

11TH GRADE STUDENTS' ENGLISH READING MOTIVATION, LANGUAGE
PROBLEMS AND READING ACHIEVEMENT IN TAIWAN

A Dissertation

by

JUNG-HSUAN SU

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of
DOCTOR OF PHILOSOPHY

May 2012

Major Subject: Curriculum and Instruction

11th Grade Students' English Reading Motivation, Language Problems and Reading

Achievement in Taiwan

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ABSTRACT

11th Grade Students' English Reading Motivation, Language Problems and Reading
Achievement in Taiwan. (May 2012)

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Motivation has been viewed as a very influential factor to successful reading for English as foreign language learners (EFL). Learners can be motivated to read English by extrinsic or intrinsic motivation, and the motivational orientations could also influence their reading achievement. However, language problems that EFL learners encounter while reading can affect their willingness to read as well as their reading achievement. The purpose of this study was to investigate Taiwanese EFL students' English reading motivation and its relationship with perceived language problems and reading achievement.

302 11th grade students from an urban district in southern Taiwan participated in the study. Measures included an English reading comprehension test, an English reading motivation questionnaire, and a questionnaire regarding language problems in reading English. A factor analysis was used to determine the motivational orientations. Multiple regression and correlation analysis were performed to examine the relationship among reading motivation, language problems, and reading achievement.

The results showed that: 1) Taiwanese senior high school students were largely motivated to read English by extrinsic motivation, specifically the importance and instrumental utility of reading English and the drive for recognition and competition, although they could also be motivated by intrinsic motivation to read English for knowledge and social purposes. Moreover, extrinsic motivation to read for compliance was significantly associated with their English reading scores ($p < .01$). 2) While reading English, unknown idiomatic expressions and vocabulary were frequently reported language problems that influenced students' willingness to read. Nevertheless, lack of grammar knowledge was generally not considered a big language problem to most of the students while reading. 3) Language problems in reading English and reading motivation were correlated, and motivation to read for compliance ($p < .01$), grammar knowledge ($p < .05$), and overall reading comprehension ($p < .01$) were significant predictors of students' English reading scores. This study highlights the influential role of extrinsic motivation to EFL students in English reading and the importance of knowledge of vocabulary and idiomatic expressions in order to help understand the meaning of English texts. It provides implications for English teachers in designing appropriate curriculum that suits students' needs and interests, and also suggestions for choosing proper reading materials.

DEDICATION

To my mother and father
for their persistent love and encouragement.

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CHAPTER I

INTRODUCTION

As English has become a key language in international communication, English language ability has turned into an important language skill for people around the world. English ability in Taiwan is widely considered as an important and required language skill for all students. English is used in many situations, such as national academic conferences, international meetings, and the international market place. As computer usage, internet connectivity and air travel have become common, people in different countries have become increasingly connected, and bilingualism in English has added advantages in the employment market (Baker, 2006). Moreover, a sufficient level of English reading ability is required, especially in international business. People fluent in English reading, writing and speaking are often rewarded in the job market in terms of job prospects and salary in Taiwan.

Taiwan is a country that uses Mandarin Chinese as the official language, while English is considered a foreign language and is taught as a mandatory school subject from third to twelfth grade, though some cities even start teaching English from the first or second grade level. To English language learners (ELLs), reading in a foreign language is very different from reading in his or her native language. Reading a text and

This dissertation follows the style of *Language Learning*.

comprehending it takes more time and energy for ELLs than those who are native English speakers (Grabe, 1991).

Reading is a complex cognitive process (Akamatsu, 1999). According to National Assessment Governing Board (2008), reading involves “understanding written text”, “developing and interpreting meaning”, and “using meaning as appropriate to type of text, purpose, and situation” (p. 2). In order to understand a written text, it is important to properly utilize linguistic competence (e.g., vocabulary knowledge), as well as semantic and syntactic knowledge of the words, including phrases, slang and idioms. In addition, understanding conceptual and sociocultural information (Lin, 2002; Wang, Martin, & Martin, 2002) is necessary to comprehend the text. Readers of alphabetic languages such as English also need to acquire decoding skills, including the knowledge of phonological awareness (PA), phonics, the alphabetic principle, and also sufficient background knowledge in order to achieve reading comprehension (McCardle & Chhabra, 2004; McCardle, Chhabra, & Kapinus, 2008).

Reading in different languages may require different skills. For example, English and Chinese employ very different writing systems. English uses an alphabetic orthography, which involves grapheme-phoneme correspondence, while Chinese uses a morphosyllabic and logographic writing system, which is non-alphabetic, and the language is written from top to bottom and right to left (Ernst-Slavit, Moor, & Maloney, 2002). The language structures between Chinese and English are also very different and these differences could affect students’ understanding in syntax and grammar while reading English. In addition, students’ prior knowledge (Lin, 2002; Wang et al., 2002),

limited English proficiency (Edwards & Yang, 2007), and differences in cultural background (Ernst-Slavit et al., 2002; Lin, 2004) could also build barriers to Chinese students' reading in English.

It is widely considered that motivation is a key element to reading success (Baker, Dreher, & Guthrie, 2000; Pintrich & Schunk, 1996) and can affect reading achievement (Mucherah & Yoder, 2008; Unrau & Schlackman, 2006). Also, learners who have strong motivation and positive attitudes toward second or foreign language acquisition will be able to attain a high level of language ability and reading achievement (Bernaus & Gardner, 2008; Guthrie & Humenick, 2004; McCardle et al., 2008). In other words, if the learners are motivated and desire to learn, they are likely to read more and be able to develop stronger cognitive capacity and knowledge, thus supporting their language learning further. As Mucherah and Yoder (2008) noted, the amount and breadth of reading that students engaged in could be an important factor for their reading achievement. Because English has become a compulsory subject for students from the third to twelfth grade in Taiwan's education system, satisfactory English reading ability is required for all students. However, achieving good reading comprehension is not an easy task for most Taiwanese students.

Statement of the Problem

Most English as a second language (ESL) and foreign language (EFL) students fail to read adequately in the foreign language (Alderson, 1984; O'Sullivan, 2004). Their reading comprehension is lower than one might expect them to have. The distinction between ESL and EFL is that ESL students learn English in a predominantly

English-speaking country, whereas EFL students learn English in a country where English is not an official or main language. For both ESL and EFL students, their first language is not English. As Alderson (1984) pointed out, many students who read in a foreign language seem to read without really understanding the meaning of the text, and their reading speed is considerably slower in foreign languages than in their first language. It typically takes more time and energy for EFLs to read a text in English because they need more time in decoding or word recognition in order to understand the word meaning (August, Carlo, Dressler, & Snow, 2005; Laufer, 1992; Wang & Koda, 2007) and comprehend the text, and they also need sufficient linguistic competence, conceptual understanding and sociocultural knowledge to process the information (Akamatsu, 1999; Lin, 2002). All of this important and necessary knowledge and skill in reading is influential to good reading comprehension. Because EFL students' poor reading comprehension may be caused by English language problems which originated in the lack of linguistic competence and also knowledge of word meaning and recognition (Adams, 1980; Alderson, 1984; Fukkink, Hulstijn, & Simis, 2005; Lin, 2002), language problems can influence EFL students' reading achievement and impact their willingness and motivation to read in English as well.

Because English is not the first language in Taiwan, environment becomes one of the major factors that limit the frequency of English use. Most people use English in certain specific occasions but not in daily interactions and they learn it mostly for a specific purpose, such as passing an examination or a promotion at work. In light of the English environment in Taiwan, motivation seems to be one of the most important

elements for successful English reading and learning. Several researchers (e.g., McCardle et al., 2008; Zhou & Salili, 2008) have indicated that intrinsic motivation is an important element to students' success in reading. Students who had intrinsic motivation engaged in English reading and learning spontaneously for the purpose of their own interest and curiosity (Brown, 2007; McCardle et al., 2008; Zhou & Salili, 2008), which do not derive from extrinsic or outside attractions, such as a teacher's praise or avoidance of punishment. Many researchers have emphasized the importance of motivation, especially intrinsic motivation, to students' academic achievement, including reading achievement, and created strategies and environments that encourage readers to engage in reading and promote their intrinsic motivation (Brown, 2007; Guthrie & Humenick, 2004; McCardle et al., 2008, Pintrich & Schunk, 1996). However, due to the EFL learning context, Chinese EFL learners are mostly motivated to read English for extrinsic reasons, such as passing an examination and future career prospects (Kyriacou & Zhu, 2008; Wang, 2008). Previous researchers (e.g., Ho, 1998; Kim, 2010; Kyriacou & Zhu, 2008; Wang, 2008) have found that most EFL students were motivated to read English by extrinsic motivation, whereas ESL students were motivated by intrinsic motivation, illustrating that different learning contexts can drive different types of motivation.

Purpose of the Study

Although many researchers (e.g., Bernaus & Gardner, 2008; Dörnyei, 1994; Masgoret & Gardner, 2003; Pae, 2008; Wang, 2008; Wavo, 2005) have indicated that learners' motivation to learn a second or foreign language has a significant influence on

their language acquisition and achievement, and that their attitudes could also affect learning engagement and the language outcomes, there is little research investigating Chinese EFL students' English reading motivation level. In addition, there is also a need for extensive research examining Chinese EFL students' English language competence, and to understand the relationship between English reading motivation and language problems among high school students.

Therefore, the main purpose of the present research was to investigate Taiwanese 11th grade high school students' English reading motivation and language problems they encounter while reading English. Specifically, the current study investigated the reading motivational orientations of Taiwanese EFL students to learn what orientations motivated them the most in reading English. In addition, because English language competence and knowledge can influence readers' reading comprehension and willingness to read, the present study also aimed to examine the language problems regarding linguistic and syntactic knowledge that Taiwanese EFL students generally face while they are reading in English, and how these language problems correlate with their reading motivation and achievement. Most importantly, the study examined how these motivational and English reading problems variables predict students' English reading achievement. Correlational data were used to address these issues.

An English reading comprehension test was used to collect the participants' reading scores. In addition, a set of questionnaires consisting of English reading motivations, English language problems while reading, and other related personal and familial demographic background questions were also distributed to the participants for

data analysis. The motivation for English reading questionnaire was pilot-tested with different participants of the same grade level at the same participating school in Taiwan to validate the survey items.

Research Questions

The present study addressed the following research questions:

- 1) What are Taiwanese 11th grade high school students' English reading motivational orientations and what orientation most inspires their reading motivation?
- 2) What frequent English language problems do Taiwanese high school students report having while reading in English that affect their willingness to read?
- 3) How does English reading motivation correlate with language problems among Taiwanese senior high school students and how do these factors predict students' reading achievement?

CHAPTER II

REVIEW OF LITERATURE

Because this study focused on EFL students' English reading motivation and language problems in reading English, related literature regarding ESL/EFL learners' motivation and motivational theories were reviewed for the theoretical framework of the study. Next, related literature concerning the essential knowledge and ability that learners, especially Chinese EFL students, should acquire in reading English were also discussed.

Motivation and Attitudes toward English

Motivation, according to Brown (2007), could be defined by the choices you make for a goal and the effort you devote to pursue the goal. Motivation has been considered a crucial element in learning a foreign language (Bernaus & Gardner, 2008; Dörnyei, 1990, 1994; Pae, 2008; Wang, 2008). In other words, language learners who have strong motivation and desire to learn the language will be able to attain high levels of competence and knowledge in that language. In addition, learners' attitudes toward learning the language and attitudes toward the speakers of the language and the community can play a critical role in language learning motivation as well as achievement.

Gardner and Lambert (1972) proposed that, "the learners' motivation for language study... would be determined by his attitudes and readiness to identify and by his orientation to the whole process of learning a foreign language" (p. 132). According

to Baker (1992), there is a bidirectional causal connection between attitudes and language ability in which early attitudes could affect later achievement or vice versa. For example, if students hold positive attitudes toward learning the language, they are likely to be motivated and tend to read more, and thus score higher on the reading test. Some researchers (e.g., Loh & Tse, 2009; McKenna, Kear, & Ellsworth, 1995) also have found that attitudes could influence reading ability and reading engagement, which refers to “interaction with text that is simultaneously motivated and strategic” (Guthrie et al., 2004, p. 403). Accordingly, the relationship between attitudes and motivation toward learning a second or foreign language are strongly connected and can influence reading achievement.

To ESL or EFL learners, the status of English in the country can affect the learners’ attitudes toward English and their motivation to learn the language. Kyriacou and Zhu (2008) investigated senior high school students’ attitudes towards English and how much they liked different school subjects in China. They found that English was listed as the fifth highest subject students liked among 12 school subjects, with about 54% of students reporting they liked English very much or a little, and about 12.8% reporting they disliked English very much or a little. Nevertheless, these senior high school students reported an overall higher level of motivation to learn English than other subjects (Kyriacou & Zhu, 2008). In Lin and Warden’s (1998) study of 346 Taiwanese college students’ attitudes toward learning English, they found that most of the students had unpleasant or panicked feelings of past English learning experiences, especially during junior and senior high school years, and their results showed a high percentage of

students' basic purpose of learning English was for communication. Moreover, Wavo (2005) investigated 1,007 high school students' attitudes toward the English language in China and found that female students generally had more positive attitudes than male students toward English language learning. Wavo (2005) further pointed out that students who had more positive attitudes toward English perform better on English achievement. The results supported Gardner and Lambert's (1972) findings of the influence of learners' attitudes on second or foreign language acquisition.

Furthermore, these attitudes are also influenced by "socio-emotional learning", such as a student's level of self-confidence, language anxiety and self-esteem, which can impact his or her foreign language learning. Pae (2008) found through a path analysis that students' self-confidence had a significant relationship with English achievement directly or indirectly through motivation. Bernaus and Gardner (2008) also reported that language anxiety and attitudes toward the learning situation could directly impact EFL students' language achievement. In addition, as Rubio (2007) mentioned, self-esteem should deserve more attention in language education because it can influence other affective and social variables such as self-confidence, anxiety, motivation, and personal identity engagement in language learning.

Motivation to EFL Learners

To ELLs, English language could be learned as a second or foreign language typically depending on whether or not the learners can be involved in the target language environment or community in the country. Different EFL and ESL learning context can influence the frequency of use in English and also motivational orientations (Burke,

2004; Dörnyei, 1990; Kraemer, 1993; Mori, 2002a; Williams, 1994). It is widely considered that motivation is a key element to learn a second or foreign language and has significant connection with language achievement (Bernaus & Gardner, 2008; Dörnyei, 1990, 1994; Pintrich & Schunk, 1996). In other words, learners who have strong motivation and positive attitudes toward second or foreign language acquisition will be able to achieve high level of language proficiency. According to Masgoret and Gardner's (2003) meta-analysis about second language learners' attitudes and motivation, students' "attitudes toward the learning situation, integrativeness, motivation, integrative orientation, and instrumental orientation, are all positively related to achievement in a second language" (p. 205). Dörnyei (1990) also stressed that the foreign language learners' motivation could be different from second language learners' motivation because the context and learning environment are not the same. For Chinese EFL students, English exposure is generally limited to the classroom or campus; therefore, when students are out of the school, they are unlikely to be surrounded by an English-speaking environment, which reduces their opportunities to use the English language compared to ESL students.

In summary, there have been many researchers (e.g., Dörnyei, 1990, 1994; Gardner, 1985; Gardner & Lambert, 1972; Pae, 2008; Wang, 2008) devoted to the field of second or foreign language acquisition motivation and investigated how the motivational orientations are important predictors on students' language achievement and how these connect with other factors which influence students' language acquisition. In the past thirty years, motivation has been recognized as an important determinant to

the success of second or foreign language learning, and there have been many researchers investigating the role of motivation in ESL or EFL learning context (e.g., Dörnyei, 1994; Gardner, 1985; Gardner & Lambert, 1972; Noels, Pelletier, Clement, & Vallerand, 2003; Shaikholeslami & Khayyer, 2006; Williams, 1994).

Social and Cultural Variables in Language and Learning Motivation

Learning a second or foreign language differs from learning other subjects. As Gardner (1985) stated, “languages are unlike any other subject taught in a classroom in that they involve the acquisition of skills and behavior patterns which are characteristic of another community” (p. 146). Williams (1994) also indicated that language is part of one’s identity and is used to communicate with other people. According to Snow (1993), “language is tied closely to personal identity, to cultural identification, to national or ethnic pride, to specific communicative tasks or situations, and to a set of attitudes and beliefs that have an impact on the course of second language acquisition” (p. 407). Clement, Noels, and MacIntyre (2007) also emphasized that cultural origin could influence a learner’s language learning experience.

Language learning includes far more than just learning the skills, grammar and rules; it also includes learning the aspects of social and cultural behaviors. Snow (1993) further noted that “learning a second language means joining a second culture, not just acquiring a new system of grammar or a better accent” (p. 408). Therefore, to language learners, both the social and cultural contexts as well as an appropriate learning environment where the learning takes place are important. In addition, a learner’s attitude towards the target language community is also an influential factor that connects

to the learners' success in learning the language (Gardner, 1985; Snow, 1993; William, 1994).

Gardner's Socio-Educational Model

The pioneering researcher Gardner (1985) originated the socio-educational model which stressed the impact of the social and cultural context to language learners and also investigated aspects of motivation, attitudes, and anxiety toward language learning. Therefore, when learning a second or foreign language, several other factors, such as attitudes toward the language situation, attitudes toward the speakers of the language, and integrative or instrumental orientation could influence learners' language acquisition.

Gardner's (1985) socio-educational model mainly brought out two orientations, integrative orientation and instrumental orientation, which are important to second and foreign language acquisition motivation. Integrative orientation refers to the desire to have contact with the target language, to further understand and learn the language; instrumental orientation refers to the desire to learn the target language in order to achieve certain goals and to attain a certain specific purpose, such as obtaining a job promotion (Dörnyei, 1990, 1994; Gardner, 1985; Gardner & Lambert, 1972; Noels et al., 2003; Pae, 2008; Wang, 2008). Several studies (e.g., Bernaus & Gardner, 2008; Masgoret & Gardner, 2003; Pae, 2008) supported Gardner's socio-educational models in which learners' motivation and attitudes are linked, playing an influential role in learners' language achievement.

Integrative orientation was found to have higher correlation with achievement in an ESL learning context, while instrumental orientation had a significant correlation among students in an EFL learning context (Burke, 2004; Dörnyei, 1990; Kraemer, 1993; Mori, 2002a; Williams, 1994). Masgoret and Gardner's (2003) study about ESL learners' motivation supported the statement because they found a strong correlation between integrative motivation and successful second language learning among ESL students. In an EFL learning environment, it is reasonable to assume that EFL learners are more motivated by instrumental orientation than integrative orientation due to the fact that they mainly learn the foreign language in the classroom and do not have much opportunity to make contact with the target language speakers (Dörnyei, 1990; Pae, 2008). Kyriacou and Zhu's (2008) study of 610 senior high school students learning EFL in Shanghai, China supported the statement. Their findings indicated that these senior high school students were mainly motivated by instrumental reasons; the factor defined as life and career-based reasons and accounted for 24.5% of variance in the study. Moreover, Wang's (2008) study found that college EFL students in China learned English mainly for external reasons, such as to pass the English examinations and for graduation. If they cannot receive external rewards or benefits, they may lack motivation to continue learning English.

SDT of Motivation

Self-Determination Theory (SDT) proposed that motivation exists in a social context that meets three human psychological needs: the need for competence, the need for autonomy, and the need for relatedness (Deci & Ryan, 2002; Pae, 2008; Wang, 2008).

Therefore, by satisfying these basic human needs, there would be more opportunities for people to be innately motivated (Pae, 2008). According to the SDT, the two general types of motivation are intrinsic motivation and extrinsic motivation, which are based on the extent of the learner's self-determination (Deci & Ryan, 2002; Guthrie & Humenick, 2004; Noels, 2001; Noels et al., 2003; Pae, 2008; Wang, 2008).

Intrinsic motivation is the most self-determined form in SDT and refers to the desire or will one has in order to do an activity for one's own sake and could be further categorized into three levels, which are: motivation for knowledge (e.g., obtain new ideas and knowledge), motivation for accomplishment (e.g., achieve some goals or master a task), and motivation for stimulation (e.g., feeling of excitement or joy by performing a task) (Deci & Ryan, 1985, 2002; Deci, Vallerand, PeUetier, & Ryan, 1991; Noels et al., 2003; Pae, 2008; Shaikholeslami & Khayyer, 2006). On the other hand, extrinsic motivation refers to one who does an activity due to outside incentives or for desirable outcomes, such as rewards and praises (McCardle et al., 2008; Noels et al., 2003; Pintrich & Schunk, 1996; Wang, 2008).

In terms of extrinsic motivation, SDT further categorized it into four subcategories based on the degree of internalization (i.e., external regulation, introjected regulation, identified regulation and integrated regulation) (Deci et al., 1991; Noels et al., 2003; Pae, 2008; Shaikholeslami & Khayyer, 2006; Wang, 2008). External regulation is the least autonomous form that refers to one who performs an activity mainly for the purpose of external demands such as for a reward or to avoid a punishment. Introjected regulation refers to one who performs the work because of the feeling of pressure from

other people such as the feeling of shame. Although the feeling of pressure is internal, introjected regulation does not belong to intrinsic motivation because the person does not have a real choice but is just reacting to the pressure under the situation (Pae, 2008; Wang, 2008). Identified regulation is the most self-determined form because it refers to a person who has identified the importance and true value of a behavior and accepted it as his or her own (Pae, 2008; Wang, 2008). For example, a student with identified regulation understands that learning a language proficiently will benefit his or her future career and bring a better job salary.

Reinforcement Theory

The reinforcement theory posited by Skinner (1953, 1971) proposes that a desired behavior of a person was increased by giving a reward immediately after that desired behavior occurred (Skinner, 1953, 1971; Stipek, 1998; Wlodkowski, 1978). This theory relates to motivation in second language acquisition because desiring praise or avoiding punishment may contribute to a learner's motivation to study English. According to Gardner and MacIntyre (1993), "motivation itself, however, is also a complex of factors – proposed here to encompass desire to achieve a goal, effort expended in this direction, and reinforcement associated with the act of learning" (p. 4). They pointed out that behavior in the language classroom could also affect the learners' motivation and attitudes in language learning (Gardner & MacIntyre, 1993), such that students who were more integratively motivated in learning tended to respond more to the teacher and receive more positive reinforcement from the teachers than those who were not motivated. Kiyamazarslan (2002) also indicated that using positive

reinforcement to establish correct repetition and imitation in language acquisition would make language learning easier.

Reinforcement can be seen as a factor in motivation, and the reinforcement theory has offered teachers practical suggestions and interpretations on student motivation (Stipek, 1998; Wlodkowski, 1978). Although there was a common belief that “extrinsic reinforcement undermines intrinsic motivation” and Kohn (1993)’s study also pointed out that external reinforcement could restrain students’ internal motivation to some extent, several researchers (e.g., Cameron & Pierce, 1994; Flora, 1990; Flora & Flora, 1999) dispute the influence of extrinsic reinforcement on intrinsic motivation. Therefore, proper use of extrinsic reinforcement could be a good method to develop students’ motivation in learning and bring desired language outcomes.

Language Problems in Reading English

Reading in a foreign language is very different from reading in the native language. For those who are ESL or EFL learners, the process of reading a text and comprehending it takes more time than for those who are native English speakers. There have been many previous studies about the factors that influence second or foreign language learners’ reading comprehension. Reading comprehension, according to McCardle et al. (2008), refers to “the ability to understand written language at several levels: words in print, the relationships of those words in sentences...” and “*comprehension* includes the ability to build understanding across large pieces of text, such as entire articles, chapters, and books” (p. 141). The cognitive process in reading comprehension is complex and it involves the interaction among “the reader who is

doing the comprehending, the text that is to be comprehended, and the activity in which the comprehension is a part” (Snow, 2002, p. 11).

Reading is a complex and cognitive process (Akamatsu, 1999) that involves equipping the student with linguistic competence, semantic and syntactic knowledge of the words, such as word recognition, which includes understanding the breadth and depth of the word meaning. In addition, being able to realize conceptual and sociocultural information (Lin, 2002; Wang et al., 2002) is necessary in order to attain reading comprehension. According to Alderson (1984), if the problem in reading a foreign language is due to a “language problem”, then it has to deal with “semantic and discourse processing, and...[is] related to problems of conceptualization and, to put it crudely, word meaning” (p. 20). In other words, if the reader is having a language problem in reading a foreign language, he or she has to deal with word recognition and identification, conceptual and textual structures, and more linguistic aspects of competence in a foreign language (Adams, 1980; Alderson, 1984; Fukkink et al., 2005; Lin, 2002).

Even though English is a required subject in Taiwan, most of the students fail to read adequately in the foreign language. According to Alderson (1984), “students reading in a foreign language seem to read with less understanding than that one might expect them to have, and to read considerably slower than they reportedly read in their first language” (p. 1). In general, ESL and EFL learners spend more time and energy to read the text written in English. They may need more time in word recognition in order to identify the word meaning (August et al., 2005; Laufer, 1992; Wang & Koda, 2007).

Moreover, they need linguistic competence in matters such as syntax, and the conceptual and sociocultural knowledge as well to process the information in reading (Adams, 1980; Akamatsu, 1999; Lin, 2002; Wang et al., 2002).

Word Recognition and Vocabulary

Several researchers (e.g., Akamatsu, 1999; Anderson, 1991; Day & Mamford, 1998; Grabe, 1991) investigated language learners' word recognition skill and noted that skilled readers seem to perform word recognition tasks automatically and with less effort. As Akamatsu (1999) pointed out, skilled readers "are better at comprehending text because automatized word-recognition processing, which is fast and does not need attentional resources, allows skilled readers more 'cognitive space' for comprehension in reading processes" (p. 382). In other words, skilled readers have attained the automaticity in word recognition that makes them better in comprehending the text in contrast with the poor readers. The automatized word recognition process is critical to second or foreign language learners' reading comprehension. As Lin (2002) wrote, "L2 [second language] readers may well be able to recognize L2 words without knowing what they mean" and "need to build up their vocabulary and learn to automate the link between word recognition and word meaning" (p. 173). Accordingly, word recognition and its automatic connection to word meaning is what EFL learners need to work on in order to improve reading comprehension.

Many researchers (e.g., Akamatsu, 1999; August et al., 2005; Hunt & Beglar, 2005; Kamil, 2004; Laufer, 1992; Lin, 2002) consider vocabulary or word recognition as the foundation of learning a second or foreign language and believe it plays a crucial role

in second or foreign language reading. Therefore, word recognition is important and influential to the process of reading in the second or foreign language. Lin (2002) stated that, “like L1 (first language) reading comprehension, L2 (second or foreign language) reading comprehension starts with word recognition” (p. 173). August et al. (2005) also point out that English language learners “who experience slow vocabulary development are less able to comprehend text at grade level than their EO [English-only] peers, and they may be at risk of being diagnosed as learning disabled” (p. 50) because of the limitation of lack of sufficient vocabulary knowledge and poor reading comprehension.

According to McCardle et al. (2008), “vocabulary development related to reading can encompass several areas: oral vocabulary, sight word, concept development, and the use of context clues” (p. 86). Students must learn oral vocabulary, such as *walk*, *play*, and *food*, for communication with others. They also have to understand sight word vocabulary, including the function words (e.g., *in*, *on*, *for*) and words they frequently encounter while reading which are necessary to contribute to reading fluency (McCardle et al., 2008). In addition, knowing a word means knowing not only the simple meaning but also the depth of the word; however, English language learners usually show insufficient depth of word knowledge comparing to English native speakers (August et al., 2005).

Many researchers (e.g., Hunt & Beglar, 2005; Laufer, 1992; Wang, 2004) have emphasized the importance of vocabulary knowledge in learning a second or foreign language. Laufer (1992) stressed the importance of vocabulary to second language reading, stating that “even learners of mediocre ability can improve considerably in their

L2 reading once they have raised their lexical level” (p. 101). In other words, if English language learners have too many unknown words in a sentence or a passage, their comprehension might be disrupted. It is also noted by August et al. (2005) that vocabulary plays a central role in reading because of “its influence on earlier reading and reading-related skills including phonological, orthographic and morphosyntactic processes” (p. 50). Accordingly, vocabulary knowledge is an important contributor to proficient reading comprehension, and it affects the development of reading-related skills as well.

Grammar Knowledge in English Learning

Grammar knowledge is important in learning a second or foreign language. It can influence the understanding of the written text, writing, and also speaking in English. Bao and Sun (2010) investigated Chinese undergraduate students, and they concluded that, “grammatical rules help students to understand and use the target language better, if they are presented and explained implicitly in certain contexts” (p. 50). They believed it helps students to apply the grammar rules correctly in real situations by presenting the grammar rules in context and let students “deduce the grammar usage from the context” (p. 50). However, Chinese and English have different language systems, and the grammar rules differ in several aspects, such as tense, word order, plural nouns, and passives (Bao & Sun, 2010; Edwards & Yang, 2007; Ruddell, 2002; Yang, 2001). These linguistic differences in grammatical rules often confuse Chinese EFL learners. For example, in Chinese, the verb forms do not change to show different tense and also do not change to reflect the quantity of a noun. Therefore, Chinese students may forget

to change the inflections on the verbs to reflect past tense, for example, which then may alter the intended meaning of the passage.

Grammar knowledge is typically emphasized in Taiwan's English teaching (Bao & Sun, 2010; Chern, 2002). English teachers often spend a lot of time explaining grammatical rules and practicing the rules, and students need to memorize the rules in order to understand the text and score higher on the exams. However, Bao and Sun (2010) indicated that many Chinese students thought grammar learning did not improve their listening and speaking skills much. On the contrary, the grammar teaching oriented English learning could bring negative attitudes toward grammar learning (Bao & Sun, 2010).

Orthography and Syntax Impact

The orthography between English (alphabetic) and Chinese (non-alphabetic and morphosyllabic) is quite different. English language learners whose first language system is similar to English, such as Spanish, will benefit from their first language when learning and reading in English compared to those learners whose first language system is different from English, such as Chinese and Japanese (Akamatsu, 1999; August et al., 2005; Gottardo, Yan, Siegel, & Wade-Woolley, 2001; Wang & Koda, 2007). August et al. (2005) addressed cognate transfer, which refers to the transfer of vocabulary between two different languages but are similar "both orthographically and semantically" (p. 52), and its influence on ELLs' English reading comprehension and inferencing skills on vocabulary acquisition.

According to August et al. (2005), ELLs whose first language shares cognates with English or has a similar alphabetic orthography as English will be able to take advantage of their L1 and help to facilitate their English language acquisition, involving word recognition, vocabulary learning, and reading comprehension. However, the benefit of L1 and L2 that share cognates or are alphabetic orthographies, which is helpful in learning vocabulary and recognizing words, is not available to Chinese EFL learners. Alderson (1984) further addressed the influence of syntax knowledge in which many students who understand the words and structures of English in a text were still unable to comprehend what they read. As Adams (1980) stated, “syntactic competence is an important dimension of linguistic competence in general” (p. 18). Lin (2002) also pointed out the importance of syntactic knowledge to second language readers, who use the knowledge to “construct an interpretation of what they read” (p. 173). Accordingly, it is important for EFL learners to equip themselves with adequate syntax knowledge. However, English reading to EFL students does not simply mean knowing the words, the grammar rules, or the syntax of the language; there are other factors that make reading difficult for ESL or EFL learners. They must overcome the challenges of different cultural background, prior knowledge, and conceptual or sociocultural knowledge to achieve reading comprehension.

Because English has become a *lingua franca* and is considered as the most important international language (Jenkins, 2006, 2009), many countries have instituted English as a required subject in schools, just like Taiwan. English in Taiwan is broadly used as an important foreign language, and Taiwan’s educational system has English

taught from third grade in elementary school throughout senior high school; yet, some of the cities start teaching English from first or second grades. In view of this, English reading ability is one of the important language skills that Taiwanese students need to attain. However, English reading skill is generally not an easy task for most EFL students. English learning environment, teaching materials, peer and family influence, as well as linguistic problems can impact students' learning outcomes. Motivation can have direct or indirect relationships with these factors, and motivation in learning and reading in English is considered as a very important element to successful reading achievement as well (Dörnyei, 1990, 1994; Pintrich & Schunk, 1996). Therefore, the purpose of the present study was to examine 11th grade Taiwanese students' English reading motivational orientations and language problems they encountered while reading in English and to determine the factors that affect Taiwanese students' motivation to read in English and English reading achievement. A quantitative research design was used based on the purpose and the research questions in the present study.

CHAPTER III

METHOD

The purpose of the study was to examine 11th grade Taiwanese students' English reading motivational orientations, language problems they generally encounter while reading in English, and how these affect their motivation and willingness to read, as well as their reading achievement. The participants took an English reading comprehension test and completed a set of questionnaires. A pilot study was conducted for the English reading motivation questionnaire with a different group of participants from the same grade level in the same participating school to validate the survey instruments.

Participants

The participants were from a southern urban district senior high school in Taiwan. A total of 302 11th grade senior high school Taiwanese students (168 males and 134 females, with mean age of 17) voluntarily participated in the study. The sample was selected by using convenience sampling method. The participants came from two different subject orientations at the same grade level: 1) Liberal Arts and Social Science (LASS) group – the students in this group are planning to study subjects such as liberal arts, education, social science, management, finance, law, or communication when they enter a university; 2) Science, Technology, Engineering and Mathematics (STEM) group – the students in this group will major in subjects such as physics, chemistry, science, mathematics, mechanical engineering, electronic engineering or computer science when they enter a university. The participants for this study were selected from

eight classes at the 11th grade level, including five from the LASS group and three from the STEM group. At the time of the study, these 11th grade students were to begin 12th grade in the fall and were to take the College Entrance Examination in about one year's time from the study date.

In the beginning, there were a total of 340 students from the selected eight classes for this study; however, because the investigator administered the examination and survey during summer classes, there were 25 students absent. The investigator then distributed the English reading comprehension test to 315 participants. After the exam, the questionnaire was distributed to the same group of participants. Finally, a total of 302 participants responded to the survey and they also completed the English reading comprehension test. The questionnaire response rate was 96%.

General Information about the Participating School

The participating school was located in an urban city in southern Taiwan, which is a traditional star public senior high school in the district. A high percentage of students entered national universities and colleges of medicine every year, indicating an overall high academic achievement of the participating school in Taiwan. There are about 18 classes in each grade level, which is a medium-sized senior high school compared to others. Parents of the students, on average, earned a junior college or training school certificate, or a bachelor's degree.

In Taiwan, each senior high school usually has summer classes during summer vacation to help students prepare for the high-pressure national college entrance examination. The summer classes were designed for the entire 11th and 12th grade

student body during July and August before the beginning of the fall semester. The duration of summer classes varied, depending on the need of each senior high school. In the participating school, the summer classes lasted four weeks. All of the 11th and 12th grade students were asked to attend the summer classes, just as they did their formal classes in the fall or spring semester. There were five English classes of 50 minutes each per week during the summer classes for both the LASS and the STEM group of students.

In fall and spring semester, 10th and 11th grade students had five English classes per week; however, the LASS group of students in 11th grade had one additional English listening and speaking class per week. 12th grade students had seven English classes per week. Students in both the LASS and the STEM group of the same grade level used the same English textbooks. Furthermore, the school had one English experimentation class for each grade level which was part of the LASS group. The present study also included the potential participants from the 11th grade English experimentation class. One of the differences between the English experimentation classes and other classes was that students in the English experimentation classes can attend two additional English classes taught by a native English-speaking teacher on weekends. The weekend English class used other textbooks written in English only. It is optional for the students to attend and the grades do not count in their formal English grades. In recent years, the school only offered the weekend English class for the 10th grade English experimentation class due to the heavy schoolwork for 11th and 12th grade students.

The participating school held an English composition competition, an English public speaking competition, an English drama competition, and the selection of school

representatives for the competition of “Young Delegates of Diplomacy” on campus. “Young Delegates of Diplomacy” is a national competition held by Taiwan’s Minister of Foreign Affairs for the purpose of enhancing senior high school students’ English proficiency and concern for international affairs. Representatives must possess a satisfactory level of English ability and relevant knowledge of foreign affairs. The selection of representatives has become an important activity for each senior high school. In addition, the school held a summer English camp for all grade level of students with native English-speaking teachers involved to create all-English environments.

Instruments

The instruments used in the study were an English reading comprehension test and a set of questionnaires. The English reading comprehension test, which was originally developed by Yau (2009), was distributed to the participants to collect their English reading scores. The investigator adopted Yau’s (2009) English reading comprehension test because Yau and her research team developed the test for the purpose of examining 11th grade Taiwanese students’ English reading comprehension in her study, which had examined the same grade level of students as in the present research study. The English reading comprehension test (see Appendix E) included three passages; text length ranged from 145 to 270 words, and had a total of 34 multiple-choice format items (Yau, 2009). Furthermore, the reading comprehension test had an internal consistency reliability coefficient of .82 (Yau, 2009). The investigator obtained Yau’s permission to use her English reading comprehension test before conducting this study.

The set of questionnaires used in the present study consisted of three parts. All questionnaires were administered in Chinese. The first part was a motivation for English reading questionnaire, which included 40 items. Examples include: I read English extracurricular reading because it will broaden my view; I am happy when someone recognizes my reading in English; I like being the best in my class at English reading; I like to share with my family about what I am reading in English (see Appendix B for complete survey items; Chinese version, see Appendix A). The motivation for English reading questionnaire was derived from previous research studies (i.e., Clement & Kruidenier, 1983; Mori, 2002b; Takase, 2004; Wigfield & Guthrie, 1997) used in assessing language learners' English reading motivation. Most of the survey items were modified and integrated in order to correspond to the EFL learning context, and some were developed for the study; for example, I learn to read English because there is a lot of Internet information written in English. The survey items were organized based on the aspects of motivation for reading questionnaire (MRQ), which was originally developed by Wigfield and Guthrie (1997) to assess children's reading motivation (e.g., importance, challenge, competition, recognition, compliance, grade, and social, etc.). The MRQ was mostly used for native English speakers; therefore, there is a lack of studies using the MRQ to assess foreign language learners' English reading motivation. Based on this, the present study adopted most of the aspects in the MRQ to examine Taiwanese EFL students' English reading motivation and to evaluate if there are similar or different results under different learning contexts. The survey items were pilot-tested

with the same grade level of students at the same senior high school to verify the reliability of the survey instrument.

The second part was a questionnaire regarding English language problems that students generally encounter while they are reading in English, which included 22 items. Examples include: I usually can't get the meaning of the sentence when there are unknown phrases, slang or idioms in the text; I don't want to read English when there are too many words I don't know; I usually can't understand the meaning of the sentence because of English grammar; when reading English, a disturbing problem is that I can't understand complicated sentences in the text (see Appendix D for complete survey items; Chinese version, see Appendix C). Some of the survey items were integrated and revised from Lin's (2002) study of English reading comprehension questionnaire, and some items were developed for the study.

The third part was English reading related personal information and familial background information, such as: do they have the habit of reading English extracurricular reading; how many hours they spend per week on academic English reading and extracurricular reading in English; how often do they read English magazines or newspapers; and other background information of gender, age, and parental educational levels. A 5-point Likert-type scale (e.g., 1 is very different from me; 5 is a lot like me) was used in most parts of the questionnaire. In addition, the researcher obtained permissions to use the questionnaires from the original authors (e.g., Lin, 2002; Mori, 2002b; Takase, 2004) prior to the study.

Pilot Study (for the English Reading Motivation Questionnaire)

A pilot study was conducted with a sample of 86 (66 boys and 20 girls) 11th grade students with an average age of 16.7 at the same senior high school as the main study. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, $KMO = .758$, which can be interpreted as a good sample size for factor analysis (Field, 2009). The pilot study aimed to test the reliability of the motivation for English reading questionnaire due to the fact that the questionnaire items were derived from different studies investigating students' reading motivation in different contexts (i.e., Clement & Kruidenier, 1983; Mori, 2002b; Takase, 2004; Wigfield & Guthrie, 1997). The items were revised and rearranged in order to fit the participants' background. In addition, a questionnaire of language problems in reading English was also distributed to the participants, which was derived from Lin's (2002) study. An open-ended question asking what other language problems the students have while reading English was added to ascertain whether the survey missed other language problems that affect the students' willingness to read. The pilot study, however, focused on analyzing the motivation for English reading questionnaire to verify the reliability of the survey instrument, and to determine if there were any inappropriate items that should be deleted.

A principal component analysis (PCA) was performed on the motivation for English reading questionnaire with varimax rotation. A five-factor solution was chosen. Based on the following extract criteria, suggested by Field's (2009) *Discovering Statistics Using SPSS*, a) the five factors had eigenvalues over 1, b) each factor contained individual items with a minimum loading of .4, and c) adequate reliability for

each factor, which was over 0.7, there were seven items deleted, with 38 items remaining. Two additional traveling items revised from Clement and Kruidenier (1983) were added to the survey. Finally, there were 40 items in total for the motivation for English reading questionnaire. The internal consistency reliability (Cronbach's Alpha) of the five factors ranged from .72 to .89, with a mean value of .80, which indicated the scale was reliable in measuring students' English reading motivational orientations.

Procedures

After the pilot study was completed, the researcher started to administer the English reading comprehension test and the questionnaire to the participants selected from eight 11th grade classes in the participating school. Data were collected by the following procedures:

- 1) The researcher obtained IRB approval in advance for the present study. A permission letter was also obtained from the participating school's principal.
- 2) The researcher introduced the purpose of the study and procedure to the school principal, director of teaching affairs, and involved English teachers a few days before administering the instruments. Time and date for taking the English reading comprehension test and the questionnaire were arranged by them. Permission forms for the potential participants' parents were obtained before distributing the instruments to the participants.
- 3) English reading comprehension test and the questionnaire were administered during two of the English class sessions on the same date. On the day before administration, the investigator visited each class and briefly introduced the study to the students.

Information regarding their voluntary participation in the study was distributed to students before administering the instruments. Students could choose to participate or not in the reading test and the questionnaire at any time by checking the box of “I want to participate” or “I do not want to participate” on the top of the reading test and the questionnaire; so the investigator could make sure they voluntarily participated in the study. Students’ records were kept private and confidential.

- 4) The investigator distributed the English reading comprehension test first to the participants. The participants had one hour to complete it. If they finish it earlier, they could turn in the test paper, but after one hour they had to turn in the test paper, whether or not they had completed it. In the next class session, the questionnaire was distributed to the participants. The questionnaire took approximately 25 minutes to complete.
- 5) The investigator visited each classroom to see if the participants had additional questions regarding the reading test or the questionnaire. After the students completed the reading test and the questionnaire, the investigator went to each classroom to collect the test papers and the questionnaires with the help of the English teachers.

Data Analysis

The data in the present study were analyzed and interpreted by the following statistical procedures:

- 1) An exploratory factor analysis was performed to validate the items of the motivation questionnaire and to analyze the factor loadings of the questionnaire.

- 2) Reliability coefficients were calculated for each factor loading to evaluate the internal consistency of the motivation for English reading questionnaire.
- 3) Variables in the language problems in reading English questionnaire were grouped and the means, standard deviations and frequencies were calculated by SPSS.
- 4) Multiple regression analyses were performed to investigate the relationship among English reading motivation, language problems, and reading achievement, and to determine which factors significantly predicted the reading achievement.
- 5) Correlation analysis was conducted for all variables to examine the interrelations among the motivational orientations, language problems in reading English, and reading achievement.
- 6) Analysis of variance (ANOVA) was performed to determine the interactions between gender and group on the reading test, and a *t*-test was performed to examine the differences by gender or group on the motivational orientations and reading achievement.

CHAPTER IV

RESULTS

The present study aimed to examine 11th grade Taiwanese students' English reading motivation, language problems that EFL students generally encounter while reading in English, and how these affect their motivation to read as well as their reading achievement. The study sought to examine Taiwanese EFL students' reading motivational orientations and to understand which orientation motivated them the most in reading English. In addition, the study investigated language problems that EFL students reported having while reading in English and how these language problems correlated with their motivation to read in English as well as predicted reading achievement. Data analysis was guided by the research questions in the study and was described in the following.

Motivation for English Reading Questionnaire Analysis

An exploratory factor analysis was performed to validate the questionnaire items of English reading motivation in order to determine its feasibility in assessing EFL students' motivation for English reading in the present sample. A principal component analysis (PCA) was conducted on the 40 items (see Appendix B for complete items) with varimax rotation through SPSS. Eigenvalues over 1 and each factor contained individual items with a minimum loading of .4 were the extract criteria based on the

suggestion of Field (2009). In the initial run, the results revealed six factor loadings with eigenvalues greater than 1 and each individual item's loading over .4. However, item 17 was eliminated for the loading was less than .4. The internal consistency reliability (Cronbach's α) was then analyzed on each of the six factors. Items 19, 39, and 40 were eliminated with low reliability by the suggestion of Cronbach's Alpha if Item Deleted. Therefore, a total of four items were finally deleted from the 40 items.

A principal component analysis with varimax rotation was re-conducted on the 36 items with the same criteria of eigenvalues over 1 and each factor contained individual items with a minimum loading of .4. Table 1 displays the factor loadings after rotation for students' motivational subscales. The loadings of each factor were interpreted as the motivational orientations. The Kaiser-Meyer-Olkin Measure verified the sampling adequacy for the analysis, $KMO = .93$, which refers to a superb sampling (Field, 2009). The six components in combination explained 64.16% of the variance in the motivational subscales.

Table 1. Summary of Factor Analysis Results for the Motivational Questionnaire
(N=302)

Item ¹	<u>Rotated Factor Loadings</u>					
	Motivation for Knowledge and Social Purposes	Motivation for Importance and Instrumental Utility	Motivation for Recognition and Competition	Motivation for External Demands	Motivation for Compliance	Motivation for Challenge and Involvement
13	.734					
35	.718					
36	.705					
1	.684					
15	.647					
2	.570					
31	.543					
20	.538					
23		.830				
21		.714				
6		.686				
22		.662				
5		.654				
33		.643				
37		.594				
9		.433				
24			.720			
32			.701			
18			.696			
26			.636			
38			.624			
4			.606			
3			.588			
8			.586			

¹ For detailed item content, please see Appendix B.

Table 1. (continued)

Item	Motivation for Knowledge and Social Purposes	Motivation for Importance and Instrumental Utility	Motivation for Recognition and Competition	Motivation for External Demands	Motivation for Compliance	Motivation for Challenge and Involvement
30			.571			
25			.548			
29				.724		
28				.643		
27				.628		
7				.472		
10					.862	
11					.787	
12					.529	
34						.634
16						.545
14						.475
Eigenvalues	5.64	5.46	5.42	2.38	2.24	1.96
% of variance	15.67	15.16	15.05	6.62	6.23	5.43
α	.90	.90	.90	.60	.80	.70

Most of the items loaded on factor one are about interest in acquiring English knowledge and sharing with others (e.g., English extracurricular reading is a hobby of mine; I read English extracurricular reading because I want to know more about the cultures and life in English-speaking countries; I like to share with my family about what I am reading in English; I like to talk to my friends about what I am reading in English). This factor tended to show intrinsic motivation and also integrative orientation (Gardner, 1985); thus, factor one could refer to motivation for knowledge and social purposes.

This subscale consisted of eight items which had a moderate factor loading ($>.54$) with its construct.

Items loaded on factor two are mainly concerned with the importance of English reading to achieving personal goals, such as future jobs, studying abroad or traveling overseas. This displayed an instrumental purpose and identified regulation of extrinsic motivation in the SDT (Noels et al., 2003; Pae, 2008; Wang, 2008). Therefore, factor two could represent motivation for importance and instrumental utility, which consisted of eight items (e.g., I learn to read in English because it will be useful to my general education; I learn to read in English because I might study abroad in the future; I learn to read in English because it will help me if I should ever travel; I read English extracurricular reading because English reading ability will help me to get a better job in the future) that had a moderate factor loading ($>.43$) with its construct.

Items loaded on factor three are mainly about recognition in English reading and competition with others (e.g., My parents often tell me what a good job I am doing in reading English; my friends sometimes tell me that I am a good English reader; I like being the best in my class at English reading; I like being the only one who knows an answer on an English reading exam); therefore, factor three could represent motivation for recognition and competition. Recognition refers to the desire to receive compliments and acknowledgements from other people for their reading. This subscale of motivation for recognition and competition consisted of 10 items that had a moderate factor loading ($>.55$) with its construct.

Most of the items loaded on factor four are extrinsic motivation for the purpose of grades, exam, and future college English, which tended to describe external regulation of SDT (Noels et al., 2003; Pae, 2008; Wang, 2008). For example, I read English merely because I want to pass the exam; I read English extracurricular reading in order to succeed in the college entrance examination; I read English extracurricular reading in order to prepare for future college professional textbooks written in English. Thus, factor four could represent motivation for external demands, which consisted of four items, that had a moderate factor loading ($>.47$) with its construct.

Items loaded on factor five are mainly concerned with obedience and attention to English reading assignments (e.g., I always do my English reading assignments exactly as the teacher wants it; finishing every English reading assignment is very important to me); thus, factor four could be referred to as motivation for compliance. This motivational subscale consisted of three items that had a moderate factor loading ($>.53$) with its construct.

Items loaded on factor six are concerned about challenges and involvement in English reading (e.g., if the English text is interesting, I will read it no matter how hard it is to read; when I read in English, I visualize in my head); therefore, factor six could describe motivation for challenge and involvement. This motivational subscale consisted of three items that had a moderate factor loading ($>.48$) with its construct.

As Table 1 shows, each of the first three factors (i.e., motivation for knowledge and social purposes accounted, motivation for importance and instrumental utility, and motivation for recognition and competition) accounted for about 15% of the total

variance, which appeared to be the three highest factors among the six motivational subscales. However, each of the remaining three factors (i.e., motivation for external demands, motivation for compliance, and motivation for challenge and involvement) accounted for about 6% of total variance.

Comparing with the pilot study on the motivation for English reading questionnaire, the six motivational subscales of this study almost replicated the five factor loadings of the pilot study, including the motivation for competition and recognition, motivation for knowledge and social purposes, motivation for importance and instrumental utility, motivation for compliance, and motivation for challenge and involvement. All factors on the pilot study accounted for 55.97% of the total variance. Replication of factors across different samples validated the exploratory factor analysis of the present study.

In addition, concerning the reliability of the six motivational subscales, motivation for knowledge and social purposes, motivation for importance and instrumental utility, and motivation for recognition and competition all had an excellent reliability of $\alpha = .90$. Motivation for compliance had a good reliability of $\alpha = .80$, and motivation for challenge and involvement had an acceptable reliability of $\alpha = .70$. However, motivation for external demands had a relatively low reliability of $\alpha = .60$. Overall, the internal consistency reliability (Cronbach's α) of the six motivational subscales ranged from .60 to .90 with an average reliability of .80; in addition, the Cronbach's α was .95 for the instrument as a whole, which means the subscales are reliable in measuring students' motivation for English reading.

Language Problems in Reading English Questionnaire Analysis

Items in the language problems in reading English questionnaire were grouped into six components, which were: unknown vocabulary², unknown idiomatic expressions (i.e., slang, idioms, and phrases in the text), lack of grammar knowledge, complicated syntax and text length (i.e., difficult sentence structure and long text), unfamiliar topic or content and overall reading comprehension (i.e., not understanding the whole passage). The six components represent general English language problems and conditions that affect EFL students' reading comprehension and also their motivation to continue reading English texts. In this questionnaire, item 5, 19, 20 and 21 were eliminated while grouping and analyzing the components because these items were not involved in any of the component. The questionnaire was answered based on a 5-point Likert-type scale in which "1" means very different from me and "5" means a lot like me.

Table 2 shows the means and standard deviations of each component for language problems in reading English. Unknown idiomatic expressions was the most frequent language problem that students report having while reading English ($M = 3.56$, $SD = .72$) that affects reading motivation and comprehension; the next-highest three components were unknown vocabulary ($M = 3.54$, $SD = .91$), unfamiliar topic or content ($M = 3.41$, $SD = .70$) and complicated syntax and text length ($M = 3.25$, $SD = .80$). However, lack of grammar knowledge ($M = 2.91$, $SD = .87$) and overall reading comprehension ($M = 2.97$, $SD = .64$) were not considered big language problems, on average, in reading English that affected students' willingness to read.

² The unknown "vocabulary" mentioned in the study refers to "sight word vocabulary".

Table 2. Components of Language Problems in Reading English with Means and Standard Deviations

Components	<i>N</i>	<i>Mean</i>	<i>SD</i>
Unknown idiomatic expressions	301	3.56	0.72
Unknown vocabulary	301	3.54	0.91
Unfamiliar topic or content	301	3.41	0.70
Complicated syntax and text length	300	3.25	0.80
Overall reading comprehension	295	2.97	0.64
Lack of grammar knowledge	301	2.91	0.87

Table 3. Means, Standard Deviations and Frequency of Each Item in the Component

Items	<i>Mean</i>	<i>SD</i>	<i>Frequency (%)</i>				
			<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5</i>
<i>Unknown Idiomatic Expressions</i>							
4. I usually can't get the meaning of the sentence when there are unknown phrases, slang or idioms in the text.	3.47	0.87	2	12	29	50	7
16. When reading English, slang or idioms that I don't know in the passage are a disturbing problem to me.	3.65	0.88	1	9	28	47	15
<i>Unknown Vocabulary</i>							
8. I don't want to read English when there are too many words I don't know.	3.55	1.06	6	9	24	45	16
15. I feel that too many new words in the text are usually a disturbing problem in reading.	3.54	1.04	3	14	29	36	19

Table 3. (continued)

Items	Mean	SD	Frequency (%)				
			1	2	3	4	5
<i>Unfamiliar Topic or Content</i>							
13 I don't want to read English when I am not interested in the topic.	3.59	0.96	2	11	31	39	18
14 I don't want to read English when I am not familiar with the topic.	2.97	0.97	6	23	44	20	6
18 I feel that sometimes I don't understand what I read, especially unfamiliar topic or content.	3.66	0.95	2	10	26	45	18
<i>Complicated Syntax and Text Length</i>							
10 I don't want to read English when the sentence structure is too complicated.	3.25	1.06	8	14	34	34	10
11 I don't want to read English when I feel the sentences are too long.	2.95	1.05	8	25	38	21	8
12 I don't want to read English when the text is too long.	3.24	1.01	5	17	34	35	8
17 When reading English, a disturbing problem is that I can't understand complicated sentences in the text.	3.57	0.90	2	10	31	45	13
<i>Overall Reading Comprehension</i>							
1 I can understand the whole passage written in English.	3.30	1.02	3	22	28	36	11
2 I can understand most of the meaning of the sentence in the text.	2.81	0.95	5	38	30	24	3
3 I can't get the meaning of the sentence even though I know every word of it.	3.07	1.06	9	22	29	36	5
22 I feel that reading in English is easy.	2.66	1.02	15	24	40	16	3
<i>Lack of Grammar Knowledge</i>							
6 I usually can't understand the meaning of the sentence because of English grammar.	2.77	1.01	10	30	38	18	5
7 I think it is my poor English grammar that results in poor English reading comprehension.	2.88	1.09	11	27	32	24	6
9 I don't want to read English when I can't understand the grammar of the sentence.	3.07	1.07	8	20	38	25	9

Correlations

In order to examine how language problems in reading English affect students' English reading motivation, a bivariate correlation analysis was performed by the six motivational subscales and the six components of English language reading problems to examine the relationship between them. Table 4 displays the means, standard deviations and correlations among motivational orientations, components of language problems and English reading achievement.

As the investigator expected, the results indicated that most of the language problems in reading English had statistically significant correlations with English reading motivational orientations. In addition, almost all the reading motivation and language problems correlated significantly with English reading achievement. In terms of the strongest relationship of the results, overall reading comprehension had a statistically significant positive correlation with the motivation for recognition and competition, $r = .59, p < .01$. Also, overall reading comprehension had a statistically significant positive correlation with the motivation for knowledge and social purposes, $r = .53, p < .01$.

Figure 1 displays the frequency distribution of the English reading comprehension test scores. The test is based on a 100-point scale; the scores ranged from 12 to 100 with a mean score of 75.84 and a standard deviation of 20.94.

Table 4. Item Means, Standard Deviations, and Intercorrelation among Motivational Orientations, Components of Language Problems and English Reading Achievement

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	Mean	SD
<i>Motivational Orientations:</i>															
1. Motivation for knowledge and social purposes	—													2.78	0.84
2. Motivation for importance and instrumental utility	.66**	—												3.75	0.78
3. Motivation for recognition and competition	.68**	.63**	—											3.00	0.80
4. Motivation for external demands	.21**	.38**	.37**	—										3.25	0.70
5. Motivation for compliance	.53**	.52**	.57**	.36**	—									3.37	0.78
6. Motivation for challenge and involvement	.67**	.66**	.56**	.19**	.41**	—								3.46	0.87
<i>Components of Language Problems:</i>															
7. Unknown vocabulary	-.46**	-.17**	-.35**	.22**	-.28**	-.30**	—							3.54	0.91
8. Unknown idiomatic expressions	-.22**	-.02	-.16**	.28**	-.04	-.08	.58**	—						3.56	0.72
9. Lack of grammar knowledge	-.16**	-.18**	-.16**	.16**	-.11	-.32**	.42**	.42**	—					2.91	0.87
10. Complicated syntax and text length	-.39**	-.24**	-.26**	.25**	-.15*	-.41**	.67**	.54**	.64**	—				3.25	0.80
11. Unfamiliar topic or content	-.31**	-.16**	-.25**	.12*	-.24**	-.24**	.59**	.43**	.36**	.60**	—			3.41	0.70
12. Overall reading comprehension	.53**	.38**	.59**	.11	.38**	.39**	-.40**	-.25**	-.13*	-.27**	-.29**	—		2.97	0.64
<i>English Reading Achievement</i>															
13. English Reading Comprehension Test Scores	.25**	.25**	.26**	.09	.25**	.20**	-.18**	-.11	-.17**	-.14*	-.13*	.24**	—	75.84	20.94

Note: * $p < .05$; ** $p < .01$

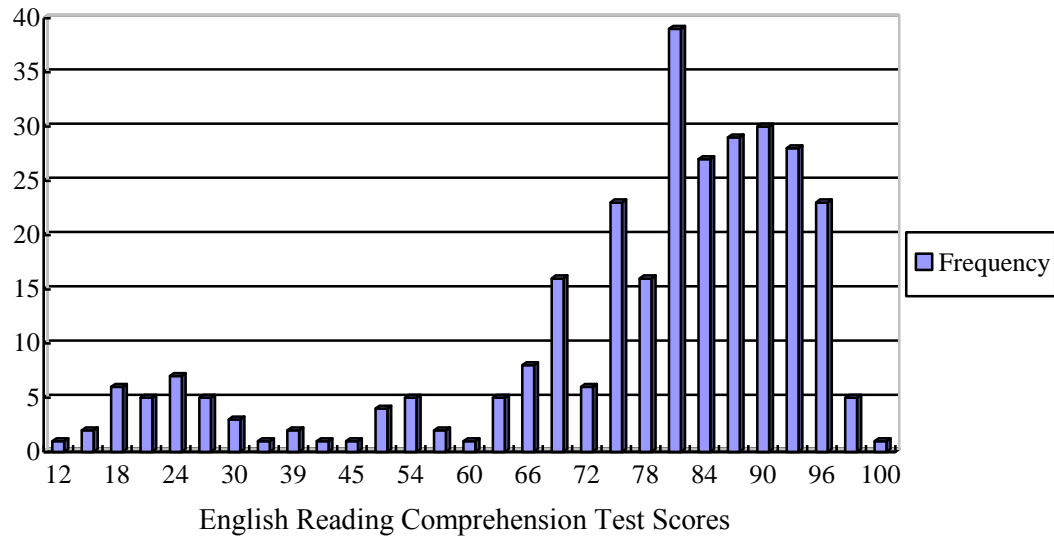


Figure 1. Frequency Distribution of the English Reading Comprehension Test Scores

Multiple Regression Analysis

Motivation on English Reading Achievement

In order to determine the relationship between all motivational subscales and students' English reading comprehension test scores, multiple linear regression was used with the six motivational orientations (i.e., motivation for knowledge and social purposes, motivation for importance and instrumental utility, motivation for recognition and competition, motivation for external demands, motivation for compliance, and motivation for challenge and involvement) as independent variables to predict students' English reading comprehension test scores. According to Madden and Bottenberg's (1963) study, all possible combinations of independent variables were estimated and entered simultaneously.

Table 5 displays the results of multiple regression analysis of students' motivational subscales on English reading comprehension. The results confirmed that the motivational subscales toward English reading were statistically significantly associated with students' English reading comprehension test scores ($F = 13.14, p < .001$). The regression coefficient showed that the motivation for recognition and competition ($p < .01$), and the motivation for compliance ($p < .05$) were statistically significant predictors of students' English reading comprehension test. However, motivation for knowledge and social purposes, motivation for importance and instrumental utility, motivation for external demands, and motivation for challenge and involvement were not significant predictors of English reading comprehension.

Table 5. Summary of Multiple Regression Analysis of Students' Motivational Subscales on English Reading Comprehension

Variables	<i>B</i>	<i>SE B</i>	β
Motivation for recognition and competition	4.76	1.80	.18**
Motivation for compliance	3.85	1.84	.14*
Multiple <i>R</i>	.29		
R^2	.083		
Adjusted R^2	.076		

Note: * $p < .05$; ** $p < .01$

The results revealed that the motivation for recognition and competition ($\beta = .18$) had a statistically significant, positive, and slight correlation with English reading

comprehension test, and motivation for compliance ($\beta = .14$) also had a statistically significant, positive, and slight correlation with English reading comprehension test ($R^2 = .083$). Multiple $R = .29$ and adjusted $R^2 = .076$, indicating the two variables, which are motivation for recognition and competition as well as motivation for compliance, accounted for 8% of variance on the English reading comprehension test. The tolerance values of the two variables were both .68, indicating that there were no serious multicollinearity problems with the predictors.

Language Problems on English Reading Achievement

In order to assess which component of students' language problems in reading English has the most impact on their reading achievement, data was analyzed by using a multiple linear regression with the six components of reading problems (i.e., unknown vocabulary, unknown idiomatic expressions, lack of grammar knowledge, complicated syntax and text length, unfamiliar topic or content, and overall reading comprehension) as predictors and English reading comprehension test scores as the dependent variable. All possible combinations of independent variables were estimated and entered simultaneously (Madden & Bottenberg, 1963).

Table 6 displays the results of the multiple regression analysis of students' language problems on English reading comprehension. The results confirmed that the components of English language problems were statistically significantly associated with students' English reading achievement ($F = 12.67, p < .001$).

Table 6. Summary of Multiple Regression Analysis of Students' Language Problems on English Reading Comprehension

Variables	<i>B</i>	<i>SE B</i>	β
Lack of grammar knowledge	-3.52	1.37	-.15*
Overall reading comprehension	7.42	1.87	.23***
Multiple <i>R</i>	.28		
<i>R</i> ²	.080		
Adjusted <i>R</i> ²	.074		

Note: * $p < .05$; *** $p < .001$

The regression coefficient showed that lack of grammar knowledge ($p < .05$) and overall reading comprehension ($p < .001$) were statistically significant predictors of students' English reading comprehension scores. However, unknown vocabulary, unknown idiomatic expressions, complicated syntax and text length, and unfamiliar topic or content were not statistically significant predictors of English reading achievement. The results revealed that lack of grammar knowledge ($\beta = -.15$) had a statistically significant, negative, and slight correlation with English reading achievement, and overall reading comprehension ($\beta = .23$) had a statistically significant, positive, and slight correlation with English reading achievement ($R^2 = .08$). Therefore, students with fewer grammar problems and better reading comprehension obtained higher English reading scores. Multiple $R = .28$ and adjusted $R^2 = .074$, indicating the two variables, which are lack of grammar knowledge and overall reading comprehension, accounted for 7% of variance on the English reading comprehension test. In addition,

the tolerance values of the two variables were both .98, indicating that there were no serious multicollinearity problems on the predictors.

Motivation and Language Problems on English Reading Achievement

In order to determine how the motivational subscales and components of language problems in reading English together predict EFL students' English reading achievement, a multiple linear regression was used with the six motivational subscales and the six components of language problems in reading English as independent variables and students' English reading comprehension test scores as dependent variables. All possible combinations of independent variables were estimated and entered simultaneously (Madden & Bottenberg, 1963).

Table 7 shows the results of the multiple regression analysis of motivational subscales and components of language problems on English reading comprehension test. The results confirmed that the motivational subscales and components of language problems toward reading English were statistically significantly associated with students' English reading achievement ($F = 11.26, p < .001$). The regression coefficient showed that the motivation for compliance ($p < .01$), lack of grammar knowledge ($p < .05$), and overall reading comprehension ($p < .01$) were statistically significant predictors of students' English reading achievement. The results re-emphasized that among all the variables, the motivation for compliance, lack of grammar knowledge, and overall reading comprehension were statistically significantly associated with reading achievement when all the variables together were used to predict Taiwanese 11th grade students' reading achievement.

Table 7. Summary of Multiple Regression Analysis of Motivational Subscales and Components of Language Problems on English Reading Comprehension Test

Variables	<i>B</i>	<i>SE B</i>	β
Motivation for compliance	4.57	1.62	.17**
Lack of grammar knowledge	-3.36	1.36	-.14*
Overall reading comprehension	5.35	1.99	.16**
Multiple <i>R</i>	.32		
<i>R</i> ²	.105		
Adjusted <i>R</i> ²	.095		

Note: * $p < .05$; ** $p < .01$

The results showed that motivation for compliance ($\beta = .17$) had a statistically significant, positive, and slight correlation with English reading comprehension, lack of grammar knowledge ($\beta = -.14$) had a statistically significant, negative, and slight correlation with the reading test, and overall reading comprehension ($\beta = .16$) had a statistically significant, positive, and slight correlation with the reading test ($R^2 = .105$). Multiple $R = .32$ and adjusted $R^2 = .095$, indicating the three variables accounted for 10% of variance on the English reading comprehension test. The tolerance values of the three variables were ranging from .85 to .98, which indicated that there were no serious multicollinearity problems on the predictors.

Secondary Analysis

ANOVA

A two-way analysis of variance was used to examine the interaction between gender and group on students' English reading comprehension test because the participants were from two different types of groups, the LASS group and the STEM group. Table 8 displays the ANOVA results of English reading comprehension test by gender and group. The results showed a statistically significant main effect for gender on the English reading comprehension text, $F(1, 298) = 5.65, p < .05$, such that the average English reading test score was significantly higher for females ($M = 79.42, SD = 16.6$) than for males ($M = 72.98, SD = 23.5$) (see Table 9). However, there was no statistically significant main effect for group, $F(1, 298) = .645, p > .05$, and also no statistically significant interaction effect, $F(1, 298) = .00, p > .05$, on the English reading test scores.

Table 8. ANOVA of English Reading Comprehension Test by Gender and Group ($N=302$)

Source	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Gender	1	2435.81	5.649	.018*
Group	1	278.15	.645	.423
Gender × Group	1	.07	.000	.990
Error	298	431.22		
Total (Corrected)	301			

Note: * significant at the $p < .05$ level

Table 9. Means and Standard Deviations for Gender on English Reading Comprehension Test

English Reading Comprehension Test Scores by Gender	<i>N</i>	<i>Mean</i>	<i>SD</i>
Females	134	79.42	16.6
Males	168	72.98	23.5

The t-Test

An independent *t*-test was conducted to examine group differences on students' English reading comprehension test. Table 10 shows the *t*-test results. The results indicated that students in the LASS group ($M = 75.9$, $SD = 20.57$) had no significant difference from students in the STEM group ($M = 75.71$, $SD = 21.79$) on the test scores, $t(300) = .072$, $p > .05$.

Table 10. The *t*-Test Results for Group Differences on English Reading Comprehension Test

Variable	LASS Group (<i>N</i> = 205)		STEM Group (<i>N</i> = 97)		<i>t</i>	<i>p</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
English reading comprehension test	75.90	20.57	75.71	21.79	.072	.656

An independent *t*-test was conducted to examine whether there were gender differences on students' English reading motivational orientations. Table 11 displays the *t*-test results for the six motivational subscales.

Table 11. The *t*-Test Results for Gender Differences on English Reading Motivational Orientations

Variable	Female			Male			<i>t</i>	<i>p</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>		
Motivation for knowledge and social purposes	133	2.92	0.75	164	2.67	0.89	-2.49	.054
Motivation for importance and instrumental utility	134	3.98	0.69	166	3.57	0.80	-4.72	.115
Motivation for recognition and competition	131	3.09	0.77	166	2.93	0.81	-1.82	.792
Motivation for external demands	133	3.29	0.65	167	3.22	0.75	-.77	.242
Motivation for compliance	134	3.55	0.74	166	3.22	0.78	-3.67	.772
Motivation for challenge and involvement	133	3.62	0.80	168	3.34	0.90	-2.79	.223

Table 11 revealed that, overall, female students expressed greater motivation for knowledge and social purposes ($M = 2.92$, $SE = 0.75$) than male students ($M = 2.67$, $SE = 0.89$), $t(295) = -2.49$, $p = .054$, a result that is marginally statistically significant. All other differences were statistically non-significant, with p -values all above .10; however the motivation for importance and instrumental utility did represent a medium-sized effect $r = .3$. Motivation for compliance and motivation for challenge and involvement had small effect size $r = .2$, while the rest of motivational subscales had very small effect sizes of less than .2.

CHAPTER V

DISCUSSION AND CONCLUSION

This chapter begins with the discussion of the findings from the three research questions of the present study, followed by a conclusion, limitations and suggestions for future study, and implications for education.

Discussion

The present study attempted to discover 11th grade high school students' English reading motivational orientations and to understand which orientation most motivates their reading in English. According to the findings from the factor analysis, 11th grade Taiwanese students' English reading motivation could be attributed to six orientations, which were motivation to read for knowledge and social purposes, for importance and instrumental utility, for recognition and competition, for external demands, for compliance, and for challenge and involvement. Nevertheless, motivation to read for knowledge and social purposes, for importance and instrumental utility, and for recognition and competition were the three highest factors among the six, in which each of the factors counted for about 15% of variance in the motivational subscales (see Table 1).

Based on the SDT, intrinsic motivation could be further divided into three levels: motivation for knowledge, which refers to engaging in an activity in order to develop new ideas or obtain new knowledge; motivation for accomplishment, which refers to attempting to achieve certain goals or become skilled in a task; and motivation for

stimulation, in which one obtained fun, excitement or appreciation by performing an activity (Deci et al., 1991; Noels et al., 2003; Pae, 2008; Shaikholeslami & Khayyer, 2006). On the other hand, SDT categorized extrinsic motivation into four subcategories based on the degree of internalization (i.e., external regulation, introjected regulation, identified regulation and integrated regulation) (Noels et al., 2003; Pae, 2008; Shaikholeslami & Khayyer, 2006; Wang, 2008). The present study found that among the six motivational orientations, four orientations could be categorized into extrinsic motivation (i.e., motivation for importance and instrumental utility, motivation for recognition and competition, motivation for external demands, and motivation for compliance), and two orientations could be categorized into intrinsic motivation (i.e., motivation for knowledge and social purposes, and motivation for challenge and involvement).

In addition, concerning the three highest motivational orientations (i.e., motivation for knowledge and social purposes, motivation for importance and instrumental utility, and motivation for recognition and competition) among the six, two orientations were classified as extrinsic motivation and one was classified as intrinsic motivation. To sum up the results, it showed that Taiwanese 11th grade students could be motivated by both intrinsic motivation and extrinsic motivation to some extent. However, a higher proportion of students displayed extrinsic motivation than showed intrinsic motivation, which indicated that these students were mainly motivated by extrinsic motivation, specifically external purpose and fulfillment in reading English. These results suggest reading motivation is multidimensional (Watkins & Coffey, 2004;

Wigfield & Guthrie, 1995, 1997). Motivation is multidimensional because when one is motivated to learn a language, it may be due to several other factors, which may come from intrinsic or extrinsic motivation, or both, and a student's motivation may be changed along with his or her attitudes and other personal or environmental factors. This multidimensionality of motivation is in accordance with Wigfield and Guthrie's (1995, 1997) findings that children's reading motivation could be attributed to 11 scales (e.g., challenge, involvement, importance, recognition, competition, and compliance) that affect their reading motivation.

The finding that most Taiwanese students were driven by extrinsic motivation theoretically reflects Gardner's (1985) instrumental orientation. For example, engaging in English extracurricular reading is helpful to general education, useful if traveling abroad or studying abroad, helpful to attain an ideal job, and can benefit one's career in the future. The result was consistent with several previous studies (e.g., Ho, 1998; Kim, 2010; Kyriacou & Zhu, 2008; Wang, 2008) that EFL students were mainly motivated by extrinsic motivation in studying English. However, there was an interesting finding that motivation for external demands, which included items concerning engaging in English extracurricular reading for passing tests and the national college entrance examination, did not have a high percentage of accounted variance (6.62%) in the motivational subscales, even though overall these students were motivated by extrinsic motivation.

Passing the examination is usually one of the major reasons that many EFL students give for studying English; yet, it was not reported as a strong reason for these 11th grade students. A possible explanation is that these 11th grade students tended to

have “identified regulation” to read English. In this study, items covered in the motivation for importance and instrumental utility were mainly concerned with the importance of reading English to achieve some goals for themselves. The subscale of the motivation for importance and instrumental utility is theoretically similar to identified regulation in the SDT, which refers to a person who has identified the importance of a behavior and accepted it as his or her own (Eccles & Wigfield, 2002; Noels et al., 2003; Pae, 2008; Wang, 2008). Identified regulation is the most self-determined form of extrinsic motivation in the SDT. If these students have identified regulation motivation, then they have internalized the importance of reading English and value the behavior of being proficient in English, thus they indicated they read English for themselves and not just for passing the exams.

In addition, the findings showed that these 11th grade students were motivated to read English when other people recognized their reading in English and gave them compliments. For example, they liked hearing their friends, parents, and teachers applaud them for reading well in English or praise them as good English readers. The result could reflect Skinner’s (1953, 1971) reinforcement theory, suggesting that positive reinforcement can be an influential factor to stimulate students’ motivation, specifically their extrinsic motivation, to read English. Therefore, students may read more in English if they receive extrinsic reinforcement.

Moreover, these students were motivated by competing with their classmates; for example, they wanted to be the best at English reading and be the only one who knows an answer on an English reading exam in the class. In explaining this, Taiwan’s national

college entrance examination should be considered. To many Taiwanese senior high school students, English is perceived as an essential school subject in one's overall education that influences future college placement. The goal of English teaching in Taiwan is basically to cultivate students' English language capacity due to the increasing importance of English in globalization and also for students to earn high scores on the national college entrance examination since English subject test typically took a high percentage of overall grades in the national college entrance examination. Besides, some of the colleges even give extra points to the applicants based on their college entrance examination's English test scores when deciding their college placements. Therefore, it is not surprising that the motivation for competition among peers constitutes a strong part of Taiwanese students' reading motivation. The finding of English reading motivation for competition among EFL students was in accordance with those in several studies, such as Tercanlioglu's (2001) study on Turkish students and Kim's (2010) study on Korean students.

Another interesting finding was that female students, on average, maintained higher English reading motivation than male students, specifically on the motivation for knowledge and social purposes, though the results were not statistically significant. Social goals in learning could increase learning motivation and are connected to academic outcomes for students who like to interact socially with their peers and teachers (Juvonen & Wentzel, 1996; Wentzel, 1991). Kang's (2000) research also found that female students reported stronger integrative orientations than male students, and female students were more interested in the target language's society and culture than

male students. The findings of the present study offer additional support for greater integrative orientation for female students. Also, female students' English reading scores were significantly higher than male students. This finding is in line with many studies which also found that female students possessed stronger motivation and favorable attitudes toward learning a foreign language (e.g., Abu-Rabia, 1997; Jones & Jones, 2001; Mori & Gobel, 2006; Pritchard, 1987; Wavo, 2005; Williams, Burden, & Lanvers, 2002). As in Abu-Rabia's (1997) study of eighth-grade Canadian-Arab students who were learning English as a second language, the author found female students had more integrative attitudes toward learning English than male students. Also, Wavo's (2005) study of ninth-grade Chinese students showed female students generally possessed more positive attitudes than male students toward English language learning; and the students with more positive attitudes toward English performed better on English examinations.

Although these 11th grade Taiwanese students were largely motivated by extrinsic motivation, the intrinsic motivation in terms of knowledge and social purposes had high accounted variance in the motivational subscales. This showed that some students have the desire to gain new knowledge, have interest in reading, like to understand the culture and life of other countries, desire to share and have contact with other people. Intrinsic motivation has been emphasized by many researchers (e.g., McCardle, et al., 2008; Zhou & Salili, 2008) for successful reading, and many teachers also aimed at achieving the goal of promoting and arousing students' intrinsic motivation in reading English. The result was similar to Ho's (1998) research finding

that Taiwanese students who were interested in English-speaking countries maintained stronger motivation and more positive attitudes towards learning English. The motivation for knowledge and social purposes is theoretically similar to Gardner's (1985) integrative orientation, which refers to the desire to have contact with the target language and to further understand and learn the language.

Several studies (e.g., Clement & Kruidenier, 1983; Dörnyei, 1990, 1994; Gardner & Lambert, 1972) have pointed out that learning a foreign language is different from learning a second language and the contextual factors can result in varied English reading motivation. These 11th grade Taiwanese students were learning English in an EFL setting in which English is mainly used as a school subject and as a medium in government, business or international situations for the purpose of communicating with foreigners; thus, students have limited contact with English language and culture. The finding that these students tended to display extrinsic motivation and instrumental orientation toward reading English was in accordance with findings from Dörnyei (1990), Kraemer (1993), and Mori (2002a) that instrumental orientation in an EFL context was greater than integrative orientation.

Another purpose of the study was to investigate English language problems that senior high school students frequently reported having while reading in English that affect their willingness to read. The present study identified six language problems in reading English: unknown vocabulary, unknown idiomatic expressions, lack of grammar knowledge, complicated syntax and text length, unfamiliar topic or content, and overall reading comprehension. The present study found that, among the six, unknown

idiomatic expressions, unknown vocabulary, and unfamiliar topic or content were the three language problems in reading English that students reported identifying with the most that affect their willingness to continue reading. For example, over half of the students reported they cannot get the meaning of the sentence when there are phrases, slang or idioms in the text, and these problems disturbed their reading in English. As is commonly known, the English language embraces a great deal of phrases, slang and idioms which require in-depth understanding of the sociocultural aspects of the language for true comprehension. These phrases, slang, and idioms may augment EFL students' difficulties in learning the language and make them feel confused and frustrated (Lin, 2004; Wang et al., 2002), which can result in less willingness to read in English.

Moreover, over half of the students reported they do not want to read English when there are too many words they do not understand, and this problem disturbed them while reading English texts. Vocabulary knowledge is an important backbone in English reading for EFL learners. Taiwan's Ministry of Education has assigned a vocabulary size of around 2,000 basic words for junior high school students and around 5,600 basic words for senior high school students (Yang, 2006). However, researchers (e.g., Hsu, 2009; Wang, 2004; Yang, 2006) disagree on the amount of vocabulary that Taiwanese high school students need for reading English texts. If the English reading text included too many unknown words, it will make reading difficult to understand and cause learners frustration, especially to those less proficient EFL learners (Hsieh, 1999, 2000; Hunt & Beglar, 2005; Kitao & Kitao, 1986; Wang, 2004).

In addition, according to the findings, lack of grammar knowledge was found to be the language problem least likely to be identified among the six. In other words, fewer students reported they have grammar problems in reading, which indicated that grammar knowledge was not considered a big language problem on average for these students that affect their motivation to continue reading English texts. Of all the participants, only about 26% of students reported English grammar was a problem that influences their understanding of the sentence and reading comprehension. The results showed that most of the 11th grade Taiwanese students have confidence with their grammar knowledge. The finding could reflect Taiwan's English instructional focus on establishing students' grammar knowledge; teachers generally adopt the grammar translation method as one of the primary instructional methods to teach a foreign language (Bao & Sun, 2010; Chern, 2002). The grammar translation method typically emphasizes grammatical rules, vocabulary, and translations of the text (Brown, 2007; Richards & Rodgers, 2001; Snow, 1993) and is favored in most Asian countries, such as Taiwan and China. Therefore, students usually spend a lot of time memorizing grammar rules and vocabulary items that can help them translate the meaning of the print, facilitate in writing article text, and especially help them achieve higher grades in the national entrance examination.

The present study also sought to identify what factors of English reading motivation and language problems most predicted 11th grade Taiwanese students' English reading achievement and how they are correlated. The present study found that, among the six motivational subscales, the motivation for recognition and competition

and the motivation for compliance were significant predictors of students' English reading achievement. Also, lack of grammar knowledge and overall reading comprehension were the two factors among the six language problems that significantly predicted students' English reading achievement. However, the study found that when all the motivational and language problems in reading variables were used together to predict these students' English reading achievement, only the motivation for compliance, lack of grammar knowledge, and overall reading comprehension were significantly associated with the students' reading scores. These results re-emphasized the influential factors of compliance motivation, grammar knowledge, and overall reading comprehension for these Taiwanese students on English reading achievement. This result could mirror back to the findings described earlier that fewer students reported lack of grammar knowledge and overall reading comprehension as serious language problems that influence their motivation to read English texts. That is to say, students who had fewer problems in English grammar scored higher in reading and students who reported better reading comprehension of the whole passage scored higher in reading as well.

Moreover, as the present study found and described above, the motivation for knowledge and social purposes, motivation for importance and instrumental utility, and motivation for recognition and competition were the three highest motivational orientations that motivated these students in reading English; however, the motivation for compliance was the only one that significantly predicted their English reading scores. The result suggested students who highly regarded every English reading assignment

and completed it exactly as the teacher said tended to achieve higher English reading scores. The result may also imply the washback effect of the entrance examination that result in Taiwan's English teaching in senior high schools was somewhat "teaching to the test" (Chen, 2002; Roever & Pan, 2008), which means the course design was typically focused on preparing for the examination and students tended to engage in rote memorization and drill learning. As long as the students memorized and practiced what the teachers presented and completed the assignments, they would be able to attain higher scores. The washback effect may impact the English curriculum and students' English proficiency, as well as their motivation to learn.

The results of the intercorrelation among motivational orientations and language problems in reading English showed that most of the variables were positively or negatively correlated. It is important to acknowledge that language problems in reading can influence the motivation and willingness to read English texts and also impact reading achievement. To EFL learners, reading English is not like reading in their first language; vocabulary knowledge, idiomatic expressions, syntax, grammar, or cultural background can influence their understanding of the English texts (Edwards & Yang, 2007; Lin, 2004; Wang et al., 2002) and then impact their willingness to continue reading. Regarding reader awareness in metacognitive knowledge and strategies EFL learners used in reading English texts, Zhang (2001) found EFL students need to pay attention to the linguistic forms and apply appropriate strategies to decode the meaning in the texts. If the texts included too many unknown words, phrases, or unfamiliar content, reading would be impeded and make them feel frustrated (Wang et al., 2002).

Conclusion

Motivation and language problems in reading English are correlated and influenced EFL students' reading achievement. In the present study, these 11th grade Taiwanese students were motivated to read in English both by intrinsic motivation and extrinsic motivation to some extent; however, extrinsic motivation played an essential role to motivate their English extracurricular reading and was significantly associated with their reading achievement. In addition, language problems in reading English influenced these students' willingness to continue reading, specifically when there were a lot of unknown idiomatic expressions and vocabulary in the texts. The study found that grammar knowledge as well as overall reading comprehension significantly predicted these 11th grade Taiwanese students' English reading scores. These students were less likely to identify grammar as a problem while reading English and this may be due to an emphasis on grammar knowledge in Taiwan's English teaching and learning in high schools.

Limitations and Suggestions for Future Study

There are some limitations of the present study. First, the participants in the present study were selected by using samples of convenience, and those students who participated in the study were volunteers. These two factors limit the generalizability of the results. Second, the present study was a survey-based study relying on students' self-reported evaluation of their English reading motivation and language problems they felt they had while reading English. However, the self-reported questionnaire might have been affected by social desirability bias (Fisher & Katz, 2000). Namely, students

might not truthfully respond to the questionnaire but instead choose the answer that seemed socially favored. In light of this, some students in the study might choose to answer they maintained high levels of motivation in reading English, enjoyed English extracurricular reading, or completed English assignments as the teacher asked, and so forth. Additionally, some of the students tended to choose the “in between” answers in the questionnaire, which made the “no opinion” become the most favored answer by them. This issue could be another limitation of the study because the result might be influenced and might not reflect the real distribution of students’ motivation and language problems.

In addition, these 11th grade students will take the college entrance examination in one year; thus, 11th grade students’ motivation to read in English could be influenced by the prospect of taking the exam and may differ from students at other grade levels. Also, because the study administered the English reading comprehension test first, and then distributed the questionnaire soon after the test, the students might be influenced by their perceived success or failure on the previous test while responding to the questionnaire. Therefore, there might have been a “reactive effect of testing” threat on the results (Patten, 2009) that affected students’ sensitivity to the questionnaire. The result could also be different if the administration order of the instruments was changed.

Other limitations of the study were related to the instruments and analytical procedures. The present study did not include other subtypes of motivational orientations based on the SDT in the survey to make a more complete analysis, and the study only focused on 11th grade high school students. Future research could include

more detailed motivation subtypes and explore motivation at different grades of students to make comparisons, both cross-sectionally and longitudinally, following students over time to see whether reading motivation changes. Regarding the language problems in reading English questionnaire, most questions were based on Lin's (2002) study of EFL learner's prior linguistic knowledge on reading comprehension. The language problems, however, discussed in the present study did not include every possible factor that could occur while reading English that can influence reading willingness, such as the sociocultural aspects. Moreover, there were not many studies investigating Chinese EFL students' linguistic problems encountered while reading that impact their willingness and motivation to read. Future research examining EFL language problems in reading could expand the problems to include more social and cultural aspects, because sociocultural issue are connected to language learning and influence linguistic and conceptual understanding of the texts. Also, it would be interesting for future research to investigate students' motivation for different language abilities, such as listening and speaking in English, and make comparison of the different outcomes.

Furthermore, the data in the present study was analyzed by using the multiple regression analysis only. It is recommended for future research on this topic to use the structural equation modeling (SEM) for data analysis to examine more thoroughly the relationships among and between predictors and outcomes.

Implications for Education

The study has pedagogical implications for EFL teachers, curriculum developers, and school administrators who are devoted to students' English reading and language

acquisition at the high school level. The motivational orientations discussed in the study can provide high school English teachers a better understanding of students' English reading motivation, knowing what intrinsic and extrinsic motivation students have, and how the different types of motivation influence their reading performance. Also, understanding students' English reading motivation can facilitate teachers in designing curriculum and providing appropriate English instruction that fit students' needs and interests. For example, students who like receiving recognition for their reading in English by others showed high motivation in reading, but they may not be motivated to read for the reason of obtaining new knowledge in other countries' culture. Therefore, these students will benefit when teachers give compliments to them, but not when the teacher assigns a "fact-gathering" assignment. Students who are motivated to read because they are interested in English-speaking countries' culture and life will benefit if teachers provide them relevant reading materials, such as how Americans celebrate Thanksgiving. Therefore, it is recommended that EFL teachers include different instructional methods in teaching English and provide students materials including various topics of English extracurricular reading to suit different students' needs. Moreover, teachers could create an English reading corner in the classroom and let students share self-selected English books, novels, or magazines to create a positive reading environment in the classroom that may help to increase students' interest in reading English.

The research results are promising for improving the teaching of reading in English in an EFL setting. To Taiwanese EFL students, English is not their first

language and the environment for using and learning the language is mostly limited to school; thus, they need to put more effort in learning English than students who are immersed in an English-speaking environment. When it comes to English reading, students often feel frustrated and lose motivation to read if the texts contain many unknown vocabulary words, slang, idioms, complicated syntax, or unfamiliar content. In light of this, choosing English reading materials that match the appropriate level of difficulty to the readers or slightly exceed their reading levels will help them make progress in reading ability (Carver & Leibert, 1995; Kitao & Kitao, 1986) and also help promote enjoyment and fulfillment that connected to students' English reading motivation.

REFERENCES

- Abu-Rabia, S. (1997). Gender differences in Arab students' attitudes toward Canadian society and second language learning. *Journal of Social Psychology, 137*, 125-128.
- Adams, M. J. (1980). Failures to comprehend and levels of processing in reading. In R. J. Spiro, B. C. Bruce, & W. F. Brewer (Eds.), *Theoretical issues in reading comprehension: Perspectives from cognitive psychology, linguistics, artificial intelligence and education* (pp. 11-32). Hillsdale, NJ: L. Erlbaum Associates.
- Akamatsu, N. (1999). The effects of first language orthographic features on word recognition processing in English as a second language. *Reading and Writing: An Interdisciplinary Journal, 11*, 381-403.
- Alderson, J. C. (1984). Reading in a foreign language: A reading problem or a language problem? In J. C. Alderson & A. H. Urquhart (Eds.), *Reading in a foreign language* (pp. 1-24). New York, NY: Longman.
- Anderson, N. J. (1991). *Exploring second language reading: Issues and strategies*. Boston, MA: Heinle & Heinle.
- August, D., Carlo, M., Dressler, C., & Snow, C. (2005). The critical role of vocabulary development for English language learners. *Learning Disabilities Research & Practice, 20*, 50-57.
- Baker, C. (1992). *Attitudes and language*. Clevedon, UK: Multilingual Matters.
- Baker, C. (2006). *Foundations of bilingual education and bilingualism* (4th ed.). Clevedon, UK: Multilingual Matters.

- Baker, L., Dreher, M. J., & Guthrie, J. T. (2000). Why teachers should promote reading engagement. In L. Baker, M. J. Dreher, & J. T. Guthrie (Eds.), *Engaging young readers: Promoting achievement and motivation* (pp. 1-16). New York, NY: Guilford.
- Bao, J., & Sun, J. (2010). English grammatical problems of Chinese undergraduate students. *English Language Teaching*, 3(2), 48-53
- Bernaus, M., & Gardner, R. C. (2008). Teacher motivation strategies, student perceptions, student motivation, and English achievement. *The Modern Language Journal*, 92, 387-401.
- Brown, H. D. (2007). *Teaching by principles: An interactive approach to language pedagogy* (3rd ed.). White Plains, NY: Longman.
- Burke, W. M. (2004). Getting the buggers into languages: How to motivate students to speak, listen, read and write in a modern foreign language. *Literacy*, 38, 159-160.
- Cameron, J., & Pierce, D. (1994). Reinforcement, reward, and intrinsic motivation: A meta-analysis. *Review of Educational Research*, 64, 363-423.
- Carver, R. P., & Leibert, R. E. (1995). The effect of reading library books at different levels of difficulty upon gain in reading ability. *Reading Research Quarterly*, 30, 26-48.
- Chen, L. M. D. (2002). *Taiwanese junior high school English teachers' perceptions of the washback effect of the basic competence test in English* (Doctoral dissertation). Retrieved from <http://www.ohiolink.edu/etd/>

- Chern, C.-L. (2002). English language teaching in Taiwan today. *Asia-Pacific Journal of Education*, 22, 97-105.
- Clement, R., & Kruidenier, B. G. (1983). Orientations in second language acquisition: I. The effects of ethnicity, milieu and target language on their emergence. *Language Learning*, 33, 272-291.
- Clement, R., Noel, K. A., & MacIntyre, P. D. (2007). Three variations on the social psychology of bilinguality: Context effects in motivation, usage and identity. In A. Weatherall, B. M. Watson, & C. Gallois (Eds.), *Language, discourse and social psychology* (pp. 51-77). New York, NY: Palgrave Macmillan.
- Day, R. R., & Bamford, J. (1998). *Extensive reading in the second language classroom*. New York, NY: Cambridge University Press.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.
- Deci, E. L., & Ryan, R. M. (2002). Overview of self-determination theory: An organismic dialectical perspective. In E. L. Deci & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 3-33). Rochester, NY: University of Rochester Press.
- Deci, E. L., Vallerand, R. J., PeUetier, L. G., & Ryan, R. M. (1991). Motivation and education: The self-determination perspective. *Educational Psychologist*, 26, 325-346.
- Dörnyei, Z. (1990). Conceptualizing motivation in foreign-language learning. *Language Learning*, 40, 45-78.

- Dörnyei, Z. (1994). Motivation and Motivating in the foreign language classroom. *The Modern Language Journal*, 78, 273-284.
- Eccles, J. S., & Wigfield, A. (2002). Motivational beliefs, values, and goals. *Annual Review of Psychology*, 53, 109-132.
- Edwards, P., & Yang, H. (2007). Asian ESL students and literacy development. *Multicultural Review*, 16, 26-33.
- Ernst-Slavit, G., Moor, M., & Maloney, C. (2002). Changing lives: Teaching English and literature to ESL students. *Journal of Adolescent & Adult Literacy*, 46, 116-128.
- Field, A. (2009). *Discovering statistics using SPSS* (3rd ed.). Thousand Oaks, CA: SAGE Publications Inc.
- Fisher, R. J., & Katz, J. E. (2000). Social-desirability bias and the validity of self-reported values. *Psychology & marketing*, 17, 105-120.
- Flora, S. R. (1990). Undermining intrinsic interest from the standpoint of a behaviorist. *The Psychological Record*, 40, 323-346.
- Flora, S. R., & Flora, D. B. (1999). Effects of extrinsic reinforcement for reading during childhood on reported reading habits of college students. *The Psychological Record*, 49, 4-13.
- Fukkink, R. G., Hulstijn, J., & Simis, A. (2005). Does training in second-language word recognition skills affect reading comprehension? An experimental study. *The Modern Language Journal*, 89, 54-75.
- Gardner, R. C. (1985). *Social psychology and second language learning: The role of attitudes and motivation*. London, UK: Edward Arnold.

- Gardner, R.C., & Lambert, W. E. (1972). *Attitudes and motivation in second language learning*. Rowley, MA: Newbury House.
- Gardner, R. C., & MacIntyre, P. D. (1993). A student's contributions to second-language learning: Part II: Affective variables. *Language Teaching*, 26, 1-11. doi: 10.1017/S0261444800000045
- Gottardo, A., Yan, B., Siegel, L. S., & Wade-Woolley, L. (2001). Factors related to English reading performance in children with Chinese as a first language: More evidence of cross-language transfer of phonological processing. *Journal of Educational Psychology*, 93, 530-542.
- Grabe, W. (1991). Current developments in second language reading research. *TESOL Quarterly*, 25, 375-406.
- Guthrie, J. T., & Humenick, N. M. (2004). Motivating students to read: Evidence for classroom practices that increase reading motivation and achievement. In P. McCardle & V. Chhabra (Eds.), *The voice of evidence in reading research* (pp. 329-354). Baltimore, MD: Paul H. Brookes Publishing Co.
- Guthrie, J. T., Wigfield, A., Barbosa, P., Perencevich, K. C., Taboada, A, Davis, M. H., Scaffidi, N. T., & Tonks, S. (2004). Increasing reading comprehension and engagement through concept-oriented reading instruction. *Journal of Educational Psychology*, 96, 403-423. doi: 10.1037/0022-0663.96.3.403
- Ho, M.-C. (1998). Culture Studies and Motivation in Foreign and Second Language Learning in Taiwan. *Language, Culture and Curriculum*, 11, 165-182.

- Hsieh, L. T. (1999). The effect of pre-reading vocabulary instruction and cultural background knowledge activation on Chinese junior college fourth-year students' EFL reading. *Proceedings of the 16th Conference on English Teaching and Learning on ROC* (pp. 227-239). Taipei: Crane Publishing Co.
- Hsieh, L. T. (2000). The effect of translation on English vocabulary and reading learning. *Proceedings of the 9th International Symposium on English Teaching* (pp. 339-347). Taipei: Crane Publishing Co.
- Hsu, W. (2009). College English textbooks for general purposes: A corpus-based analysis of lexical coverage. *Electronic Journal of Foreign Language Teaching*, 6(1), 42-62.
- Hunt, A., & Beglar, D. (2005). A framework for developing EFL reading vocabulary. *Reading in a Foreign Language*, 17, 23-59.
- Jenkins, J. (2006). Current perspectives on teaching world Englishes and English as a Lingua Franca. *TESOL Quarterly*, 40, 157-181. doi: 10.2307/40264515
- Jenkins, J. (2009). English as a lingua franca: Interpretations and attitudes. *World Englishes*, 28, 200-207. doi: 10.1111/j.1467-971X.2009.01582.x
- Jones, B., & Jones, M. (2001). *Boys performance in modern foreign languages: Listening to learners*. London, UK: Centre for Information on Language Teaching.
- Juvonen, J., & Wentzel, K. R. (Eds.). (1996). *Social motivation: Understanding children's school adjustment*. New York, NY: Cambridge University Press.
- Kamil, M. L. (2004). Vocabulary and comprehension instruction: Summary and implications of the National Reading Panel findings. In P. McCardle & V. Chhabra

- (Eds.), *The voice of evidence in reading research* (pp. 213-234). Baltimore, MD: Paul H. Brookes Publishing Co.
- Kang, D. H. (2000). *Motivation and its change in Korean contexts*. (Doctoral dissertation). Retrieved from ProQuest Information & Learning. (AAI9950805).
- Kim, T.-Y. (2010). Socio-political influence on EFL motivation and attitudes: Comparative surveys of Korean high school students. *Asia Pacific Education Review, 11*, 211-222. doi: 10.1007/s12564-010-9071-7
- Kitao, K., & Kitao, S. K. (1986). Difficulties Japanese have in reading English (Digest No. 278214). Retrieved from <http://www.eric.ed.gov/PDFS/ED278214.pdf>
- Kiyamazarslan, V. (2002). *A discussion of language acquisition theories*. Retrieved from <http://charttesl.wordpress.com/2011/01/18/>
- Kohn, A. (1993). *Punished by rewards: The trouble with gold stars, incentive plans, A's, praise, and other bribes*. Boston, MA: Houghton-Mifflin.
- Kraemer, R. (1993). Social psychological factors related to the study of Arabic among Israeli high school students: A test of Gardner's socioeducational model. *Studies in Second Language Acquisition, 15*, 83-104.
- Kyriacou, C., & Zhu, D. (2008). Shanghai pupils' motivation towards learning English and the perceived influence of important others. *Educational Studies, 34*, 97-104.
- Laufer, B. (1992). Reading in a foreign language: How does L2 lexical knowledge interact with the reader's general academic ability? *Journal of Research in Reading, 15*, 95-103.

- Lin, H., & Warden, C. A. (1998). Different attitudes among non-English major EFL students. *The Internet TESL Journal*, 4(10), 1-9.
- Lin, W. (2004). A study on cross-cultural barriers in reading of English. *Asian EFL Journal*, 6 (2), 1-9.
- Lin, Z. (2002). Discovering EFL learners' perception of prior knowledge and its role in reading comprehension. *Journal of Research in Reading*, 25, 172-190.
- Loh, E. K. Y., & Tse, S. K. (2009). The relationship between motivation to read Chinese and English and its impact on the Chinese and English reading performance of Chinese students. *Chinese Education and Society*, 42(3), 66-90.
- Madden, J. M., & Bottenberg, R. A. (1963). Use of an all possible combination solution of certain multiple regression problems. *Journal of Applied Psychology*, 47, 365-366.
- Masgoret, A.-M., & Gardner, R. C. (2003). Attitudes, motivation, and second language learning: A meta-analysis of studies conducted by Gardner and associates. *Language Learning*, 53, 167-210.
- McCardle, P., & Chhabra, V. (Eds.). (2004). *The voice of evidence in reading research*. Baltimore MD: Paul H. Brookes Publishing Co.
- McCardle, P., Chhabra, V., & Kapinus, B. (Eds.). (2008). *Reading research in action*. Baltimore, MD: Paul H. Brookes Publishing Co.
- McKenna, M. C., Kear, D. J., & Ellsworth, R. A. (1995). Children's attitudes toward reading: A national survey. *Reading Research Quarterly*, 30, 934-956.

- Mori, S. (2002a). Redefining motivation to read in a foreign language. *Reading in a Foreign Language, 14*, 91-110.
- Mori, S. (2002b). *The relationship between motivation and the amount of out-of-class reading* (Doctoral dissertation). Retrieved from ProQuest Information & Learning. (2002-95013-123).
- Mori, S., & Gobel, P. (2006). Motivation and gender in the Japanese EFL classroom. *System, 34*, 194-210. doi:10.1016/j.system.2005.11.002
- Mucherah, W., & Yoder, A. (2008). Motivation for reading and middle school students' performance on standardized testing in reading. *Reading Psychology, 29*, 214-235.
- National Assessment Governing Board. (2008). *Reading framework for the 2009 National Assessment of Educational Progress* (Contract No. ED-02-R-0007). Washington, DC: US Government Printing Office.
- Noels, K. A. (2001). New orientations in language learning motivation: Towards a model of intrinsic, extrinsic, and integrative orientations and motivation. In Z. Dörnyei & R. Schmidt (Eds.), *Motivation and second language acquisition* (pp. 43-68). Honolulu, HI: Second Language Teaching & Curriculum Center.
- Noels, K. A., Pelletier, L. G., Clement, R., & Vallerand, R. J. (2003). Why are you learning a second language? Motivational orientations and self-determination theory. *Language Learning, 53*, 33-63.
- O'Sullivan, A. (2004). Reading and Arab college students: Issues in the United Arab Emirates higher colleges of technology. *Proceedings of the First International*

- Online Conference on Second and Foreign Language Teaching and Research.*
Retrieved from The Reading Matrix website: <http://www.readingmatrix.com/conference/pp/proceedings/sullivan.pdf>
- Pae, T. (2008). Second language orientation and self-determination theory: A structural analysis of the factors affecting second language achievement. *Journal of Language and Social Psychology, 27*, 5-27.
- Patten, M. L. (2009). *Understanding research methods: An overview of the essentials* (7th ed). Los Angeles, CA: Pyrczak.
- Pintrich, P. R., & Schunk, D. H. (1996). *Motivation in education: Theory, research, and applications*. Columbus, OH: Charles E. Merrill.
- Pritchard, R. M. O. (1987). Boys' and girls' attitudes towards French and German. *Educational Research, 29*, 65-72.
- Richards, J., & Rodgers, T. (2001). *Approaches and methods in language teaching* (2nd ed.). Cambridge, UK: Cambridge University Press.
- Roever, C., & Pan, Y.-C. (2008). Test review: GEPT: General English proficiency test. *Language testing, 25*, 403-418.
- Rubio, F. (Ed.). (2007). *Self-esteem and foreign language learning*. Newcastle, UK: Cambridge Scholars Publishing.
- Ruddell, R. B. (2002). *Teaching children to read and write* (3rd ed.). Boston, MA: Allyn & Bacon.
- Shaikholeslami, R., & Khayyer, M. (2006). Intrinsic motivation, extrinsic motivation, and learning English as a foreign language. *Psychological Reports, 99*, 813-818.

- Skinner, B. E (1953). *Science and human behavior*. New York, NY: Macmillan.
- Skinner, B. F. (1971). *Beyond freedom and dignity*. New York, NY: Bantam.
- Snow, C. (1993). Bilingualism and second language acquisition. In Gleason, J. B. & Ratner, N. B. (Eds.). *Psycholinguistics*. New York, NY: Harcourt Brace Jovanovich.
- Snow, C. (2002). *Reading for understanding: Toward an R&D program in reading comprehension*. Santa Monica, CA: RAND Corporation.
- Stipek, D. J. (1998). *Motivation to learn: From theory to practice* (3rd ed.). Needham Heights, MA: Allyn and Bacon.
- Takase, A. (2004). *The effects of extensive reading on the motivation of Japanese high school students* (Doctoral dissertation). Retrieved from ProQuest Information & Learning. (2004-99001-054).
- Tercanlioglu, L. (2001). The nature of Turkish students' motivation for reading and its relation to their reading frequency. *The Reading Matrix*, 1(2), 1-33.
- Unrau, N., & Schlackman, J. (2006). Motivation and its relationship with reading achievement in an urban middle school. *The Journal of Educational Research*, 100, 81-101.
- Wang, F. (2008). Motivation and English achievement: An exploratory and confirmatory factor analysis of a new measure for Chinese students of English learning. *North American Journal of Psychology*, 10, 633-646.
- Wang, K.-C. (2004). Vocabulary learning difficulties for senior I students' in Taiwan. (Master's thesis). Retrieved from <http://nccur.lib.nccu.edu.tw/handle/140.119/33445>

- Wang, M., & Koda, K. (2007). Commonalities and differences in word identification skills among learners of English as a second language. *Language Learning, 57*, 201-222.
- Wang, Y., Martin, M. A., & Martin, S. H. (2002). Understanding Asian graduate students' English literacy problems. *College Teaching, 50*, 97-101.
- Watkins, M. W., & Coffey, D. Y. (2004). Reading motivation: Multidimensional and indeterminate. *Journal of Educational Psychology, 96*, 110-118. doi: 10.1037/0022-0663.96.1.110
- Wavo, E. (2005). Chinese students' attitudes toward English language and their school performance in English. *Ife Psychologia, 13*, 1-10.
- Wentzel, K. R. (1991). Social competence at school: Relation between social responsibility and academic achievement. *Review of Educational Research, 61*, 1-24.
- Wigfield, A., & Guthrie, J. T. (1995). *Dimensions of children's motivations for reading: An initial study* (Research Rep. No. 34). Athens, GA: National Reading Research Center.
- Wigfield, A., & Guthrie, J. T. (1997). Relations of children's motivation for reading to the amount and breadth of their reading. *Journal of Educational Psychology, 89*, 420-432.
- Williams, M. (1994). Motivation in foreign and second language learning: An interactive perspective. *Educational and Child Psychology, 11*, 77-84.

- Williams, M., Burden, R., & Lanvers, U. (2002). French is the language of love and stuff: Student perceptions of issues related to motivation in learning a foreign language. *British Education Research Journal*, 28, 503-528.
- Wlodkowski, R. J. (1978). *Motivation and teaching: A practical guide*. West Haven, CT: NEA Distribution Center.
- Yang, Y. (2001). Chinese interference in English writing: Cultural and linguistic differences (Digest No. ED 461992). Retrieved from <http://eric.ed.gov/PDFS/ED461992.pdf>
- Yang, Y. L. (2006). 國內各級英語教學的詞彙量問題 [The problem of English vocabulary size in English teaching]. *Journal of the National Institute for Complication and Translation*, 34(3), 35-44.
- Yau, J.-L. C. (2009). Reading characteristics of Chinese-English adolescents: Knowledge and application of strategic reading. *Metacognition Learning*, 4, 217-235.
- Zhang, L. J. (2001). Awareness in Reading: EFL students' metacognitive knowledge of reading strategies in an acquisition-poor environment. *Language Awareness*, 10, 268-288. doi: 10.1080/09658410108667039
- Zhou, H., & Salili, F. (2008). Intrinsic reading motivation of Chinese preschoolers and its relationships with home literacy. *International Journal of Psychology*, 43, 912-916.

APPENDIX A
CHINESE VERSION OF THE MOTIVATION FOR ENGLISH READING
QUESTIONNAIRE

	請在符合您的情形下打『v』，請勿留白。	非常符合	有一點符合	沒意見	有一點不符合	非常不符合
1	我喜歡閱讀英文刊物，例如英文書籍、報章、雜誌、小說、電子書等等。					
2	我會閱讀英語課外讀物，因為可以增廣我的知識見聞。					
3	我很高興別人認同我的英語閱讀能力。					
4	我期待自己的英語閱讀是班上最優秀的。					
5	培養英語閱讀能力很重要，因為網路上很多資訊都是英文寫的。					
6	我培養自己的英語閱讀能力，因為會對我的學業有很大幫助。					
7	我閱讀英語課外讀物，是為了以後大學的英文原文書作準備。					
8	我喜歡幫助同學解決英文閱讀方面的問題。					
9	如果師長推薦的英文書籍或文章，我認為很有趣或很實用，我會去閱讀。					
10	我都會照著老師的要求去完成我的英語閱讀作業。					
11	我很重視每一次的英語閱讀作業。					
12	我喜歡比別人更早完成我的英語閱讀作業。					
13	閱讀英語課外讀物是我的興趣。					
14	閱讀自己感興趣的英語課外讀物是個有趣的活動。					
15	當我閱讀英文時，我很沉浸在其中。					
16	當我閱讀英文時，我會想像書中描述的人、事、物。					
17*	我閱讀英文時不喜歡被別人打擾。					
18	我父母常常稱讚我英語閱讀能力很好。					
19*	我閱讀英語課外讀物是因為父母親鼓勵我這麼做。					
20	我喜歡與師長、家人分享我閱讀的英文書籍或文章。					
21	對我來說英語閱讀能力很重要，因為我希望能理解我想看的英文書籍或文章。					
22	我培養自己的英語閱讀能力，因為在將來可能會出國留學。					

Table continued

23	我培養自己的英語閱讀能力，因為如果出國旅遊，會對我有幫助。					
24	我覺得自己的英語閱讀能力很好。					
25	我期待知道自己英語閱讀測驗的成績。					
26	我喜歡當班上唯一能答對英語閱讀測驗答案的人。					
27	我通常因為考試的需要才去閱讀英語課外讀物。					
28	為了準備學力測驗及大學聯考的英語考試，我會去閱讀英語課外讀物。					
29	我閱讀英語課外讀物是為了跟同學競爭，想比其他人更優秀。					
30	我喜歡得到師長稱讚我的英語閱讀能力很好。					
31	我喜歡和朋友討論我在閱讀的英文書籍或文章。					
32	我的朋友有時會說我的英語閱讀能力很好。					
33	我會閱讀英語課外讀物來培養自己的英語閱讀能力，因為對未來工作會有幫助。					
34	如果是有興趣的英文書籍或文章，我不會在意它的困難度。					
35	我喜歡閱讀困難度較高的英文書籍或文章，例如文學、科學、醫藥生技等書籍。					
36	我閱讀英語課外讀物，是因為想更瞭解英語系國家（例如美國、英國、加拿大、澳洲、紐西蘭.....）的文化和生活等。					
37	我培養英語閱讀能力，因為我想到英語系的國家旅遊。					
38	我喜歡因為英語閱讀能力好而得到一些稱讚。					
39*	對我來說閱讀英語課外讀物是浪費時間的事情。					
40*	英語閱讀對我來說是痛苦的經驗。					

Note: * were deleted items.

APPENDIX B

ENGLISH TRANSLATION OF THE MOTIVATION FOR ENGLISH READING

QUESTIONNAIRE

		A lot like me	A little like me	No opinion	A little different from me	Very different from me
	Please mark the one that best describes you with a “v” in the column.					
1	I enjoy reading English publications (e.g., books, newspapers, magazines, novels, and/or e-books).					
2	I read English extracurricular reading because it will broaden my view.					
3	I am happy when someone recognizes my reading in English.					
4	I like being the best in my class at English reading.					
5	I learn to read English because there is a lot of Internet information written in English.					
6	I learn to read in English because it will be useful to my general education.					
7	I read English extracurricular reading in order to prepare for future college professional textbooks written in English.					
8	I like to help my friends with their English reading assignments.					
9	If the teacher suggests an English book/article that is interesting or useful to me, I will read it.					
10	I always do my English reading assignments exactly as the teacher wants it.					
11	Finishing every English reading assignment is very important to me.					
12	I like to finish my English reading assignments before other students.					
13	Reading English extracurricular reading is a hobby of mine.					
14	Spending time reading an interesting English extracurricular reading is a fun activity.					
15	I get deeply engaged when I am reading English.					

Table continued

16	When I read in English, I visualize in my head.					
17*	I don't like to be disturbed while I am reading English.					
18	My parents often tell me what a good job I am doing in reading English.					
19*	I am reading English extracurricular reading because my parents encourage me.					
20	I like to share with my family about what I am reading in English.					
21	I learn to read in English because I would like to comprehend texts written in English that interest me.					
22	I learn to read in English because I might study abroad in the future.					
23	I learn to read in English because it will help me if I should ever travel.					
24	I am good at reading in English.					
25	I look forward to finding out my English reading grades.					
26	I like being the only one who knows an answer on an English reading exam.					
27	I read English merely because I want to pass the exam.					
28	I read English extracurricular reading in order to succeed in the national college entrance examination.					
29	I read English extracurricular reading in order to compete with my classmates.					
30	I like when my teacher says that I read well in English.					
31	I like to talk to my friends about what I am reading in English.					
32	My friends sometimes tell me that I am a good English reader.					
33	I read English extracurricular reading because English reading ability will help me to get a better job in the future.					
34	If the English text is interesting, I will read it no matter how hard it is to read.					
35	I enjoy the challenge of reading difficult English texts, e.g., literature, science, biotechnology, or medical science.					
36	I read English extracurricular reading because I want to know more about the cultures and life in English-speaking countries (e.g., American, Canada, England, Australia or New Zealand).					
37	I learn to read in English because I would like to travel to English-speaking countries.					
38	I like to get compliments for my reading in English.					
39*	Reading English extracurricular reading is a waste of time.					
40*	It is a pain to read in English.					

Note: * were deleted items.

APPENDIX C

CHINESE VERSION OF THE LANGUAGE PROBLEMS IN READING

ENGLISH QUESTIONNAIRE

	請在符合您的情形下打『v』，請勿留白。	非常符合	有一點符合	沒意見	有一點不符合	非常不符合
1	一般來說，我都能理解整篇英文文章的意思。					
2	我可以理解文章裡面每個英文句子的意思。					
3	有時我即使知道每個英文單字，卻不能理解整個句子的意思。					
4	我常因為句子裡含有不懂的英文片語、俚語等等，而不能理解整個句子的意思。					
5*	閱讀英語時，遇到不懂的單字我會查字典，可以幫助我理解句子的意思。					
6	我常因為英文文法的關係，看不懂句子的意思。					
7	我覺得是自己英文文法不夠好的關係，影響我對文章句子的理解能力。					
8	如果有太多我不認識的英文單字在文章裡，我會不想再閱讀下去。					
9	如果發現文章裡英文句子的文法我看不懂，我會不想再閱讀下去。					
10	如果文章的句子結構太複雜，很難理解，我會不想再閱讀下去。					
11	當發現文章裡的句子太長，我會不想再閱讀下去。					
12	當發現英文文章太長，我會不想再閱讀下去。					
13	如果對文章的主題不感興趣，我會不想再閱讀下去。					
14	如果對文章的主題不熟悉，我會不想再閱讀下去。					
15	閱讀英文時，太多的英文單字對我來說是個很困擾的問題。					
16	閱讀英文時，看不懂文章段落裡的成語或俚語，讓我感到很困擾。					
17	閱讀英文時，看不懂太複雜的英文句子，讓我感到很困擾。					
18	閱讀英文時，我有時覺得唸了卻不知道自己在唸什麼，尤其是對陌生的主題或內容。					
19*	我忘記很多剛閱讀過的內容，尤其是較長的英文文章。					
20*	我常在幾天後，忘記很多我閱讀過的英文內容。					
21*	我閱讀英文的速度很慢。					
22	對我來說，閱讀英文是容易的。					

Note: * were deleted items.

APPENDIX D

ENGLISH TRANSLATION OF THE LANGUAGE PROBLEMS IN READING

ENGLISH QUESTIONNAIRE

	Please mark the one that best describes you with a “v” in the column.	A lot like me	A little like me	No opinion	A little different from me	Very different from me
1	I can understand the whole passage written in English.					
2	I can understand most of the meaning of the sentence in the text.					
3	I can't get the meaning of the sentence even though I know every word of it.					
4	I usually can't get the meaning of the sentence when there are unknown phrases, slang or idioms in the text.					
5*	I want to look up new words in the dictionary while reading to help me understand the sentence.					
6	I usually can't understand the meaning of the sentence because of English grammar.					
7	I think it is my poor English grammar that results in poor English reading comprehension.					
8	I don't want to read English when there are too many words I don't know.					
9	I don't want to read English when I can't understand the grammar of the sentence.					
10	I don't want to read English when the sentence structure is too complicated.					
11	I don't want to read English when I feel the sentences are too long.					
12	I don't want to read English when the text is too long.					
13	I don't want to read English when I am not interested in the topic.					
14	I don't want to read English when I am not familiar with the topic.					

Table continued

15	I feel that too many new words in the text are usually a disturbing problem in reading English.					
16	When reading English, slang or idioms that I don't know in the passage are a disturbing problem to me.					
17	When reading English, a disturbing problem is that I can't understand complicated sentences in the text.					
18	I feel that sometimes I don't understand what I read, especially unfamiliar topic or content.					
19*	I forget a lot of what I read in English right afterwards, especially long passages.					
20*	I forget a lot of what I read in English a few days later.					
21*	I read very slowly in English.					
22	I feel that reading in English is easy.					

Note: * were deleted items.

APPENDIX E

ENGLISH READING COMPREHENSION TEST

(Note: Permission for using the test was given by Jia-ling Charlene Yau)

Bees

In the wild, families of honeybees live in holes in a tree or a rock. But if a friendly beekeeper provides a couple of cozy hives, then the bees are very happy to move in. This is really to help the beekeeper, of course—collecting honey from a hive is much easier than climbing a tree!

When a honeybee finds plenty of food, it flies back to the hive to tell its friends. It does this by dancing. The number of wiggles in the dance and the direction the bee points tell the other bees exactly where to go.

Honeybees have little baskets on their back legs and brushes of hair on their other legs. When a bee lands on a flower, it brushes a powder called pollen into its baskets. Then it flies back to the hive to feed the pollen to its young.

Please answer the following questions:

1. Another meaning for “cozy” is
 - a) easy.
 - b) friendly.
 - c) comfortable.
 - d) wild.

2. A hive is a
 - a) bee house.
 - b) hole in a tree or rock.
 - c) beekeeper’s house.
 - d) type of basket.

3. Wild bees live
 - a) in hives.
 - b) in holes.

- c) around trees.
 - d) near honey.
4. The beekeeper puts bees into hives
- a) to make collecting honey easier.
 - b) to make the bees happy.
 - c) to help the bees find honey.
 - d) to keep the bees near the trees.
5. Bees communicate by
- a) talking.
 - b) stinging.
 - c) dancing.
 - d) pointing.
6. Why do bees dance?
- a) because they're cold.
 - b) because they like to wiggle.
 - c) to get back to the hive.
 - d) to tell others where there's food.
7. Pollen comes from
- a) hives.
 - b) bees.
 - c) flowers.
 - d) baskets.
8. Pollen is used
- a) to feed young bees.
 - b) to make honey.
 - c) to feed beekeepers.
 - d) It doesn't say.
9. A powder is something
- a) wet.
 - b) dry.
 - c) sticky.
 - d) cold.
10. Bees have baskets and hairs on their

- a) head.
 - b) body.
 - c) leg.
 - d) eyes.
11. What lesson can be learned from the second paragraph of this passage?
- a) How bees feed their young.
 - b) How bees find new homes.
 - c) How we get honey.
 - d) Why bees dance.
12. What lesson can be learned from the last paragraph of this passage?
- a) How bees feed their young.
 - b) How bees find new homes.
 - c) How we get honey.
 - d) Why bees dance.

Two Large Stones

Two large stones sat on the side of a hill. Grass and flowers grew there.

“This side of the hill is nice,” said the first stone.

“But I wonder what is on the other side of the hill?”

“We do not know. We never will,” said the second stone.

One day a bird flew down.

“Bird, can you tell us what is on the other side of the hill?” asked the stones.

The bird flew up into the sky. He flew high over the hill. He came back and said, “I can see towns and castles. I can see mountains and valleys. It is a wonderful sight.” The first stone said, “All of those things are on the other side of the hill.”

“How sad,” said the second stone. “We cannot see them. We never will.”

The two stones sat on the side of the hill. They felt sad for one hundred years.

One day a mouse walked by. “Mouse, can you tell me what is on the other side of the hill?” asked the stones.

The mouse climbed up the hill. He put his nose over the top and looked down.

He came back and said, "I can see earth and stones. I can see grass and flowers. It is a wonderful sight."

The first stone said, "The bird told us a lie. That side of the hill looks just the same as this side of the hill."

"Oh good!" said the second stone.

"We feel happy now. We always will."

Please answer the following questions:

1. Another word for "castle" is
 - a) palace.
 - b) house.
 - c) shack.
 - d) nest.

2. Another word for "wonderful" is
 - a) common.
 - b) natural.
 - c) amazing.
 - d) peaceful.

3. Where were the two stones?
 - a) sitting on the side of a hill
 - b) next to the mice
 - c) looking at the castles and towns
 - d) climbing up the hill

4. The stones were curious about
 - a) who lived on the other side of the hill.
 - b) what was on the other side of the hill.
 - c) whether the bird was telling the truth.
 - d) whether or not to believe the mouse.

5. How long were the stones sad?
 - a) one day
 - b) one year
 - c) one hundred years

- d) It doesn't say.
6. Why did the bird see towns, castles, mountains and valleys?
- a) because it flew high in the sky
 - b) because it flew down to the stones
 - c) It didn't. The bird lied.
 - d) It had a good imagination.
7. What was the mouse's wonderful sight?
- a) stones and earth
 - b) castles and towns
 - c) valleys and mountains
 - d) rivers and valleys
8. Who are the main characters in the story?
- a) the stones
 - b) the bird
 - c) the mouse
 - d) It doesn't say.
9. Why were the stones happy at the end?
- a) because they couldn't see the other side of the hill
 - b) because they believed that the mouse lied
 - c) because they believed that both sides were the same
 - d) because they couldn't see towns, castles, mountains and valleys
10. What lesson can be learned from this story?
- a) Sometimes we are happier when we don't know the truth.
 - b) There's no place like home.
 - c) Nothing ventured, nothing gained.
 - d) A bird in the hand is worth two in the bush.

Traveling Time

We divide the surface of the Earth from north to south into segments, like an orange, using imaginary lines called longitude. Together the segments equal 360 degrees. The Earth takes 24 hours (1,440 minutes) to rotate on its axis, and every degree passes once in front of the sun each day. Every degree travelled is four minutes in time.

In the past, every place had its own local time, which meant that times could be different in towns that were just miles apart. When trains were invented, timetables became a problem, so all towns in Britain decided to use London time as the standard time. Soon after, the world was divided into time zones. Each time zone is equivalent to 1 hour and covers 15 degrees of longitude. Moving eastward, 1 hour is added on for every time zone passed.

When travelling along a line of longitude, north or south, you remain in the same time zone for the whole journey. The time in Accra, West Africa is the same as in Greenwich in London—they lie on the same line of longitude. This is the prime meridian, or 0 degrees of longitude. It is known as Greenwich Mean Time or GMT.

The longitude of a given place is its distance east or west of the prime meridian. On board ship, sailors must know longitude in order to calculate the exact position of the ship. To calculate longitude it is necessary to know accurately the time at the prime meridian. In 1764, John Harrison invented a clock, known as a chronometer, that could keep accurate time at sea.

Please answer the following questions:

1. Segments
 - a) belong to an orange.
 - b) are time zones.
 - c) are pieces of the world.
 - d) are parts of a whole.

2. “Rotate” means
 - a) to travel in front of the sun.
 - b) to turn from north to south.
 - c) to move in degrees of longitude.
 - d) to turn around a center.

3. To travel a degree of longitude takes the earth
 - a) one minute.
 - b) fifteen minutes.
 - c) 24 hours.
 - d) four minutes.

4. How many degrees of longitude does the earth rotate through?
 - a) one
 - b) three hundred and sixty
 - c) twenty four
 - d) fifteen

5. British towns started using London time so that
 - a) train schedules could apply to different towns.
 - b) times would remain different in nearby towns.
 - c) local times could determine train schedules.
 - d) towns a few miles apart could be connected by trains.

6. Time zones are divided
 - a) one hour for every 15 degrees.
 - b) according to train timetables.
 - c) by means of a chronometer.
 - d) from the earth's north/south axis.

7. The time in Accra in West Africa is the same as in London in Britain because
 - a) both are the same degree of longitude.
 - b) they are in the same time zone.
 - c) they lie on the prime meridian.
 - d) All of the answers.

8. The prime meridian
 - a) divides the earth into north and south.
 - b) measures 0 degrees of longitude.
 - c) was designed to connect Accra with London.
 - d) rotates the earth on its axis.

9. If sailors know the time at the prime meridian, they can
 - a) find out where their ship is currently located.
 - b) use a chronometer to calculate distance.
 - c) calculate the distance between lines of longitude.
 - d) Follow the same timetable despite different local times.

10. Lines of longitude are imaginary because
 - a) they divide the earth into segments.
 - b) they measure time.
 - c) they are used by sailors and trains.

d) they cannot be seen.

11. From the passage, it seems that

- a) longitude causes confusion for sailors.
- b) the needs of travel led to better measurements.
- c) chronometers made John Harrison famous.
- d) the earth was naturally divided into segments.

12. The longitude of Taipei can be measured by

- a) finding how far east it is of the prime meridian.
- b) using a chronometer to calculate Greenwich Mean Time.
- c) finding out which time zone Taipei is located in.
- d) counting the degree which pass in front of the sun.

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