line community. After all the English reading experience of "Mint Reading" on *WeChat* by smartphone is excellent.

In addition, Rachel indicated that the supervision from teachers and peers is extremely important for her in forming a reading habit, and this habit improved her reading comprehension and reading speed:

Participating in your experiment and having someone supervise me is better than reading articles alone. Through participating in "Mint Reading" and posting my daily reading status on *WeChat* moments, I feel my friends were also supervising me on-line. I enjoy the feeling of being urged to study (with a laugh). Having someone to supervise me makes me insisted in the daily reading. Before this experiment, when I read English articles, I did not even know what the article was talking about, because my attention was in answering multiple choice questions. Now as I am using English every day, my reading comprehension and reading speed increased remarkably.

*Three months after the experiment.*

Since there no one has supervised her, and no customized reading materials were available after the end of the experiment, the time Rachel has spent on reading English has decreased.

**Tom's portfolio.**

***Background information.***

Tom is a freshman majoring in finance at H University. He reads news in Chinese every day, and the topics he interested in are logo design, technology, and mobile phone assessment. He learned English mainly through doing exercises and memorizing vocabulary. The reason that he did not like to read English articles was the result of examination-oriented training, a lack of interesting content in reading texts, and the inadequacy of his vocabulary:

I once had only 70 out of a 150 points English test in the first semester of my senior year in senior high. After that, I memorized 100 words a day, which amounted to 3,000 in a month, then I got 110 points in the second semester. I did not read articles at all, all what I did is memorizing vocabularies and doing exercise on grammar. I read pretty slowly, but tests require students to make the right choices within a very short time. Therefore, I had to choose answers before I understood the article. Taking advantage of test strategies, I could answer the reading questions without understanding the whole article.

Relying on his intensive examination-oriented training, Tom passed the college entrance examination with a moderate English score. After the examination and in the most recent six months, however, he did not want to learn English anymore regardless of memorizing words or doing grammar excises. He was anxious when reading in English articles because he was always preparing to answer questions instead of learning knowledge from articles:

My college English teacher almost taught nothing in class during the first semester. She just translated the text for once and would not teach anything about it. What she said the most was: 'There's nothing to say about this article.' The texts of college English are indeed boring and cliché. The topics include friendship, bravery, honest and so on. They are moral good, but there is nothing fun to read these articles. I am already a college student, and I hope to read something broader and thoughtful.

To improve his English skills, Tom also tried to read items of his own interest, but he encountered other problems such as the overload of new words and self-regulation issues from this attempt:

I have tried to read novels in English such as *The Great Gatsby* and *Gone with the Wind*, but I could not read through them as there are too many new words which I do not know. These two novels I read are both Chinese-English bilingual versions, after I read a few pages of the English version, I cannot help to read the Chinese one for knowing the story plot in advance. However, after I finished the Chinese version at one sitting, I never read the English version anymore.

### ***During the Intervention.***

Tom did not enjoy the reading program at the beginning of the experiment and he wanted to quit. After persuasion from the instructor, he decided to stay in the experiment. According to his account, he had two problems in participating in this experiment.

The first problem was that the weekly meeting with the instructor was difficult for Tom to attend because it took him a considerable amount of time to travel to the classroom. The second problem was that this was the first time he read authentic English articles on logo design and technology of mobile phones. He was overwhelmed by the abundance of new words he was expected to learn. Although he could recognize many brand names such as *Snapdragon* and *Samsung*, which helped him to understand the meaning of the articles, his lack of vocabulary still frustrated him in deep reading.

At one point during his ten weeks training, Tom increased his interaction with the instructor and became more active in reading and discussion. At the beginning of June 2017, the incident of Chinese student Zhang Yingying who was kidnapped in the United States became major news in China. As this case happened in the United States and Chinese people do not understand the judicial system in the United States, if Chinese people wanted to understand the progress of the case, they

had to wait for the Chinese media's translation after the release of information by the United States media. Therefore, the instructor offered to read Tom the latest article about the case from the *Washington Post*.

The first time the instructor went over this article, Tom read very carefully, even though he had trouble understanding the first paragraph and often stopped to ask the instructor about new words and sentences. The instructor explained to him word by word and sentence by sentence until he understood. He thought that such a report of criminal case was a serious genre and the words were too academic, which made it difficult for him to understand. However, except for the first paragraph, he could guess the new words in the rest of the article through using the context that he was following for this case and because he knew what was happened. After reading the article, he understood the progress of the case, which made him feel a strong sense of achievement.

After studying the article on the kidnapping, the instructor tutored Tom to read news on "Doklam standoff" between China and India, and Tom also expressed a strong interest in reading this political news. During the discussion, he told the instructor that China should fight with India and he asked, "Will the United States interfere with the conflict between China and India? Do you think China's military power will exceed the United States in the future?" After a discussion, he told the instructor that he definitely wanted to read about how Americans view the Soviet Union and Eastern European socialist nations. The next week, the instructor gave him the articles as he requested, and he again read carefully.

From that point on, Tom often requested that the instructor search for articles on his interests, most of which were related to the culture and perspective differences between China and the United States. Tom also became active in reading and communicating. He was no longer restricted to ask the instructor questions about the vocabulary and grammar, but more often, he exchanged opinions on the articles with the instructor.

### ***Interview after the Intervention.***

#### *Interest and prior knowledge.*

Tom likes to read real-time political news, and he acknowledged that interest and prior knowledge play a vital role in his interest in reading authentic English articles:

The first impression I have on political news is that they are so fresh. These articles are about news that have just happened, and I feel respectful when reading these articles because they are not those old stories. Second, since I have a habit to read news daily, and I have already known some news on domestic media, reading related articles in English is not difficult than reading novels. This feature makes me feel that reading in English is not just doing exercise, it could be an enjoyment.

*Intercultural awareness.*

Tom stated that the different voices from the Western media broadened his horizon and taught him critical thinking:

Regarding politics news, the opinions that Western media expressed are of a global perspective. Reports from Western media usually valued the importance of investigation, but to report Chinese issues, the Western media seem ungenerous and non-objective. I really like reading foreigners' commenting on Chinese politics, which is very fun and different from the perspective of Chinese news. Before attending this experiment, I only read Chinese media's reports and comments on foreign countries, and what I read were not always first-hand materials, which means they were very much influenced by the Chinese ideology. Now I read Western media's articles directly, and I can get to know a lot of things and viewpoints that I could not know from Chinese media. They help me to understand what the Western people are thinking, to neutralize my thoughts, and to make me become more critical.

*Experience improvement.*

Through the experiment, Tom's confidence and interest towards English reading were dramatically improved along with the improvement of his linguistic knowledge:

Now I feel English reading is not something difficult, or something beyond my reach. It's still too early for me to say I like English reading, but I absolutely don't hate it. Before the

experiment, I got tired in reading those chicken-soup-like articles, but the articles you recommended to me sparked my interest again. You always helped me understand new words and long sentences immediately, and my vocabulary and grammar are gradually improved after the long-term practice.

*Habit formation.*

Tom believes vocabulary is the key in English reading, but by contrast, reading strategies are less important:

Lack of vocabulary is the most difficult issue for me in weekly autonomous reading.

Vocabulary in the authentic English texts of different genre varied greatly. It is easy for me to understand the main idea of an article by using reading strategies, but I cannot understand it in detail. As a result, I still have to frequently consult a dictionary. Though I did not spend too much time in searching and reading articles, I spent more time in memorizing vocabulary, this change was caused by the weekly tutoring which made me realize that vocabulary is the basis of reading comprehension.

Tom thinks he has learned the first step in forming a positive reading habit from participating in the CRSI experiment, and he also shared his different approaches to reading Chinese and English respectively:

In terms of EFL reading purposes, I experienced the change from ‘learning to read’ to ‘read to learn.’ Before this experiment, I had to read English articles just for taking exams, but now I read for my own interest. When I read English articles, I seldom pay attention to the title of the articles. Most often I just skim the content. But when I read Chinese articles, I like to check whether the title is interesting. In short, I never read in English for myself in the past, but now at least I start to read what I like, which is a huge progress for me.

*Three months after the experiment.*

At this point, Tom was becoming accustomed to reading in English. He frequently cooperated with international students on PPT designing. He often used Google to search for English resources,

and he had confidence in collecting information regarding English resources. Tom thought that having someone to supervise him was important, as he needs a tutor's supervision and tutoring skills.

### **Susan's portfolio.**

#### ***Background information.***

Susan is some freshmen majoring in finance in H University, and she is Tom's classmate. Susan's experience of English learning was typically aimed at her desire to achieve high test scores by answering test papers and memorizing vocabulary from a dictionary without context:

My English score was pretty good in the college entrance examination because I kept taking test trainings a semester before the exam. But my score dropped faster than it rose after I took the college entrance examination. The test trainings I did before the exam could barely improve my English skills. The vocabulary that I had memorized before the exam has already been forgotten. When I read a passage carefully, I need to consult a dictionary to learn new words, which usually cost me too much time so that the general idea of the sentence or passage would be blurred in my brain. I answer test questions in a fast manner, that I don't pay attention to details too much because some sentences are too difficult to understand, and during the examination I don't have enough time to figure out what the article is really talking about. I can only roughly read the article and see whether I can do the questions right.

Susan also mentioned that she liked her English teacher in junior high school, but she did not like the one in senior high, which constituted one of the reasons for her poor performance in English in senior high school. In terms of reading in Chinese, she liked to watch the news broadcasting by China Central Television (CCTV). She tended to focus on social news, international events, and historical articles. She also emphasized that she does not like inspiration articles at all.

### ***During the Intervention.***

Throughout Susan's reading process, she was interested in certain topics such as the movies she watched and the game she was playing at that time. The instructor observed this and personalized reading according to her interest topics and prior knowledge in order to prompt her to read in detail and to enjoy the reading experience. For example, Susan showed interest when she was reading an article about the mobile game, *King of Glory*. She did not expect that the British people could be interested in observing the mobile games celebrated by Chinese young people: "I never thought that foreigners would focus on something like that." She said that she likes playing this game a great deal, and she had registered as an adult player with her real name to avoid the time limit of the game.

An article discussed the film "Dangal," which introduced the popularity of an Indian film shown in China from a British person's perspective. After reading the article, Susan excitedly expressed that "I like Aamir Khan very much and I've watched this film. The content of this article is similar with the news I have read in Chinese, it is not difficult to understand."

Susan was also curious about Westerners' viewpoints on some current events, and she showed a strong interest in reading those articles beyond the purpose of learning linguistic knowledge. In class, she read these articles about culture differences slowly and carefully instead of like she had expressed to the instructor that she was a fast reader. For instance, the instructor provided Susan an assessment of China's military capability taken from the *Quora*, which neutrally introduced the capability and structure of the Chinese army and indicated that the Chinese army are under the control of Communist Party rather than being a nation's army. Susan briefly paraphrased the content of the article, and she pointed out that it was not a problem that the Communist Party led the army: "I admitted this is an unusual fact compared with other countries, but I support that the national army should be led by the party. Western media liked to denigrate China with such opinions." The instructor attempted to make her recognize that this was the unique value of English

reading and that one would not read anything like this in Chinese writings. Susan agreed with the idea and emphasized again that she did not like the Western media making these remarks regarding China's politics.

Another example occurred when Susan became interested in the speech of a Chinese student Yang Shuping's speech at her graduation ceremony at University of Maryland (UM). The instructor offered her an article that had been given to Rachel. Susan shared her viewpoints toward this event after the reading: "Yang's speech did not reflect the truth of China. I felt ashamed for Yang." The second half of the article talked about the people's comments on the internet and UM students' support for Yang. Susan thought that it was understandable that there were people supporting Yang because the gist of her speech is political correctness in the United States. Susan also told me that she found another video of graduation speech in English online by herself that was voiced by another Chinese student, He Jiang, who studied at Harvard University, and after listening to this, she was increasingly motivated to learn English.

The English media's report on China's overseas events was also appealing to Susan. Such a good reading experience not only came from her sense of linguistic achievement when she was able to understand the articles, but it also came from her feelings generated from the content of the articles, including her pride for the development of China. For example, there was a report about Chinese navy enter in the first overseas military base in Djibouti. Susan enjoyed reading the news, and she had never thought that foreigners also followed this event, which made her extremely proud.

### ***Interview after the Intervention.***

#### *Interest and prior knowledge.*

Susan stated that she was interested in all the articles the instructor had selected for her. She is a news reader, and when she noticed that the English articles were about events that recently

happened, she would become interested. She reflected that she did not realize that English reading training could be so close to life:

Because I am familiar with all those news, even there are some passages with new words, sometimes I can infer the meanings based on the news I have watched. It raises a sense of achievement for a person like me who used to have a headache when reading in English.

*Intercultural awareness.*

In terms of the culture and perspective differences toward international politics between China and the Western world, Susan thought that the Western people are more aggressive and are more willing to express their personal thinking. She said, “Many English articles analyze international events standing in a hegemonic point of view. Their comments are sharp and reach to some sensitive issues, whereas Chinese news especially news from mainstream media, is relatively neutral and flat.”

*Experience improvement.*

Susan thought that the CRSI was a transformative education that was different from the exam-oriented education she once experienced. The reading process led to improvements in her reading experience and self-confidence:

I like reading more than before. I used to go crazy when I read in English. When I was asked to read an entire article, I'd rather rip the book into pieces. But now there is not so much resentment when I read in English. Although a large number of customized reading have not improved my scores increasing rapidly, my confidence was greatly improved. I'm going to take the CET 4 next, and I feel like I can pass it now.

*Habit formation.*

Susan did not have a negative attitude about reading in English at this point, and sometimes she searched for authentic articles by herself, but the reading experience of these articles was not as good as she would have liked:

I logged on *Quora* and *China Daily*, but I didn't read them quite often. I feel those articles are too hard to understand without a teacher's tutoring. Occasionally, I read some passages, but there are too many new words. Without the explanations from teachers, I could not understand the articles at all. For some articles I don't even want to read a single word just because the length is too long. At present I use CNN, BBC, and other bilingual news APPs to train my listening skills.

*Three months after the experiment.*

After the experiment, Susan started to use a reading APP named *Baicizhan* on her smartphone that contains inspirational stories with Chinese illustrations. However, Susan thought the difficulty level of the vocabulary was the most important factor, so therefore she changed her reading preference and gave priority to vocabulary rather than topic interests. Susan also mentioned that the experiment per se played the role of supervision, and she read more carefully when she was under that supervision. Susan thought that CRSI helped her to construct an EFL reading habit to a certain degree, but maintaining the habit after the intervention required her to control herself.

## **Summary**

The quantitative data explains participants' performance trends, especially their turning points by graphs. Participant interviews, classroom observations, and narratives revealed their experiences during this long-term experiment, the shift of their attitudes toward reading in English, and what they learned from the experiment. Their words and behaviors triangulated with the quantitative data and provided the validity for this experiment.

## Chapter V

### Discussion and Conclusion

#### Discussion

The purpose of this study is to examine the effectiveness of tutoring Chinese EFL students struggling with reading in English by using the CRSI to improve their reading attitude, reading practice and reading comprehension; this study also aims to gain a deep understanding of participants' learning process and reflection in this longitudinal experiment. The quantitative data presents four participant's reading habits and reading comprehension before, during, and after taking the CRSI experimental program. The qualitative data elaborated how the participants adjusted their feelings and attitude about reading in English during and after the experiment with a comparison before the experiment. The CRSI model appears to be effective in certain cases. With the background knowledge of each participant's problems and characters, this section is dedicated to discussed how CRSI helped participants solve several English learning problems by improving their reading attitude, forming reading habits, and developing reading comprehension. In addition, several unexpected issues emerged and the underrepresented phenomena are reported.

#### Common problems of reading in English.

Based on participant interviews before the experiment began, it can be concluded that the participants' struggles with reading were caused by some similar phenomena in learning English, especially reading, in their past learning experiences:

The first point is that they did not like their English teachers in terms of their teaching approach and personality. This led to them not engage in classroom learning and to display a lack of interest in learning English outside of school.

The second point is that the participants were learning English mainly to answer test questions and aiming to improve their test scores rather than for practical purposes. Though they spent a great deal of time in reading training, they read English articles only in order to choose a

correct answer for each test item by test strategies. Even after reading an article, they rarely retained the content knowledge in the article or improved their reading comprehension.

The third point is that the participants thought the topics of articles in textbooks are vapid, Therefore, they have no interest in reading them or memorizing vocabulary through reading.

The fourth point is that the vocabulary they learned in school is rarely used in their daily life. Because of this, they did not perceive that there was a benefit from memorizing new words. The overload of new words is the primary factor impeding their reading comprehension, and thereby deteriorating their English reading experience.

Finally, the fifth point is that to these participants, English is considered an academic subject rather than an important practical skill. Because of this, they did not give priority to reading English when they were busy with other matters.

### **Participants' different characteristics.**

From the qualitative data, it can be seen that the four participants had some different characteristics, as shown in Table 1.

The participants' main motivations for learning English were different, although all of them wanted to communicate with native English speakers and wanted to pass the College English Test Band 4 (CET-4). Specifically, passing the CET-4 is the freshman students' major motivation and goal; the section of reading in CET-4 makes up a large percentage of the total score that requires them to invest more attention in reading. Practical purposes, such as communicating with foreigners in China, traveling abroad, and applying for jobs are major motivations for senior students who have met international English speakers. For example, Kelly understands the importance of reading, but she wants to have speaking tutoring in the second half of the experiment.

The participants had different degrees of dependence regarding their interest in the reading topics. Susan and Rachel had lower dependence on reading topics, so they searched and read prosaic articles when they were not able to receive customized readings. According to Tom and

Kelly, they were not fairly engaged in customized readings during the first half and the second half of this experiment, respectively. To them, it was harder to find appropriate readings without a teacher's help, so they decreased their autonomic reading times at different time periods. However, when they were engaged in the reading topics, they also invested more time and attention in reading.

	Test-orientated motivation	Communication-orientated motivation	
<b>Higher dependence on topic interest</b>	Tom	Kelly	Unstable reading habits and nonsignificant increased in scores
<b>Lower dependence on topic interest</b>	Susan	Rachel	Stable reading habits and significant increase in scores

Table 1. (participants' traits)

### **Topic interest and prior knowledge improve reading experience.**

From four participant's experiences (Eidswick, 2010; Ercetin, 2010), this research proves the argument that topic interest and prior knowledge largely overlap and have a significant interaction. Topic interest can motivate a student's curiosity to read deeply for pursuing new information. For example, reading international political news helped Tom to become a careful reader, and he felt a sense of enjoyment and achievement after reading through authentic news. The Western media's reporting about China's development made Susan feel a sense of national pride. The results in this experiment support Guthrie et al. (1999) and Ryan and Pintrich's (1999) argument that students who read for their own interest are more likely to apply their cognitive ability in understanding text as deeply as they can. Prior knowledge can decrease the L2 reading difficulty caused by new words and unfamiliar knowledge. For example, Kelly feels professional and confident when she reads texts introducing the Montessori method. Also, she is more willing to learn new words when she reads articles for her own enjoyment. The results support Al-Shumaimeri (2006), Martinez (2013), and Pulido's (2007) statements that prior knowledge related to the L2

reading can compensate for reader's vocabulary deficiency in reading comprehension and can enhance their self-efficacy.

Tom and Kelly's stories that each of them asked for and turned down having the researcher search for articles for them indicates that student's reading interests are changeable. To keep track of students' current interests, prior knowledge in a dynamic process, and to ensure the effectiveness of implementing CRSI, the best instrument is not questionnaires but students' direct requests. To get student's proactive requests for selecting reading materials, teachers and students must build rapport. Tom and Rachel's profiles point out the importance of rapport in shifting their attitudes and behaviors toward reading training. The use of textbooks was replaced by having the teacher collect individual readings according to their specific interests, and students appreciated the teacher's attention and regarded it as a sign of respect, which in turn motivated them to put time and attention into deeper reading.

### **The role of intercultural awareness.**

The Western perspectives about China and Chinese people have an influence on student's reading experiences. Topic interest, prior knowledge, and intercultural awareness largely overlap. The Western media's reports about China included different opinions about the same events and the news that Chinese media missed reporting triggered student's interest (curiosity and involvement) and engaged their prior knowledge (cultural knowledge and real-time knowledge). The intersection of these three points was located in news reported by BBC, CNN, and other channels.

Susan, Rachel, and Tom's interviews point out that they all wanted to hear different voices produced by different people with different thinking, even if they did not like it. After reading articles of different ideology, these adult college readers still strongly advocated for the Chinese ideology. Nevertheless, they also admitted that they had learned critical thinking that they have not experienced before. From their interviews, they were aware of their stereotypes, and they claimed that their horizons were broadened. In this research, participants found that they were enjoying the

value of reading information from different voices obtained by their improved English reading ability. Because of this achievement and realization, they were becoming more confident and proactive with using English to gain information for their own interests.

To the best of this researcher's knowledge, the role of intercultural awareness in facilitating EFL reading experience and in teaching critical thinking is an underrepresented in previous research.

### **Overload of new words deteriorate reading experience.**

Based on the participants' feedback, grammar and reading skills are not problems of their reading comprehension. Instead, the overload of new words in texts strongly influences their reading experience and thereby decreasing their autonomic reading time. The time and frequency they spend on consulting a dictionary occupies their working memory and seriously impedes their understanding of an entire sentence or article. Taking advantage of prior knowledge and reading skills, these college students can deduce the general idea of an article, but if they want to comprehensively understand the text and retain the valuable information in detail, they must learn the meaning of new words. Thus, to change the negative experience created by new vocabulary, memorizing vocabulary is an unavoidable process of reading in a foreign language. Rachel and Kelly reflected that they preferred to memorize new words by reading easy stories, while Tom and Susan reported that they memorized vocabulary from dictionaries daily without context. All of them say that memorizing vocabulary takes them more time than learning grammar and discourse structures.

Because the degree of difficulty in vocabulary crucially influences participants' autonomic reading experience, they adjusted their first language reading habits to make themselves feel better. For example, Susan reads inspirational articles, and Tom does not read the text titles before reading an article. Since authentic news usually has a high-level vocabulary, it is suggested that teachers

need to replace some words before giving articles to students or assist students immediately to decrease their difficulty in understanding.

### **Reading experience and reading habit.**

Based on participants' interviews before this experiment, participants used to have a negative experience towards reading that included frustration, a feeling of uselessness, and boredom. To remedy their negative experience toward EFL reading confined by teach-to-test pedagogy, the CRSI aims to activate students' intrinsic interests, guide them to recognize the irreplaceable value of reading in English, and thereby construct an autonomic, need-oriented reading habit. During and after the experiment, participants' profiles show that they all had a positive experience to some degree including a sense of achievement, confidence, pleasure, and familiarity.

However, participants were reluctant to search for the readings by themselves after class. Searching for readings per se is reading, and participants thought it was too time-consuming for them, so they preferred to request that the teacher offer customized readings instead of searching by themselves. It is reasonable that students' lack of experience to find an appropriate reading was not as successful as was the teacher's expertise, and learners who are struggling in learning do not want to make things too difficult. Reviewing their interviews and amount of autonomic reading times, Kelly and Tom have a higher dependence on topic interest, which means they are more sensitive about the reading topic and content. Because they barely found appropriate readings for themselves, they were less likely to read after class. According to Tom's words, the positive reading experience was his starting point for constructing a positive reading habit.

In this research, positive reading experiences cannot strongly predict the EFL reading time as did Ercetin (2010), and Guthrie et al.'s (1999) research in L1 reading. These results indicate that constructing and maintaining a longitudinal stable EFL reading habit is a complex process that cannot be solely created by this reading project. Positive reading experience is found to be an initial

and necessary factor in creating a stable reading habit for struggling EFL readers, but it alone is not sufficient. It appears that CRSI is more effective in helping these students improve their reading experience than constructing a habit.

### **Reading habits and reading comprehension.**

Reading habit in this research is represented by reading time, or the time participants put in reading training. Reading comprehension consists of linguistic knowledge (e.g., vocabulary and grammar) and reading skills; for this research, reading comprehension is measured by a reading quiz from CET-4. From the participant's performance during the baseline period and intervention period, a correlation was noted between the amount of reading time and reading comprehension. For instance, when Kelly joined in the project as frequently as the experiment required, she invested more time on autonomic reading and her reading scores increased. When she decreased her reading time, her scores dropped slightly. In addition, Susan and Rachel's stable reading habits during the ten-week trial statistically improved their reading scores and made their reading comprehension remain at a stable level. Based on Rachel, Tom, and Kelly's figures at the end of the first five weeks, a contribution of the growth of reading amount to the development of reading comprehension can be seen in a moderate degree.

However, the CRSI only takes a small amount of participant's weekly reading time, and from the data of reading quiz, two participants (e.g. Kelly and Tom) missed several classes during the ten-week training. That means that the weekly CRSI reading training was not long enough for teaching students linguistic knowledge and thereby increase their reading comprehension.

Previous research (Becker et al., 2010; Ecalle & Magnan, 2008; Guthrie, et al., 1999; Mol & Bus, 2011) has shown significant relations between the amount of reading and reading comprehension in elementary L1 reading. The result of this research on L2 reading training appears to agree with their argument. However, the CRSI is not the only nor the decisive factor to develop participant's reading comprehension through the mediation of a reading amount. It appears that the

difficulty of new words and an individual's self-regulation are the main limitations that distinguished the adult's L2 reading performance in CRSI from the pupil's L1 reading performance in Guthrie et al.'s (1999) CORI.

### **Awareness of monitoring.**

According to participant's reflections, monitoring by teachers, parents, and peers can improve their self-regulation. For the sake of educational research, this study collected participant's autonomic reading time and reading comprehension scores. However, these two research instruments were a significant intervention to construct students' reading behavior. All participants were notified that this was an opt-in experiment and their personal information would be protected and destroyed afterwards, but they were still very careful about their performance and impressions given to the researcher. They all claimed that as they understood this routine assessment will be reported as experimental data, they work harder than they would have studying alone, and they enjoyed being monitored. It seems that the extreme caring about others' opinion is an important cultural aspect in East Asian countries, which motivates students to work harder, either unconsciously or consciously.

### **A call for implementation of education technology.**

Since all four participants had asked for a leave at times and traffic had taken a great deal of their time, participants all asked for online learning through their smartphones. Rachel's recommendation of an online reading program, "Mint Reading," seemed less individualized in terms of students' topic interest and prior knowledge, but as it is convenient to read, it is becoming more popular in the modern Chinese EFL learning environment. From the participant's interview, the burgeoning of education technology in EFL reading will be a trend soon.

## Conclusion

This research indicated that the struggles Chinese EFL students have with English reading tasks were confined to the teach-to-test pedagogy in China. Therefore, these Chinese students have neither the interest nor the ability to comprehend authentic texts to take in information rather than find the correct answers. The purpose of creating CRSI is to solve students' genuine reading problems with the goal of improving English reading comprehension and to investigate their experience in this program. CRSI consists of selecting authentic English reading materials according to each participant's reading interests and prior knowledge, followed by a tutor's teaching of linguistic knowledge (e.g., vocabulary or long sentences), reading strategies, and indication of intercultural awareness. During and after the ten weeks training period, every participant developed a positive attitude towards reading in English and improved their reading comprehension, but not all of them formed an idealized reading habit. Culture and perspective differences between Chinese and Western media played an important role in attracting participants' interests and realizing the value of English reading. The vocabulary level also played a vital role in influencing participants' reading experiences and forming a lasting reading habit.

Based on findings and discussions, conclusions can be reached about the effects and limitations of the pilot CRSI. Texts set up according to individual's topic interests, prior knowledge, and intercultural awareness are primary supports, like scaffolding, in improve reading experience and comprehension. An overload of new words without a teacher's immediate assistance deteriorates the reading experience. Teacher's tutoring, interactions, and monitoring are necessary to build and maintain this scaffolding in ameliorating participant's experiences, constructing a stable reading habit, and enhancing reading comprehension performance for long term outcomes. Positive reading experiences (achievement, confidence, and pleasure) are important but not the only factor to consider when constructing good reading habit; tutor or peer's monitoring, self-regulation and uncontrollable or unknown variables also influence whether individuals will maintain useful reading habits. This pilot CRSI had a limited effect on creating reading habits for individuals, and

in this research, the development of reading habits improved L2 reading comprehension to a moderate degree.

### **Limitations.**

Although this study explored different results, there are several limitations that could be modified in future research. First, certain authentic texts contained many new words, so students frequently had to use their dictionary or consult with a tutor, which might limit their actual reading time and decrease their experience to a degree. Second, because this study was restricted to the experimental location, students or tutors had to make a long journey to meet, which might influence participant's motivation in fully engaging with this program. Participants and participant candidates strongly suggested using an online tutoring approach. Third, there was a ceiling effect on the reading quiz for two participants (e.g., Rachel and Susan). Finally, the ten-week program by CRSI was not longer enough for a thorough training experience for the students, and the quantitative data was not significant enough to generate strong evidence.

### **Pedagogical implications and future research suggestions.**

This CRSI exploratory research generates pedagogical implications in teaching TESOL. This study's conclusions indicate that Chinese EFL students struggling with reading in English should be tutored by reading authentic English articles according to their personal interests and prior knowledge. The advanced vocabulary embedded in readings could be replaced by low level words or be taught before the reading. Teachers have the responsibility to ensure each student has fully comprehended the meaning of an entire article. The content of culture or perspective differences between Chinese and Western media should be addressed by tutors to carefully teach students critical thinking without breaching local laws and regulations. The section of interaction or discussion in CRSI played a crucial role in facilitating comprehension, activating interest, and understanding the value of reading in English. This section should be given more time than the

experiment designed, and it is suggested to incorporate it with listening and speaking training. Having teacher or peers supervise student's daily readings is strongly suggested to assist them in constructing stable reading habits.

Future research should focus on implementing CRSI programs online via mobile phones. With the development and the cost reduction of the fourth generation of mobile phone communication technology and the wide usage of *WeChat* and other social platform apps, the environment of EFL learning in China is rapidly changing. As it is portable and user-friendly, more students are using the online learning apps on their smartphones when reading English when they are free in many different physical locations. Future research should also consider how the English learning apps in China select readings and edit lessons for students of different linguistic levels and how the English learning apps can construct an online community of practice to create a longitudinal and stable reading behavior suited to the current young adult's living styles.

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## Appendix I: Interview Questionnaires

### Pre-intervention interview questions:

Do you have any hobbies?

How often do you do it?

How much do you like it? Likert-scale from 1 to 10 (1 being the lowest, and 10 being the highest).

Do you read or browse on-line on some particular topics?

How often do you read them?

Could you tell me any topics of knowledge you know a lot about?

Do you want to learn some specific topics?

Could you talk about your English learning experience? Could be anything you think you were success or failure.

What problems do you have in reading English articles?

What is your motivation in learning English?

### After intervention interview questions:

What do you think about this whole intervention program?

Do you enjoy reading the customized reading texts?

How do you think about your experience by using your prior knowledge in understanding texts?

Did you learn something different from the western author's opinion?

What does reading in English mean to you?

Do you think you have had a regular autonomous reading habit now?

Do you think you improved your English reading comprehension?

Could you give me any suggestions for improving this instruction?

## Appendix II: Check-list

### Check-list for selecting reading materials

1. Using *Quora/ Zhihu* (2017) to identify student's reading interest and prior knowledge.
2. Using CET Band 4 to test participant's reading comprehension level.
3. Selecting readings from Quora, BBC, and CNN according to participant's reading interest and prior knowledge.
4. Read the selected article and prepare a brief translation, and explanation for some high-level words and long sentences.
5. Print it out.

### Check-list for instruction

T-tutor

S-student

(0:00)

T: Tell me something you know about this topic. / Tell me what you know about \_\_\_\_ (the topic).

S: Speaking in 1-2 minutes.

(0:02)

T: That's Great, today I have prepared an interesting article related to \_\_\_\_ (the topic), you may take the advantage of your knowledge that you just tell me to deduce any new words and long sentences you may encountered. I believe you will like to learn something more about \_\_\_\_ (the topic) from this article, as it is writing in a Western's perspective. You will have twenty to twenty-five minutes to read it, and please feel free to use the on-line

dictionary (Yadao dictionary: <http://www.youdao.com.>) to check new word if you'd like; and you can also ask me anything you really cannot understand. Offer student the printed article and a laptop with the interface of this dictionary website.

S: Reading in 20-25 minutes.

(0:27)

T: Now, let's talk about the content of this article. In 4 to more sentences, tell me what this article talks about.

S: Talking 2 to 3 minutes.

T: Here is my summarizing of this article, you can listen and compare with yours. Speaking in 2 minutes.

T: Could you paraphrase this text into Chinese?

S: in 2 to 4 minutes.

T: Here is my translation, you can listen and compare with yours. Speaking in 2 minutes.

(0:40)

T: All right, now I have some open-ended questions for you, there is no right or wrong answers, please feel free to talk. I have interest to know your personal thinking. First could you in 4 to more sentences tell me how you think about this author's opinion?

S: Speaking in 2-3 minutes

T: Could you in 4 to more sentences tell me the differences or similarities you noticed between what this article's saying and Chinese people's general opinion in this thing?

S: Speaking in 2-3 minutes

T: Did you notice anything interesting in this text and want to share with me briefly?

S: Speaking in 1-2 minutes

T: Did you learn anything you think valuable in this text and want to share with me briefly?

S: Speaking in 1-2 minutes

(0:50)

T: It's an amazing reading and talking experience, I learned a lot from both this article and your knowledge. I hope when you come back you can find more articles about this topic in English from Quora, Wikipedia, or any websites. You can read as long as you want, but please record the number of minutes that you read every day and tell me the amount of your weekly reading time. Thanks for you attending.

(0:51)

### Appendix III: Reading Quiz Sample

- an indication of low ability.
7. Focusing on effort is effective in helping children overcome frustration and achieve success.
  8. We can cultivate a growth mind-set in children by telling success stories that emphasize hard work and love of learning.
  9. Students' belief about the cause of their failure explains their attitude toward setbacks.
  10. In the author's experiment, students with a growth mind-set showed greater perseverance in solving difficult math problems.
  11. The author conducted an experiment to find out about the influence of students' mind-sets on math learning.
  12. After failing again and again, most animals give up hope.
  13. Informing students about the brain as a learning machine is a good strategy to enhance their motivation for learning.
  14. People with a fixed mind-set believe that one's intelligence is unchangeable.
  15. In the workplace, feedback may not be so welcome to managers with a fixed mind-set.

#### Section C

**Directions:** *There are 2 passages in this section. Each passage is followed by some questions or unfinished statements. For each of them there are four choices marked A), B), C) and D). You should decide on the best choice and mark the corresponding letter on Answer Sheet 2 with a single line through the centre.*

#### Passage One

**Questions 46 to 50 are based on the following passage.**

"Sugar, alcohol and tobacco," economist Adam Smith once wrote, "are commodities which are nowhere necessities of life, which have become objects of almost universal consumption, and which are, therefore, extremely popular subjects of taxation."

Two and a half centuries on, most countries impose some sort of tax on alcohol and tobacco. With surging obesity levels putting increasing strain on public health systems, governments around the world have begun to toy with the idea of taxing sugar as well.

Whether such taxes work is a matter of debate. A preliminary review of Mexico's taxation found a fall in purchases of taxed drinks as well as a rise in sales of untaxed and healthier drinks. By contrast, a Danish tax on foods high in fats was abandoned a year after its introduction, amid claims that consumers were avoiding it by crossing the border to Germany to satisfy their desire for cheaper, fatter fare.

The food industry has, in general, been firmly opposed to such direct government action. Nonetheless, the renewed focus on waistlines means that industry groups are under pressure to demonstrate their products are healthy as well as tasty.

Over the past three decades, the industry has made some efforts to improve the quality of its offerings. For example, some drink manufacturers have cut the amount of sugar in their beverages.

Many of the reductions over the past 30 years have been achieved either by reducing the amount of sugar, salt or fat in a product, or by finding an alternative ingredient. More recently, however, some companies have been investing money in a more ambitious undertaking: learning how to adjust the

fundamental make-up of the food they sell. For example, having salt on the outside, but none on the inside, reduces the salt content without changing the taste.

While reformulating *recipes* (配方) is one way to improve public health, it should be part of a multi-sided approach. The key is to remember that there is not just one solution. To deal with obesity, a mixture of approaches—including reformulation, taxation and adjusting portion sizes—will be needed. There is no silver bullet.

46. What did Adam Smith say about sugar, alcohol and tobacco?

- C
- A) They were profitable to manufacture.
  - B) They were in ever-increasing demand.
  - C) They were subject to taxation almost everywhere.
  - D) They were no longer considered necessities of life.

47. Why have many countries started to consider taxing sugar?

- B
- A) They are under growing pressure to balance their national budgets.
  - B) They find it ever harder to cope with sugar-induced health problems.
  - C) The practice of taxing alcohol and tobacco has proved both popular and profitable.
  - D) The sugar industry is overtaking alcohol and tobacco business in generating profits.

48. What do we learn about Danish taxation on fat-rich foods?

- A
- A) It did not work out as well as was expected.
  - B) It gave rise to a lot of problems on the border.
  - C) It could not succeed without German cooperation.
  - D) It met with firm opposition from the food industry.

49. What is the more recent effort by food companies to make foods and drinks both healthy and tasty?

- B D
- A) Replacing sugar or salt with alternative ingredients.
  - B) Setting a limit on the amount of sugar or salt in their products.
  - C) Investing in research to find ways to adapt to consumers' needs.
  - D) Adjusting the physical composition of their products.

50. What does the author mean by saying, at the end of the passage, "There is no silver bullet" (Line 4, Para. 7)?

- A
- A) There is no single easy quick solution to the problem.
  - B) There is no hope of success without public cooperation.
  - C) There is no hurry in finding ways to solve the obesity problem.
  - D) There is no effective way to reduce people's sugar consumption.

#### Passage Two

Questions 51 to 55 are based on the following passage.

You may have heard some of the fashion industry horror stories; models eating tissues or cotton balls to hold off hunger, and models collapsing from hunger-induced heart attacks just seconds after they step off the runway.

Excessively skinny models have been a point of controversy for decades, and two researchers say a model's body mass should be a workplace health and safety issue. In an editorial released Monday in the *American Journal of Public Health*, Katherine Record and Bryn Austin made their case for government regulation of the fashion industry.

The average international runway model has a body mass index (BMI) under 16—low enough to indicate starvation by the World Health Organization's standard. And Record and Austin are worried not just about the models themselves, but about the vast number of girls and women their images

influence.

"Especially girls and teens," says Record. "Seventy percent of girls aged 10 to 18 report that they define perfect body image based on what they see in magazines." That's especially worrying, she says, given that *anorexia* (厌食症) results in more deaths than does any other mental illness, according to the National Institute of Mental Health.

It's commonly known that certain diseases are linked with occupations like lung disease in coal miners. Professional fashion models are particularly vulnerable to eating disorders resulting from occupational demands to maintain extreme thinness.

Record's suggestion is to prohibit agents from hiring models with a BMI below 18.

In April, France passed a law setting lower limits for a model's weight. Agents and fashion houses who hire models with a BMI under 18 could pay \$82,000 in fines and spend up to 6 months in jail. Regulating the fashion industry in the United States won't be easy, Record says. But with the new rules in France, U. S. support could make a difference. "A designer can't survive without participating in Paris Fashion Week", she says, adding, "Our argument is that the same would be true of New York Fashion Week."

51. What do Record and Austin say about fashion models' body mass?
- A) It has caused needless controversy. C) It is the focus of the modeling business.  
B) It is but a matter of personal taste. D) It affects models' health and safety.
52. What are Record and Austin advocating in the Monday editorial?
- A) A change in the public's view of female beauty.  
B) Government legislation about models' weight.  
C) Elimination of forced weight loss by models.  
D) Prohibition of models eating non-food stuff.
53. Why are Record and Austin especially worried about the low body mass index of models?
- A) It contributes to many mental illnesses.  
B) It defines the future of the fashion industry.  
C) It has great influence on numerous girls and women.  
D) It keeps many otherwise qualified women off the runway.
54. What do we learn about France's fashion industry?
- A) It has difficulty hiring models. C) It allows girls under 18 on the runway.  
B) It has now a new law to follow. D) It has overtaken that of the United States.
55. What does Record expect of New York Fashion Week?
- A) It will create a completely new set of rules. C) It will differ from Paris Fashion Week.  
B) It will do better than Paris Fashion Week. D) It will have models with a higher BMI.

#### Part IV

#### Translation

(30 minutes)

**Directions:** For this part, you are allowed 30 minutes to translate a passage from Chinese into English. You should write your answer on **Answer Sheet 2**.

在中国文化中,黄颜色是一种很重要的颜色,因为它具有独特的象征意义。在封建(feudal)社会中,它象征统治者的权力和权威。那时,黄色是专为皇帝使用的颜色,皇家宫殿全都漆成黄色,皇袍总是黄色的,而普通老百姓是禁止穿黄色衣服的。在中国,黄色也是收获的象征。秋天庄稼成熟时,田野变得一片金黄。人们兴高采烈,庆祝丰收。