EXTENSIVE READING FOR UNDERGRADUATE EFL LEARNERS:

MULTIMODAL TEXT VS. LINEAR TEXT

By

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EXTENSIVE READING FOR UNDERGRADUATE EFL LEARNERS:

MULTIMODAL TEXT VS. LINEAR TEXT

Abstract

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Scholars have advocated that the literacy of multimodal text is indispensible and

irreversible in this era of widespread use of Information and Computer Technology (ICT). In

response to this advocacy, the current quasi-experimental study was designed to examine

effects of English Internet extensive reading on the development of English proficiency of

Taiwanese undergraduate learners of English as a foreign language (EFL). Because positive

impact of the extensive reading of books, or linear printed text, has been established relatively

firmly by existing literature, the current study examined effects of the extensive reading of

multimodal text against that of linear text. Fiction was the genre of reading text in the current

study because it was used in all the reviewed studies of extensive reading of linear text.

Guided by four hypotheses, three types of statistical analysis tests were conducted. The

analysis of covariance (ANCOVA) test results indicated equally significant improvement in

English proficiency in the experimental groups but not significant change in motivation for

reading across all three groups. The multiple regression test results suggested that the

extensive reading of either linear or multimodal text predicted English proficiency. The

chi-square test results did not reveal significant association between extensive reading and application of several reading strategies. The discussion involving statistical findings and contextual data provided by questionnaires and participants' assignment sheets leads to pedagogical implications and directions for future research. The pedagogical implications are incorporating extensive reading of linear and/or multimodal text into formal EFL curricula and including multimodal informational text in the program. Regarding directions for future research, one is unveiling EFL learners' perception of the role of multimodal text in and the impact of their perception on their development of English literacy. Other directions include exploring effects of interacting with informational type of multimodal text and integrating reading strategy instructions in an extensive reading program. Finally, future research is recommended to identify essential elements a reliable and valid measure of motivation for EFL reading should contain to uncover the role motivation for reading plays in the development of EFL learners' English literacy.

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This dissertation is dedicated to my loving family members, true friends, and supportive

instructors, without whom I would not have made it.

CHAPTER ONE

INTRODUCTION

Much research has been done on the extensive reading of printed, or linear, text. Research findings related to learning English as a foreign/second language support the notion that extensive reading facilitates the development of English proficiency. After the popularization of Information and Computer Technology (ICT), among which the Internet being the most pervasive, studies on the interaction with multimodal text via ICT has contributed to the concept that having contact with multimodal text is essential to the development of English literacy in the 21st century. However, little has been investigated concerning the effect of interacting with English multimodal text on English learners' development of English proficiency.

The purpose of this study is to examine effects of English Internet extensive reading on improving Taiwanese undergraduate English learners' English proficiency. This purpose is informed by two categories of reviewed literature. One is the research studies that posit the extensive reading of printed linear texts, particularly graded readers, as effective in upgrading reading comprehension, accelerating reading speed, increasing vocabulary, improving writing in English, and fostering interest in reading. The other category is the studies that either advocate new literacies in response to the wide and rapid spread of ICT or support Internet reading because it promotes reading motivation, increases reading speed, and exercises

self-regulated reading strategies. However, only two reviewed studies are Internet extensive

reading programs. Moreover, the implication that extensive reading promotes motivation in

reading and the implication that Internet reading exercises reading strategies are not

supported by statistics findings. Consequently, further investigation is needed to explore

effects of Internet extensive reading on developing EFL learners' English proficiency and the

association between motivation for English reading and English proficiency.

The Need for the Study

Much has been found concerning the extensive reading of printed texts, which are

labeled as linear because readers usually need to start from the beginning and read to the end

to attain thorough comprehension of the content. First, the extensive reading of linear texts is

effective in developing English proficiency. Second, fiction, especially graded readers,[1] are a

proper type of text to use because they are the materials used in most studies (e.g., Bell, 2001;

Lao & Krashen, 2000; Mason & Krashen, 1997; Pigada & Schmitt, 2006; Rodrigo et al.,

2007; Tanaka, 2007). Among the examples above, only Lao and Krashen used authentic

fiction, which are stories not written specifically for learners of English as a foreign language

(EFL) and thus not controlling for linguistic difficulty. Rodrigo et al. used both authentic and

abridged stories.[2] Tanaka, besides graded readers, had her experimental group read

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[1] Graded readers are stories written or retold in controlled vocabulary and syntactic structures so that the linguistic levels proceed gradually from the most basic to the more advanced.
[2] Abridged stories are retold versions of authentic stories. The length is shortened as a result of simplifying and summarizing plots. Language complexity is also reduced.

information passages, for instance, the introduction of a Japanese festival. Third, according to Crossley, Louwerse, McCarthy, and McNamara (2007), authentic and simplified texts have their respective advantages and disadvantages for English learning. The main benefit of using authentic texts is that they contain natural language that facilitates comprehension. However, simplified texts are easy to understand owing to the use of highly frequent and familiar words together with repetition of messages. Hsueh-chao and Nation (2000) even proposed specifically that for independent and comfortable reading comprehension to take place, a reading text should contain not more than 2% of unknown vocabulary. Finally, several studies (e.g., Asraf & Ahmad, 2003; Day & Bamford, 2002; Rodrigo et al., 2007) provide specific implementation guidelines for the extensive reading of linear texts.

In comparison, we know much less about reading multimodal texts available via ICT, not to mention the extensive reading of them. Existing literature (e.g., Evans, 2005; Lankshear & Knobel, 2006; Leu, Kinzer, Coiro, & Cammack, 2004; Smolin & Lawless, 2003; Warschauer & Ware, 2008) posits developing students' new literacies as essential after the advent of ICT. Moreover, reading multimodal texts can be effective in developing English literacy (e.g., Al-Othman, 2003; Coiro & Dobler, 2007). Nevertheless, we do not know if reading multimodal texts extensively, which is supposed to contribute to developing new literacies, will benefit English language learners either as much as or even more than the traditional type of extensive reading. The answer to the question cannot be inferred but

requires investigation for two reasons. One is that existing research on Internet reading is mostly related to reading informational type of multimodal texts (e.g., Coiro & Dobler, 2007; Pino-Silva, 2006), which are not fiction, while fiction is widely used in the extensive reading of linear texts. The other reason is that Internet multimodal texts are mostly authentic because their target readers and listeners are usually not EFL learners with limited English proficiency. Therefore, further investigations should be undertaken to understand whether EFL learners' interactions with Internet multimodal texts of fiction presented mostly in authentic and natural English contribute to the development of their English proficiency.

Since the beneficial effect of reading linear text extensively on EFL learners' development of English proficiency has been established relatively firmly by existing literature, a feasible approach to investigate possible effects of multimodal text extensive reading would be evaluating the extensive reading of multimodal text against that of linear text. Moreover, the need to involve a comparison group with the same English curriculum but without extensive reading arises because the EFL classes involved in the study would have to be convenience groups of freshmen taking a required English course. The inclusion of a comparison group then makes it workable to measure effects of extensive reading on the development of English proficiency by holding constant the variable of the English course that both the group of linear text and that of multimodal text have to take.

The Problem

The purpose of this quasi-experimental study is to examine effects of English Internet extensive reading on the development of Taiwanese undergraduate English learners' English proficiency.

Hypotheses

(1) A difference exists in English proficiency as measured by the simulated Test of English for International Communication (TOEIC) among the participants who read English multimodal text extensively on the Internet, the learners who read linear printed text extensively, and the learners who simply go through the same English curriculum as the other two groups of participants.

(2) A difference exists in motivation for English reading as measured by the Motivation for Reading Questionnaire among the participants who read English multimodal text extensively on the Internet, the learners who read linear printed text extensively, and the learners who simply go through the same English curriculum as the other two groups of participants.

(3) Participants' motivation for English reading and involvement in extensive reading predict their English proficiency.

(4) Participants' application of certain reading strategies is associated with their experience with extensive reading.

Assumptions

(1) Participants of the experimental groups (extensive reading of linear text and extensive

reading of Internet multimodal text) followed the printed instructions of respective

extensive reading programs, chose what was appropriate to their individual English

competence and what interested individuals, and read English text, but not its Chinese

version.

(2) Participants of English Internet extensive reading took advantage of the multimodality

available on the Internet.

(3) Participants put forth an honest effort on the simulated TOEIC pre- and post tests and all

questionnaires.

(4) The simulated TOEIC pre- and post tests provided a valid and reliable measure of

participants' English proficiency.

(5) The 15-item Motivation for Reading Questionnaire (Appendix A) provided a valid and

reliable measure of participants' motivation for reading.

Delimitations

(1) Since participants were convenience samples, the study generalizability is limited to

undergraduate EFL learners in Taiwan who share similar characteristics with the

participants.

(2) Since the measure of English proficiency was simulated TOEIC tests, the demonstration

of English proficiency was limited to listening and reading skills.

(3) What the survey instruments revealed was limited to individual participants'

interpretation of survey contents and their honesty in giving their actual responses to the

items.

Limitations

(1) This study can not identify such specific elements as increase in vocabulary or reading

speed that may account for improvement in English proficiency.

(2) Although participants should know the amount of reading that was considered extensive

because it was stated clearly on their extensive reading instruction handout and their

reading log titled "Graded-Reader Reading Log" (Appendix D) for the group reading

linear text and "Online Reading Log" (Appendix D) for the group reading multimodal

text, their honesty in reporting their self-regulated reading defines whether they indeed

read extensively or not.

(3) Control over the materials available for the participants interacting with multimodal text

on the English Internet was very loose. The reason is although proper Web sites

(Appendix G) were suggested on the introduction handout to them and a PBWorks Web

site[3] was set up for the access of only the group reading multimodal text, the cyberspace

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[3] The URL of the Web site is http://onlineer.pbworks.com/w/page/31719493/List-of-Web-Sites. Participants of
multimodal text extensive reading were allowed access with their e-mail accounts and passwords.

is so open that it was impossible to have control over what participants actually accessed.

(4) Since the simulated TOEIC tests are paper-and-pencil tests, the participants of English

Internet extensive reading had no chance to demonstrate any reading comprehension

skills that are specific with online reading if there are any.

Terms

(1) **Extensive reading** refers to reading at least one book per week (Day & Bamford, 2002).

Using a graded reader of Oxford Bookworms series published by the Oxford University

Press as an example, the length is more or less 36 pages of approximately 250 words per

page. In terms of the total number of words, it is approximately 9,000 words per week.

Individuals select what is easy and interesting to them, read for pleasure and information,

and do few exercises afterwards (Day & Bamford, 2002).

(2) **EFL** stands for English as a foreign language, which refers to learning English in a

country where English is not a mother tongue.

(3) **Graded readers** are stories written or retold in controlled vocabulary and syntactic

structures so that the linguistic levels proceed gradually from the most basic to the more

advanced.

(4) **Linear text** is usually printed text although it can be spoken, too. It is linear because the

messages are conveyed in a linear fashion dictated by the author and the conventions of

the formation of a printed page and its comprehension requires serial cognitive

processing (Luke, 2003). Thus, for comprehension, one usually needs to start from the beginning to the end although it is possible to skip parts.

(5) **Multimodal text** contains more than one "mode" of text. In other words, meanings are conveyed through a combination of modes such as written words, spoken language, still pictures, and moving images. The comprehension requires parallel processing of different modes of text (Luke, 2003).

(6) **ICT** stands for Information and Computer Technology. Some examples are CD-ROMs, cell phones, and the Internet.

(7) **New literacies** are subject to a "historical period of social, cultural, institutional, economic and intellectual change that is likely to span many decades" (Lankshear & Knobel, 2006, p. 63). Thus, what new literacies are right now may become conventional several decades later. Lankshear and Knobel use the plural form of literacy because they accept Scribner and Cole's (1981) notion of regarding literacy as "a family of practices—literacies" (Lankshear & Knobel, 2006, p. 66).

(8) **TOEIC** is the Test of English for International Communication. It is designed to evaluate nonnative English speakers' English proficiency for such practical purposes as daily and workplace communication.

Significance of the Study

This study is expected to be significant in four aspects. First, it is a pioneer in the study

of possible effects of English Internet extensive reading on learners' development of English literacy. Second, it provides statistical data regarding the role of motivation for reading via extensive reading on EFL learners' development of English proficiency and statistical data concerning the association between extensive reading and the application of several reading strategies. Third, it provides implications for modification of the claim that multimodal texts are those with which learners today have wide and frequent contact and in which learners need development. Finally, the findings should provide EFL practitioners with information with which they can ponder over the issue of whether to incorporate Internet English in their curricula, and if yes, how.

CHAPTER TWO

REVIEW OF LITERATURE

Several researchers provided empirical support that extensive reading of printed

materials, in which messages are usually conveyed in a linear fashion, improves English

language learners' reading speed (Bell, 2001; Lao & Krashen, 2000; Tanaka, 2007), reading

comprehension (Bell, 2001; Mason & Krashen, 1997; Tanaka, 2007), vocabulary (Lao &

Krashen, 2000; Pigada & Schmitt, 2006), motivation (Asraf & Ahmad, 2003; Lao & Krashen,

2000), and even writing (Mason & Krashen, 1997). The general premise of these studies is

Krashen's (1982) input hypothesis, the notion of which is that receiving comprehensible

input enables a learner to acquire the target language. An example of comprehensible input is

texts that a language learner can understand independently and comfortably. In the

researcher's opinion, providing learners with comprehensible input is aligned with

Vygotsky's (1978) Zone of Proximal Development (ZPD),[4] which refers to the area in

between acquired ability and the subsequent ability that takes guidance and support to

develop.

Other researchers (e.g., Evans, 2005; Lankshear & Knobel, 2006; Smolin & Lawless,

2003; Warschauer & Ware, 2008) argued that young people of this century have frequent

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[4] However, Vygotsky's ZPD commonly serves as a theoretical framework for the studies that take language development as a social process and, therefore, focus on examining the effects of, for instance, scaffolding and interactions between instructors and students (e.g., Gibbons, 2003; Ko, Schallert, & Walters, 2003). Moreover, even Krashen (1985) himself referred to Chomsky when distinguishing subconscious *acquisition* from conscious *learning*, and subconscious *acquisition* is the underlying premise of input hypothesis.

contacts with Information and Computer Technology (ICT). They use cell phones and

iPhones. They send e-mail and text messages. They take advantage of the search and

communication functions of the World Wide Web. All of the examples above indicate that

students today interact with multimodal texts that are different from traditional linear printed

text in that meanings are conveyed through a combination of modes such as written words,

spoken language, still pictures, and moving images. Moreover, their interactions with

multimodal text via ICT have changed the nature of traditional literacy. Researchers have

suggested that reading multimodal text on line develops self-regulated reading (Coiro &

Dobler, 2007) and increases reading speed (Al-Othman, 2003) and motivation (Arnold, 2009).

These favorable effects of ICT reading thus foreground the importance of providing EFL

learners with the opportunity to interact with multimodal texts in an extensive reading

program.

In this chapter, I will first outline the implementation guidelines of extensive reading

followed by a brief discussion of proper reading materials. Then, I will share some research

studies that posit the extensive reading of printed linear texts, particularly graded readers, as

effective in upgrading reading comprehension, accelerating reading speed, increasing

vocabulary, improving writing in English, and fostering interest in reading. After that, I will

elaborate on the advocacy of new literacies in response to the wide and rapid spread of ICT.

Finally, I will share studies that support Internet reading because it promotes reading

motivation, increases reading speed, and exercises self-regulated reading strategies. Since

only two reviewed studies are Internet extensive reading programs, a gap is present, which

requires investigation to explore the effects of Internet extensive reading on developing EFL

learners' English proficiency.

Extensive Reading: Linear Text

Studies of extensive reading (e.g., Asraf & Ahmad, 2003; Bell, 2001; Mason &

Krashen, 1997; Lao & Krashen, 2000; Rodrigo et al., 2007; Tanaka, 2007) shed light on basic

implementation guidelines and proper reading materials, the combination of which illustrates

what extensive reading is. In addition, they posit the potential of extensive reading in

improving EFL learners' English competence.

Implementation guidelines. Asraf and Ahmad (2003) and Rodrigo et al. (2007)

explicitly outlined basic implementation guidelines for extensive reading and organized the

extensive reading programs they studied accordingly. Although stated in different wording,

both programs stressed guidance, encouragement, the freedom to choose texts at learners'

independent reading levels, and a relaxing classroom atmosphere where the extensive reading

proceeded regularly. In fact, these researchers utilized the commonly cited principles of

implementing extensive reading—the top ten principles sketched out by Day and Bamford

(2002). These principles include (1) reading materials that the learners can comprehend with

ease, (2) a variety of topics, (3) freedom of choice, (4) reading as much as possible, probably

at least a book a week, (5) reading for pleasure, information, and general understanding, (6) reading for the reward of reading, (7) fast reading speed, (8) individual and silent reading, (9) teacher's orientation and guidance, and (10) teacher being a role model. Moreover, after reviewing a number of successful extensive reading programs, Pilgreen (2000) concluded that conducting follow-up activities which are undemanding was one essential factor for an extensive reading program to succeed. It is indeed true that all the successful extensive reading programs reviewed for the current study contain follow-up activities, for instance, writing book reports and giving oral presentations (Bell, 2001), writing short summaries and keeping a personal reading log (Mason & Krashen, 1997), and discussing the reading and writing of two short essays (Lao & Krashen, 2000).

Proper reading materials. The basic implementation guidelines foreground the importance of providing learners with interesting reading materials that they can comfortably comprehend independently so that they read fast and enjoy reading. The researchers of most of the reviewed studies (i.e., Asraf & Ahmad, 2003; Bell, 2001; Mason & Krashen, 1997; Tanaka, 2007) used graded readers, which are simplified stories written with systematic control over lexicon and syntax to result in progressive difficulty and complexity for different levels of readers. Nevertheless, authentic novels, the target readers of which are not EFL learners with limited English proficiency, were used successfully in other studies (i.e., Lao & Krashen, 2000; Rodrigo et al., 2007). This logically suggests that it is not just reading a lot

that counts. Reading proper materials is also important, and both simplified and authentic

materials seem to be appropriate for extensive reading if they interest particular learners and

the learners feel comfortable with the linguistic complexity.

As to possible reasons why both simplified and authentic texts should be proper

extensive reading materials, Crossley, Louwerse, McCarthy, and McNamara's (2007) study

provides some justifications. They used Coh-Metrix, a program that computes readability of

texts, to examine several linguistic aspects of authentic and simplified texts. The results

indicate that authentic and simplified texts have their respective advantages and

disadvantages for English learning. On one hand, simplified texts facilitate English learning

because they contain more coreferential cohesion,[5] common connectives,[6] and frequent and

familiar words. On the other hand, they are not beneficial to English learners because they

have less diversity in parts of speech, causality, and complex logical operators.[7] Insufficient

use of the aforementioned results in unnatural language and thus does not facilitate

comprehension. In brief, the findings lead to the conclusion that though English learners need

to learn with simplified English texts, they should benefit from authentic texts that match

their language proficiency.

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[5] An example of coreferential cohesion is found in the following sentences: "When water is heated, it boils and
eventually evaporates. When the heat is reduced, it turns back into a liquid form." (Graesser, McNamara,
Louwerse, & Cai, 2004, p. 199) The coreferntial cohesion is available when different forms of the same word
"heat" is used as in "heated" in the first sentence and "heat" in the second sentence.
[6] Examples of connectives are *in other words*, *moreover*, *before*, and *because*.
[7] Examples of logical operators are *or*, *and*, and *if-then*.

Effects of extensive reading. Several research studies indicate that extensive reading is effective in upgrading reading comprehension, accelerating EFL learners' reading speed, increasing acquisition of vocabulary, improving writing in English, and fostering positive viewpoints of pleasure reading in English. First, Tanaka (2007) explored the effect of extensive reading on roughly 113 students in their first year of a public high school in Sapporo, Hokkaido, Japan. The control group was the other half of the same year group in the same school. The extensive reading materials were 38 short passages whose topics accorded with the students' interests. The percentage of unknown words in each passage was carefully controlled not to exceed 5%. The instructor also introduced graded readers and encouraged participants in the experimental group to read them. Altogether, only 18 students read graded readers. The reading comprehension test results favored only those 18 students. The other participants, who read the 38 short passages but not any graded readers, also improved in reading comprehension, though not significantly better than the control group. As for reading speed, the experimental group performed significantly better than the control group no matter whether they had read graded readers or not.

Second, a similar demonstration of improvement in reading comprehension after reading graded readers was found by Bell (2001). Bell subjected one group of elementary level EFL learners in Sana'a, Yemen to an extensive reading program of graded readers and another group of the same level to an intensive reading program in which they read short

passages and did tasks aimed at helping them to learn the vocabulary, grammar, and rhetoric

patterns woven in the passages. After about a year, he used a cloze test[8] and a

comprehension test of multiple choice and true/false questions to measure increases in

comprehension as well as reading speed. Students who had read graded readers posted

significantly higher gains in not only comprehension but also reading speed than those who

had done intensive reading. In other words, in addition to confirming Tanaka's (2007) finding

that reading graded readers could have a positive effect on English reading comprehension,

Bell's findings point to its favorable effect on reading speed.

Third, Lao and Krashen (2000), like Bell (2001), also found that extensive reading

accelerated reading speed besides increasing vocabulary and interest in pleasure reading.

They conducted extensive reading with freshmen in a Hong Kong university. Six

experimental classes were assigned five authentic novels and chose the sixth one to read,

while two control groups had speaking, writing, listening, and reading in the traditional

English class. The outcome favored the students of the experimental group. They exhibited

an increase in reading speed and vocabulary acquisition over a semester (14 weeks). The

escalation of reading speed was equivalent to an increase from 235 to 327 words per minute.

As to the growth in vocabulary, when it was translated into vocabulary size, the result was an

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[8] A cloze test consists of reading passages with blanks to fill in. The first and last sentence of each paragraph is
intact while every certain number of words, for example, every tenth word, is a blank for test takers to fill in
with a grammatically correct and conceptually meaningful word so that the statements and paragraphs make
sense.

increase from 17,000 words to 20,000 words. These students also thought more positively of

pleasure reading in English than those in the control groups. Their findings are worthy of

attention mainly owing to the different choice of reading materials. Unlike the other studies

in which graded readers were used, the participants read authentic novels and achieved

improvement in reading speed, vocabulary, and interest in pleasure reading.

Mason and Krashen (1997) performed three successive extensive reading experiments

with various groups of college students in Japan, and the outcomes bear similarities with

most of the aforementioned studies. Participants in the experimental groups chose what they

liked to read from a bank of graded readers, while the control groups received traditional

instructions. The findings indicate that extensive reading can increase EFL learners'

performance in English as measured by pre- and post cloze tests, and a reading

comprehension post test, which are also revealed by both Tanaka's (2007) and Bell's (2001)

studies. Moreover, extensive reading participants improved significantly in writing in

English.

These studies convey the notion that as long as an extensive reading program is

conducted by following the implementation guidelines well, EFL learners are likely to

benefit from it. Among the guidelines are the principles of providing learners with reading

materials that they can comprehend with ease and are interested in reading. On condition that

a text fulfills the criteria, either graded readers or authentic novels should be appropriate

materials because they offer different advantages to EFL learning.

Extensive Reading: Multimodal Text

Researchers (e.g., Evans, 2005; Lankshear & Knobel, 2006; Smolin & Lawless, 2003; Warschauer & Ware, 2008) who have been concerned with the impact of ICT on literacy advocate a conceptual modification of literacy from the traditional focus on linear texts to that of multimodal texts. Juxtaposing this advocacy of new literacies with studies revealing effects of online reading on motivation (Arnold, 2009), reading speed (Al-Othman, 2003), and application of reading strategies (Coiro & Dobler, 2007), the current study explores the effects of Internet extensive reading on EFL learners' development of English proficiency.

ICT and new literacies. To understand the relationship between new literacies and Information and Communication Technologies (ICT), it would be helpful to first adopt the expanded definition Fecho and Meacham (2007) ascribe to reading and then ponder over the definition of new literacies shared by Lankshear and Knobel (2006). Fecho and Meachan, adopting the broader ideas of text and reading advocated by Freire (1970) and The New London Group (2000), deem reading in the 21st century "as the ability to make meaning of that which can be read. As such, gestures, moods, sounds, art, weather conditions, and the like can be read, in that we can interpret meanings from them" (p. 167). These expanded definitions of text and reading are encompassed in the conception of new literacies elaborated by Lankshear and Knobel. They first establish the concept that *new* does not have

to be *technological*. Rather, newness includes "participation," "distributed expertise,"

"collective intelligence," "collaboration," "dispersion," and "sharing" (p. 60). They further

define literacies as "socially recognized ways of generating, communicating and negotiating

meaningful content through the medium of encoded texts within contexts of participation in

Discourses (or as members of Discourses)" (p. 64). The definition subjects the nature of

literacies to changes with time, for "socially recognized ways" and "medium of encoded

texts" evolve through time. Apparently, what has been evolving quickly with time in this

century is technologies. Technologies have, in turn, facilitated the manifestation of the

characteristics of newness proposed by Lankshear and Knobel. Therefore, although what is

new does not have to be technological, ICT certainly plays an essential role in new literacies

today.

   Kinds of ICT literacy. Affirming the importance of ICT in the development of

literacy in the 21st century, Smolin and Lawless (2003) illustrate four kinds of ICT literacy:

technological literacy, visual literacy, information literacy, and intertextuality. They, quoting

from U.S. Department of Education (1997), define technological literacy as "the ability to

use computers and other technology to improve learning, productivity and performance" (as

cited in Smolin & Lawless, p. 571). As for visual literacy, they use the definition from the

International Visual Literacy Association (1998) and state that it is "the ability to understand

and produce visual messages" (as cited in Smolin & Lawless, p. 571). They then identify

information literacy as "the ability to find, evaluate, analyze, and synthesize information" (p. 571). Smolin and Lawless explain intertextuality as drawing connections among the present multimodal text on a topic that students are exploring with relevant prior multimodal texts to achieve an understanding that does not arise from a vacuum. These assorted literacies that ICT is capable of supporting substantiate the role of ICT in the development of new literacies.

Need to include multimodal text in literacy curricula. Like Smolin and Lawless (2003), Luke (2003) also perceives the impacts of ICT on literacy. The perception impels Luke to implicitly stress including multimodal text in literacy curricula. Advocating "new hybrid methodologies and theories" (p. 402) in research, Luke explains that modern texts, which refer to multimodal texts available via new media such as hypertexts, games, and text messaging, "have muted into complex, hybrid semiotic systems that have made new demands on reading and writing, viewing, social exchange, and communication" (p. 401). Such new demands on literacy certainly imply their legitimate position in academic learning.

Some scholars explicitly advocate incorporating ICT multimodal texts into content area learning for several reasons. First, Kress (2003) explains a fundamental difference between printed texts and images—*telling* and *showing*. Printed texts *tell* ideas, while images *show* them. They are both texts but require different *pathways* to comprehension, which should be taught explicitly. Accepting this idea, Bearne (2005) concludes that because

children, having interactions with multimodal texts, might think multidimensionally, teaching instructions must involve multimodality. Third, Caskey (2008) specifically identifies integrating electronic literacies into academic instruction for struggling adolescent readers because these are likely to be what they can and like to read and thus reading them will contribute to building up confidence. Although adolescent EFL learners are not necessarily struggling readers, their English reading competence is normally much lower than that of English native speakers. In other words, linguistically they resemble struggling adolescent English native speakers. Therefore, it seems reasonable to assume that introducing them to the kinds of electronic literacies they are familiar and comfortable with will increase chances of experiencing successful comprehension.

   The irreversibility of ICT trend and literacy. Other scholars' notions concerning changes in modern literacy suggest the irreversibility of this ICT trend and consequently the need to prepare children today for future literacy. Leu and Kinser (2000) and Leu et al. (2004) have detected the necessity to merge literacy instruction with ICT because of three sociocultural factors. The first factor is global economic competition, which renders it crucial for employees to make effective use of information and communication. This includes accessing information quickly, evaluating it appropriately, and using it to solve problems efficiently. Undoubtedly, our present students, who will compete for jobs in this environment, must be equipped with such literacy competences. The second element is government

policies. Awareness of global economic competition has propelled governments worldwide to put emphasis on upgrading their citizens' levels of literacy, which inevitably includes literacy of ICT multimodal texts. Finally, technologies themselves are evolving rapidly. What was uncommon five years ago, for example, the use of Internet and e-mail, is ubiquitous today. The same is true for the meaning of literacy, which depends on the contexts it is situated in, and the contexts nowadays are closely intertwined with rapidly changing technologies. These sociocultural factors make it indispensable to fuse literacy with ICT. Warschauer and Ware (2008), after elaborating on the radical alternation that ICT has caused to literacy, equate ICT access and literacy to "the new print literacy of the 21st century" (p. 228). The metaphor further compares those who cannot use ICT effectively to the people who could not read in the 20th century and, therefore, posits the unalterable trend of ICT literacy.

In brief, traditional literacy has expanded to new literacies due to fast evolving ICT and its pervasive status in the modern world. Sociocultural factors associated with globalization, government policies, and the speedy advancement of technological science mandate the undeniable need for ICT literacy in the 21st century. Therefore, an extensive reading program that is devoted to fostering EFL literacy should investigate ways of incorporating ICT literacy.

Multimodal text and extensive reading. Pino-Silva's (2006) study directly urges integrating ICT in extensive reading. Pino-Silva subjected his participants to a Web-based

extensive reading program that had evolved from a paper-based extensive reading program

he started more than 10 years earlier. Participants read Internet articles issued by journals

such as *Discover*, *Scientific American*, and *Newsweek*. The follow-up activity was filling in a

worksheet and then posting it on the online Yahoo Group set up for this purpose. The

participants' responses to an open-ended questionnaire indicate that they felt they had learned

new vocabulary and appreciated the flexibility of choosing what and when to read and the

fact that the Internet offers access to hundreds of new and interesting magazine articles. They

also liked being able to have frequent contacts with the instructors because of the Internet.

Pino-Silva, therefore, concluded that extensive reading on the Internet was a pedagogical

approach that was worth developing.

Although not aiming at investigating the bond between extensive reading and the

literacy involving ICT multimodal text, Al-Othman's (2003) study indirectly encourages

incorporating multimodal texts in extensive reading. The reason is that the findings bear

connection with Lao and Krashen's (2000) finding that extensive reading improves reading

speed. Al-Othman implemented two tests, an Online Speed Reading Test and a simulated

TOEFL (Test of English as a Foreign Language) Reading Subtest, to 25 post-graduate

students enrolled in an ESL program in Kuwait after they took a background questionnaire

survey. The survey results identified 12 of them as being familiar with using the computer

while the others were not. Examining the association between the two test results revealed a

strong positive correlation ($r = 0.92$) between reading speed and performance on the Reading Comprehension subtest of Computer-Based Test (CBT) of TOEFL, and those who demonstrated high reading speed were those who were familiar with using the computer. If using the computer often is compared to reading printed texts much, the study results suggest that extensive reading of multimodal text is likely to increase reading speed, and a higher speed of reading on computer screens can have positive effects on computer-based reading comprehension tests.

Coiro and Dobler's (2007) study, which is not an example of Internet extensive reading, can nonetheless support investigating Internet extensive reading because Internet reading appears to prompt the activation of reading strategies. To explore the online reading comprehension strategies used to search for, locate, and comprehend information on the Internet, they studied 11 sixth-grade skilled printed-text readers. Participants were given sets of content questions to answer and Web sites to begin looking for the answers. The questions were designed in a way that encouraged students to stay within the pages of one informational Web site while finding answers in different locations. Think-aloud protocols were applied to understand these sixth-graders' reading comprehension processes while reading on the Internet. The protocol data were obtained by recording and transcribing participants' descriptions of what they were thinking in their minds while searching for answers and their responses to the pre- and post reading interview questions. The study led to

the conclusion that online reading requires the application of prior knowledge sources, inferential reasoning strategies, and self-regulated reading processes. The application of these reading strategies is both similar with and more complicated than that in the situation of reading printed texts. The study thus posits the reading of multimodal texts as effective in exercising reading strategies that facilitate comprehension.

In sum, the irreversible trend of ICT has necessitated the modification of traditional literacy of linear texts to new literacies, which encompass multimodal texts. Moreover, studies, though scarce in number, suggest that online reading develops motivation, increases online reading speed, and facilitates the application of reading comprehension strategies. The reviewed literature thus supports the investigation of reading multimodal texts extensively in relation to the development of English proficiency. Since the positive effects of linear text extensive reading has been established relatively firmly, it appears feasible to explore the effect of multimodal text extensive reading by comparing multimodal text extensive reading with linear text extensive reading. However, since participants of this study were EFL learners enrolled in a required freshman English course designed to develop their English proficiency, this quasi-experimental study included a comparison group that was involved in the extensive reading of neither linear nor multimodal text.

CHAPTER THREE

METHODOLOGY

Participants

Since the population of interest was undergraduate EFL learners in Taiwan, three

classes of EFL learners in a college located in Southern Taiwan were involved in the study.

They were the freshmen classes that three of the researcher's former colleagues taught in the

fall semester of 2010. Each group had approximately 55 freshmen of different majors and

from different parts of Taiwan. Most had graduated from vocational high schools. Females

outnumbered males (on average about 82% of females in each group), which is historically

the student demography of this college situated in a municipal city in Southern Taiwan.

The fact that convenience groups had to be the participants of this study inevitably

posed threat of selection to the study. To detect the possibility of such threat, a survey was

conducted to gain understanding of the geographical regions they came from and the high

schools they had graduated from. Information was also collected to obtain a general view of

their college majors and their overall English proficiency as assessed by the CSEPT.[9]

Participants' geographical backgrounds. Noticeably, more CG (comparison group)

participants' came from more prosperous regions of Taiwan than LG (linear group) and MG

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[9] The CSEPT is the College Student English Proficiency Test. It is a standardized test administered by the Language Training and Testing Center (LTTC) in Taipei, which is a widely recognized EFL test provider in Taiwan.

(multimodal group) participants (Table 1). Historically, Northern Taiwan is the most

prosperous region of Taiwan. The degree of prosperity is followed by first Southern Taiwan

and then Central Taiwan, while Eastern Taiwan is the last among them. Possible effects of

different degrees of prosperity on EFL learners' English development is not a point of study

in this research. It is simply assumed that disproportional geographical backgrounds might

imply different opportunities and even qualities of previous EFL education among the groups

before they entered this college of research site. An examination of the participants'

geographical backgrounds in Table 1 below shows that about 80% of CG participants came

from more prosperous regions (Northern and Southern Taiwan). The next high percentage is

about 62% in the group of participants who did the extensive reading of multimodal text

(MG). As for the participants who did the extensive reading of linear text (LG), about 53% of

them were from more prosperous regions of Taiwan.

Table 1

Participants' Geographical Backgrounds

Group: Total student number	Northern		Southern		Central		Eastern	
	#	%	#	%	#	%	#	%
CG (Comparison): 59	19	32	28	48	12	20	0	0
LG (Linear): 53[a]	12	21	18	32	22	39	1	2

| MG (Multimodal): 53 | 10 | 19 | 23 | 43 | 18 | 34 | 2 | 4 |

Participants' high-school backgrounds. The research site is a technical college, and the major source of undergraduate students in technical colleges and universities in Taiwan is vocational high schools although some graduates of ordinary high schools, the main goal of which is to prepare students for the national entrance examinations to gain access into their ideal academic colleges or universities, choose to study in a technical college or university. Some vocational high schools provide their students with the opportunities to focus on developing English proficiency. The table of participants' high-school backgrounds provides a general overview of their high-school educational traits (Table 2). About 85% to 91% of participants graduated from vocational high schools. A much greater proportion of MG participants (36%) had studied with an emphasis on English in comparison with the proportion of LC participants (11%) and CG participants (7%).

Table 2

Participants' High-School Backgrounds

Group: Total student number	Vocational (emphasis on English)	Vocational (emphasis on others)	Ordinary

	#	%	#	%	#	%
CG (Comparison): 59	4	7	49	83	6	10
LG (Linear): 53[a]	6	11	42	74	4	7
MG (Multimodal): 53	19	36	29	55	5	9

[a]The actual total number of LG participants is 57. However, four were absent on the day of survey for participants' background information, and one indicated that the person did not graduate from any of the kinds of high school listed on the survey.

Participants' college majors. Each group of participants was freshmen from nine to 10 different departments of the college. Table 3-1 and Table 3-2 are lists of participants' majors,[10] the numbers of participants affiliated to the departments of their majors, and the percentage of a specific affiliation in relation to the total number of students in that group. The tables are divided by grouping together the majors involving learning a foreign language (Table 3-1) while the rest are put in the other table (Table 3-2). This grouping reveals that at least half of the participants in each group (51% in CG, 53% in LG, and 66% in MG) majored in a subject related to learning a foreign language.

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[10] In Taiwan, college students begin their freshman study with a major, and thus each freshman is affiliated to a specific department.

Table 3-1

Participants Majoring in Subjects Requiring Learning a Foreign Language

Group (Total #)	CG (59)		LG (57)		MG (53)	
Major	#	%	#	%	#	%
French	6	10	9	16	8	15
German	7	12	6	10.5	4	8
Spanish	4	7	2	3.5	7	13
Japanese	12	20	13	23	15	28
Translation and Interpreting	1	2	0	0	1	2
Sub-Total	30	51	30	53	35	66

Table 3-2

Participants Majoring in Subjects Not Requiring Learning a Foreign Language

Group (Total #)	CG (59)		LG (57)		MG (53)	
Major	#	%	#	%	#	%
Applied Chinese	9	15	9	16	5	9
International Affairs	2	3	4	7	2	4
International Business Administration	6	10	6	10.5	2	4

Information Management and Communication	4	7	2	3	3	6
Communication Arts	8	14	6	10.5	6	11
Sub-Total	29	49	27	47	18	34

Participants' English proficiency. CG and LG participants appeared to be more similar in their English proficiency as measured by the CSEPT than MG participants in comparison with them (Table 4). All freshmen of the research site are required to take the CSEPT (College Student English Proficiency Test) in August before the beginning of their freshmen study. The CSEPT is administered by the Language Training and Testing Center (LTTC) in Taipei, a widely recognized standardized EFL test provider in Taiwan. Based on the test results, freshmen are assigned into six different levels with one designating the lowest in English proficiency. One of three level-3 classes was the comparison group (CG) and another was the experimental group of linear-text extensive reading (LG). One of five level-4 classes was the experimental group of multimodal-text extensive reading (MG). They were classes the respective instructors of which had agreed to participate in the current research study. As disclosed by Table 4 below, CG and LG are nearly identical regarding their English proficiency as evaluated by the CSEPT they took before the beginning of the fall semester in 2010, while the lowest group score of MG (175) is nearly the same as the highest group score of CG (173) and LG (174).

Table 4

Participants' Group CSEPT Scores

CSEPT Group	Lowest Score	Highest Score	Mean	SD
CG (Comparison)	151	173	161.7	7.4
LG (Linear)	151	174	161.4	7.9
MG (Multimodal)	175	213	195.2	10.8

Participants' Freshman English course. In addition to the aforementioned

characteristics, all the participants were involved in this study while taking their required

course of Freshman English. In this 5-credit course, four language skills of reading, writing,

listening, and speaking are integrated, and the textbooks are decided by a committee

responsible for designing its curricula. Table 5 is a list of the book titles and the groups using

each (indicated by a check mark, ✓). Each group had three textbooks and a reader. The books

for CG and LG were exactly the same. Participants of MG used books of the same series but

a higher level.

Table 5

Group Course Books for Freshman English

Book Title	Group	CG	LG	MG

Touchstone[11] (2A)	✓	✓	
Touchstone (2B)			✓
Fundamentals of English Grammar[12]	✓	✓	
Understanding and Using English Grammar[13]			✓
Active Skills for Reading: Book 2[14]	✓	✓	
Active Skills for Reading: Book 3[15]			✓
A Christmas Carol[a]	✓	✓	
Gulliver's Travels[a]			✓

[a]Both *A Christmas Carol* and *Gulliver's Travels* are graded readers published by Oxford University Press. The former is a Stage-3 retold classic while the latter is a Stage-4 one.

In sum, the participants of three different groups shared the characteristic of having, on average, about 82% of females in each group. Apart from this, the participants of CG and LG resembled each other more than either group resembled MG. First, their high-school backgrounds were alike. Second, about half of the participants' undergraduate majors were subjects involving learning a foreign language. Third, they began their study at the research site with nearly identical English proficiency as measured by the CSEPT. Finally, they used

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[11] McCarthy, M., McCarten, J., & Sandiford, H. (2005). *Touchstone*. New York: Cambridge University Press.
[12] Azar, B. S. (2003). *Fundamentals of English grammar* (3rd ed.). White Plains, NY: Pearson Education.
[13] Azar, B. S. (1999). *Understanding and using English grammar*. White Plains, NY: Pearson Education.
[14] Anderson, N. J. (2007). *Active skills for reading: Book 2* (2nd ed.). Boston, MA: Heinle ELT.
[15] Anderson, N. J. (2008). *Active skills for reading: Book 3* (2nd ed.). Boston, MA: Heinle ELT.

exactly the same books while taking Freshman English in two different classes and taught by

two different instructors. The only aspect that CG participants appeared to be different from

LG participants is region of origin. Eighty percent of CG participants came from more

prosperous regions (Northern Taiwan and Southern Taiwan). About 53% of LG participants

came from these same regions, and LG and MG (62%) resembled each other in this respect.

In general, participants of MG were not very different from those of CG and LG except in

three respects. One is a greater percentage of them (36%) studied with an emphasis on

learning English (CG: 7%; LG: 11%) in their vocational high schools. Another is their

English proficiency as evaluated by the CSEPT (M = 195.2; SD = 10.8) was higher than that

of CG (M = 161.7; SD = 7.4) and LG (M = 161.4; SD = 7.9). The other seeming difference is

they used a higher level of the same series of books that CG and LG participants used (Table

5).

  Before conducting the experimental study, an IRB (Institutional Research Board)

certificate of exemption was obtained (IRB Number: 11224). It was obtained before the

researcher conducted her pilot study of the same topic in March 2010. Participants also

received an informed consent form in English, read and understood the brief explanations of

this research study and participants' rights with the help of their respective instructors, and

signed it to indicate their agreement to participate in the study.

Instruments

Six instruments were used. The results of two instruments and part of the third

instrument were computed statistically, while the rest provide insight into individual

participants' interactions with texts, recorded amounts of reading, and their feedback to the

extensive reading program after experiencing it.

Simulated TOEIC. Of the instruments whose results were computed statistically, one

is a simulated TOEIC pretest and a simulated TOEIC post test to measure changes in the

participants' overall English proficiency. Several research studies (e.g., Bell, 2001; Lao &

Krashen, 2000; Mason & Krashen, 1997; Pigada & Schmitt, 2006; Tanaka, 2007) have

provided findings that extensive reading can improve learners' language proficiency. The

TOEIC scores are posited as valid and reliable in evaluating language learners' English

proficiency by the first study[16] (Woodford, 1982) on it and a recent one[17] (Zhang, 2006).

However, the TOEIC tests used in this study are simulated tests. The length of these tests was

roughly 40% of a real TOEIC, and the content was not developed by ETS.[18]

MRQ. The second instrument whose results were computed statistically is Motivation

for Reading Questionnaire (MRQ) (Appendix A). This 15-item MRQ is included in the study

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[16] Woodford's (1982) study findings of the first TOEIC administered in Japan on December 2, 1979: total reliability—.96 with the standard error of 34.93; validity as estimated by the correlation between TOEIC scores and direct measures of language ability—.90 for listening and .79 for reading..

[17] Zhang's (2006) study finding of the same TOEIC test administered in Japan and Korea on the same day in 2003: All the KR-20 estimates of reliability were over .90.

[18] ETS (http://www.ets.org/) stands for Educational Testing Service. It is an organization that develops, administers, and scores standardized tests, which include those for learners of English as a foreign or second language, for example, TOEFL and TOEIC.

because three reviewed articles (Arnold, 2009; Asraf & Ahmad, 2003; Lao & Krashen, 2000) suggest that extensive reading can increase motivation in EFL reading. The MRQ used in this study is adapted from Wigfield and Guthrie's (1997) MRQ. In their study, Wigfield and Guthrie examined the internal consistency reliabilities of all 80 items once in fall and again in spring and those of the remaining 53 items after deleting 27 of them also once in fall and again in spring. The reliability values of eight aspects of reading motivation ranged from .60 to .81, with the exception of Reading Work Avoidance, whose one reliability value was .44.[19] (These eight aspects of reading are Efficacy, Challenge, Curiosity, Involvement, Recognition, Social, Compliance, and Work Avoidance.) In another more recent study, Wigfield et al. (2008) assembled 18 items from the longer version of MRQ to measure participants' intrinsic motivation, and the Cronbach's alpha reliability of these items was .88.[20]

Instead of having items that are associated with all 11 aspects[21] of motivation identified by Wigfield and Guthrie, nine of those that the researcher, based on her experiences of having taught in the experimental site for over 20 years, judged as relevant to administering extensive reading to EFL learners in the researched institute. For example, since participants would not be graded for their comprehension of the English texts they

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[19] A table of the internal consistency reliability values of all 11 aspects is on page 424 of Wigfield and Guthrie's (1997) article.
[20] Wigfield et al. (2008) did not provide an appendix of all 18 items. They simply gave one example for each of the following aspects: preference for challenge, involvement, curiosity, and self-efficacy.
[21] These 11 aspects of reading motivation are: Reading Efficacy, Challenge, Curiosity, Reading Involvement, Importance, Recognition, Grades, Social, Competition, Compliance, and Reading Work Avoidance (Wigfield & Guthrie, 1997).

chose to read, no items related to the motivation of Grades is included. The nine aspects of

motivation included in this research MRQ are: Reading Efficacy, Challenge, Curiosity,

Involvement, Importance, Recognition, Social, Compliance, and Reading Work Avoidance.

Moreover, some wording is changed so that each statement sounds related to reading in

English as a foreign language and encompasses both printed and online texts. For example,

instead of the original statement—"I like hard, challenging books" (Wigfield & Guthrie,

1997, p. 431), the statement is *I like to read hard, challenging English texts*. Three groups of

participants responded to this 15-item MRQ both before and after the implementation of

extensive reading program to measure their changes in interest in EFL reading.

Reading questionnaire. The third instrument, English Online- and Print-Reading

Questionnaire (Appendix B), was implemented to gain insight into individual participants'

experiences and interactions with English texts. It is adapted from Coiro and Dobler's (2007)

Student Questionnaire about Reading on the Internet. Coiro and Dobler used the

questionnaire to understand their participants' experiences and self-evaluated ability of

searching and reading on the Internet. The modification was done mainly in three ways. One

was adding questions related to reading printed English books (e.g., questions #10 – 13 in

Appendix B). Second, questions of applying the reading strategy of prediction (question #7

and 11) and evaluation (question #8 and 12) were added. They were prompted by Coiro and

Dobler's findings that comprehending information on the Internet requires complex

application of strategies used to understand printed text, for example, prior knowledge and inferential reasoning. One kind of inferential reasoning is *forward inference*, and one example is prediction. In addition, different facets of inferential reasoning, which include evaluation, are activated to achieve comprehension. Therefore, this questionnaire contains items that ask participants to rate their application of prediction and evaluation on a scale of six levels ranging from *Almost Never* (0-10% of the time) to *Nearly Always* (90-100% of the time). Considering that participants might not understand what *evaluation* refers to in reading, the researcher, informed by Coiro and Dobler's explanation of evaluation, broke it down into evaluating the *relevance, accuracy, reliability, and/or meaningfulness* of text and gave their translation in Chinese on the questionnaire.

The third modification was adding questions about participants' habit and weekly amounts of reading English graded readers (questions #14 and 15 in Appendix B) besides the questions used by Coiro and Dobler (2007) to understand their participants' experiences with using the Internet (questions #1 and 2 in Appendix B). The main purpose of these questions (#1, 2, 14, and 15) was to identify the participants who had probably done the kind of reading that they were not supposed to. For instance, if a CG participant or an LG participant read extensively on the Internet, it would be necessary to consider whether to take this participant as a *contaminator*. Such collected information would probably affect the statistical analyses. The questionnaire was administered once before the extensive reading program began and

again when it ended to provide understanding of all participants' interactions with both linear printed texts and multimodal texts prior to and after administrating extensive reading programs to the participants of experimental groups.

Student worksheets. The fourth instrument is two student worksheets. One, titled KWL Worksheet (Appendix C), contains three questions for students to answer before and after reading their chosen texts to encourage and reveal possible activation of schemata, or prior knowledge, to aid comprehension. The inclusion of a KWL Worksheet is informed by studies (e.g., Coiro & Dobler, 2007; Eskey, 2005) that posit the activation of schemata as facilitating reading comprehension. Moreover, since several scholars advocate incorporating new literacies into curricula (e.g., Bearne, 2005; Caskey, 2008; Kress, 2003), to encourage the participants of multimodal text to experience the multimodality available on the English Internet, on their Online KWL Worksheet (in Appendix C) are questions that urge them to search on English Web sites and read, view, listen to, and/or watch anything related to their chosen stories. The other worksheet is a log sheet (Appendix D) for students to record their reading frequency and time to provide a general view of their weekly reading amount. The other items on the Reading Log were designed to reveal participants' reasons for finishing or not finishing a story and perceptions of extensive reading in that week.

Instructor log. The fifth instrument is an instructor's weekly log sheet (Appendix E) for instructors to record their observation of students' engagement in the extensive reading

programs in class, students' need for support, and instructors' comments on the extensive

reading program in that week. With this instrument, the researcher attempted to gain some

knowledge of instructors' observations and perspectives of the extensive reading programs

for possible ideas of modification for improvement.

Extensive reading questionnaire. Finally, the participants of experimental groups

responded to Extensive Reading Questionnaire (Appendix F). It was administered after the

end of the extensive reading program with the intention to know their feedback. Items on this

survey questionnaire include their reasons for reading or not reading extensively and their

preference for doing or not doing extensive reading, having the extensive reading of linear or

multimodal text, and reading stories or articles. The last item invites participants' comments

on the extensive reading activity they experienced.

Procedures

This experimental research began in the week of Oct. 11th, 2010. In the first week of

class, an instructor introduced either the extensive reading of graded readers or Internet

extensive reading to respective experimental groups with the introduction handouts and

PowerPoint presentation prepared by the researcher. The introduction included the purpose of

extensive reading program, students' expected amount of reading per week and related

assignments, and a suggested list of graded readers for the group of linear text and Web sites

of narrative stories for the group of multimodal text. The instructor of the comparison group

explained to the students that they were invited to participate in the study to provide a baseline for the investigation. Then students were given the informed consent form to read, ask questions about, and then sign if they agreed to be a participant. Next, the instructors administered the simulated TOEIC pretest to all participants after explaining to them that for research purpose, their present English proficiency had to be evaluated. In the following week, participants responded to the pre-questionnaires, namely Motivation for Reading Questionnaire (Appendix A) and English Online- and Print-Reading Questionnaire (Appendix B), and the actual extensive reading program also began, The program continued for twelve weeks.

Description of intervention. The extensive reading activity took place in class once per week, and students were expected to continue doing extensive reading in their free time. A typical in-class procedure included guidance, individual reading activity, and brief sharing. First, an instructor gave guidance provided by the researcher via PowerPoint presentations. The content was what the researcher judged as helpful to the participants by juxtaposing her knowledge of implementing extensive reading with what she perceived as a support to the participants after reading their KWL Worksheets and Reading Logs submitted via e-mail. For example, after receiving MG participants' Week-1 assignments, the researcher found that more than 70% of them had not explored Web sites related to the stories they had read (item 4 on Online KWL Worksheet). Some of these participants responded to this item by repeating

the URLs of the stories they had read. This then gave the impression that even though it had been explained in the introduction of online extensive reading to MG participants, the majority still did not know how to respond to this item on their worksheet. The researcher then prepared a PowerPoint file with an example to repeat to them what they could and were expected to do to take advantage of the multimodality available on the English Internet.

After the presentation of supportive guidance, students were given approximately 20 to 30 minutes to engage themselves in their individual extensive reading activity. The session is also referred to as *sustained silent reading* because students are expected to continue reading silently for that period of time in class. Individual activity during this session included all or part of the following. First, students responded to the first two questions on their KWL Worksheet (Appendix C)—*What do I know about the story* and *What do I want to know about the story*—before starting reading. Then they read their chosen stories silently. If they finished the story within the period allocated for in-class sustained silent reading, they could answer the third question on the KWL Worksheet—*What do I learn after reading the story*. After this, a participant of MG was expected to explore the English Internet for whatever the person judged as interesting and relevant to the story having been read and respond to the fourth item, which is also the last item, on their Online KWL Worksheet. When the sustained silent reading ended, students shared what they had just read with neighboring classmates for two to three minutes. Finally, the instructor invited one to three students to share with the

whole class what they had just read.

General guidance to LG and MG. In light of the ninth rule of the top ten principles of implementing extensive reading that Day and Bamford (2002) have sketched out, instructors should provide guidance to students of extensive reading program. In two major ways, the researcher attempted to provide guidance aiming at helping the participants of LG and MG to do their respective extensive reading activities as beneficially as possible. The first way was instructions given by means of PowerPoint slides prepared by the researcher, presented by the respective instructors in class, and posted on the participants' college e-learning cyberspace for their voluntary review. One example is the instruction of an easy way to decide whether the reading levels of their chosen stories were appropriate for them. Participants would first count up to 300 words. Then, they would read from the first to the 300th word and tallied every unknown word. If the total number of unknown words exceeded six, which is greater than 2% of unknown words suggested by Hsueh-chao and Nation (2000) for independent comfortable reading comprehension, the reading levels should not be appropriate for them. Another example is what has been mentioned in the previous section—providing whatever guidance the researcher judged as helpful to participants after reading their assignments submitted via e-mail. The other way was giving feedback to individual participants via e-mail for personal encouragement and/or further directions to help students to take advantage of the extensive reading activity.

Particular guidance to MG. Participants of multimodal text received particular

guidance in two respects. One is the introduction of several Web sites of relatively controlled

semantic and syntactic text. This was considered useful primarily because what is available

on the English Internet is usually not targeted at EFL learners. Moreover, the cyberspace

contains so many accessible materials that such guidance likely saved participants time in

finding appropriate stories to read. The other guidance was in interacting with the

multimodality available on the English Internet. With the PowerPoint presentation prepared

by the researcher, the instructor of multimodal text demonstrated how one could access, for

instance, a film clip or images related to the story topic, an oral presentation of a story, or

another story of a similar topic. For MG participants' convenience, a PBWorks Web site was

set up for them to use. On the Web site were brief instructions of doing online extensive

reading followed by a list of the hyperlinks to suggested story Web sites arranged from

shorter and linguistically easier stories to longer and more difficult ones (Appendix G). In

addition to this list of suggested Web sites was a page of three examples exemplifying how

one could explore Web sites related to a chosen story to profit from the multimodality

available on the English Internet.

In the 13th week, which was the week of Jan. 3rd, 2011, and also the last week of

extensive reading programs, participants responded to the post questionnaires. The content of

MRQ (Appendix A) and that of English Online- and Print-Reading Questionnaire (Appendix

B) were exactly the same as those of pre-questionnaires to reveal their motivation for reading and their online and print reading situations after the implementation of extensive reading programs. The experimental groups, referring to the participants of LG and MG, took the post experiment survey titled Extensive Reading Questionnaire (Appendix F) to provide insights into their experiences with the extensive reading of either linear or multimodal text. In the following week, they took the simulated TOEIC post test, which contains similar question types (but not identical questions) as those of the pretest. The completion of the post test marked the end of the entire procedure.

Design

The design of this study is quasi-experimental because participants were intact groups of students. The intervention (independent variable) was extensive reading, either reading English narratives extensively on the Internet or reading printed English stories extensively. The measured outcome (dependent variable) was the participants' changes in English proficiency, motivation for reading, and application of certain reading strategies.

Analysis

Part of collected data was analyzed statistically while the rest descriptively. The alpha level for statistic tests was set at .01. Assumptions of parametric data were tested for the simulated TOEIC pre- and post test scores and for the MRQ pre- and post questionnaire score sums by running the Kolmogorov-Smirnov test for normal distribution and the Leven's test

for homogeneity of variance. Participants' simulated TOEIC pre- and post test scores were

correlated with their CSEPT scores to examine the validity of these simulated TOEIC tests.

Tests of analysis of covariance (ANCOVA) were run to detect changes in participants'

English proficiency by holding the pre-test scores of simulated TOEIC as the covariate to

eliminate the impact of participants' different degrees of English competence at the beginning

of the study on the post test scores at the end of the study. Similarly, ANCOVA tests were

used to assess possible changes in participants' motivation for reading before and after the

experiment. Multiple regression provided understanding of the association between

participants' English proficiency and the predictors, namely the motivation for reading, the

extensive reading of linear text, and that of multimodal text. Chi-square tests were applied to

observe if relation existed between having or not having experienced extensive reading and

the changes in the application of certain reading comprehension strategies. Descriptive

analysis of questionnaire responses contains percentages.

CHAPTER FOUR

RESULTS

The current study was designed to examine effects of English Internet extensive reading on Taiwanese undergraduate English learners' English proficiency. Four hypotheses were tested. The first is that a significant difference existed in simulated TOEIC test scores among the comparison group (CG), linear group (LG), and multimodal group (MG). The second is that a significant difference existed in 15-item Motivation for Reading Questionnaire (MRQ) scores among groups. The third hypothesis tested is that participants' MRQ scores and involvement in extensive reading predicted their TOEIC scores. The final hypothesis tested is that participants' application of reading strategies was associated with their experience with extensive reading.

To test the hypotheses, data was collected and the following was analyzed statistically: TOEIC, MRQ (Appendix A), and participants' self-reported application of the reading strategies of locating, predicting, and evaluating reading text, which are questions #5, 7, 8, 11, and 12 on the English Online- and Print-Reading Questionnaire (Appendix B). First, the simulated TOEIC pre- and post test scores and the MRQ pre- and post questionnaire score sums were tested for normal distribution and homogeneity of variance. Q-Q plot graphs were further consulted when a seeming violation was detected. Second, a significantly positive correlation was found both between the participants' CSEPT scores and TOEIC pretest scores

and between their CSEPT scores and TOEIC post test scores. This posited the simulated

TOEIC pre- and post test scores as valid in evaluating participants' English proficiency. Third,

the ANCOVA tests detected significant changes in participants' simulated TOEIC scores but

not in their MRQ scores. Two additional ANCOVA tests were conducted to find out if the

significant difference in TOEIC scores were affected by outliers or *contaminators*. The

outliers were the participants whose absolute z-score values of simulated TOEIC pre- and/or

post test scores were higher than 2.58. The contaminators were the participants who had done

the kind of extensive reading that they should not have done as defined by the group they

belonged to and revealed by their responses to the first four questions and #14 and 15 on

English Online- and Print-Reading Questionnaire (Appendix B). These additional ANCOVA

test findings confirmed the significant difference in simulated TOEIC post test scores. Fourth,

multiple regression tests revealed that having or not having the extensive reading of either

linear or multimodal text predicted participants' simulated TOEIC post test scores, while

their MRQ scores did not. Finally, chi-square test results did not support a significant

association between experiencing or not experiencing extensive reading and participants'

self-reported application of the reading strategies of locating, predicting, and evaluating

reading text.

First Hypothesis: Difference in Simulated TOEIC Scores

Participants of CG, LG, and MG took the simulated TOEIC pretest in October 2010

before the launch of extensive reading programs to measure their English proficiency at that

point of time and then the simulated TOEIC post test at the beginning of January 2011, after

the 12-week implementation of extensive reading. The collected simulated TOEIC pre- and

post test scores were first examined for the assumption of normal distribution and

homogeneity of variance. The p-values of Kolmogorov-Smirnov (K-S) test results were all

greater than the alpha criterion of .01 (Table 6). Regarding the Levene's test for homogeneity

of variance, the variances of simulated TOEIC pretest scores were equal across all three

groups of participants, $F(2, 153) = 1.84$, ns, and so were the simulated TOEIC post test

scores, $F(2, 153) = 3.59$, ns. These test results then confirmed that the score distributions of

the simulated TOEIC pre- and post tests were normal and their variances were equal.

Table 6

Kolmogorov-Smirnov Test Results of Simulated TOEIC Scores

Group	df	Pre-TOEIC Statistic (*D*)	Pre-TOEIC Sig.	Post TOEIC Statistic (*D*)	Post TOEIC Sig.
CG	58	.07	.20	.09	.20
LG	48	.12	.13	.09	.20
MG	50	.09	.20	.07	.20

The reliability and validity of TOEIC have been established and recognized.[22]

However, the tests used in this research study were simulated tests, the length of which was roughly 40% of a real TOEIC and the content of which was not developed by ETS. Thus, it appears necessary to examine the correlation between participants' simulated TOEIC pre- and post test scores with their scores of CSEPT (administered by LTTC in Taiwan), which is a standardized test of English proficiency. Positive and significant, though not strong, relations were detected between TOEIC pretest scores and CSEPT scores, $r = .25$, p (one-tailed) $< .01$, and between TOEIC post test scores and CSEPT scores, $r = .33$, p (one-tailed) $< .001$. This posited the simulated TOEIC as relatively valid in measuring participants' overall English proficiency.

After the validity of simulated TOEIC was established, ANCOVA was run by holding participants' simulated TOEIC pretest scores as the covariate. The covariate was significantly related to the participants' simulated TOEIC post test scores, $F(1, 152) = 26.93$, $p < .001$, $r = .39$. There was a significant difference in groups' simulated TOEIC post test scores after controlling the effect of simulated TOEIC pretest scores, $F(2, 152) = 10.92$, $p < .001$, partial $\eta^2 = .13$. In other words, extensive reading had a significant effect on participants' English proficiency as measured by the simulated TOEIC post test after controlling the effect of pre-test scores.

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[22] Further information of the reliability and validity of TOEIC is given in Footnote 16 and 17 on page 36.

The next concern, then, was where the significant effect lied. Did it lie between the comparison group and the experimental groups or between the experimental group of LG and that of MG? To find out, post hoc tests were conducted. The test results indicated that having extensive reading of multimodal texts significantly increased participants' simulated TOEIC post test scores, $t(152) = -3.89$, $p < .001$, $r = .30$. However, no difference existed between reading linear or multimodal texts, $t(152) = 0.16$, $p > .01$, $r = .01$.

Finally, caution was taken to address the issue of participant inclusion to ensure that the aforementioned statistic test results were affected by neither outliers nor *contaminators*. To detect an outlier, the researcher first converted all participants' simulated TOEIC scores into z-scores and then counted those whose absolute z-score values were higher than 2.58. In a normal distribution, the percentage of z-score values higher than 2.58 should not exceed one (Field, 2009). Because the percentages in CG and MG were greater than one (Table 7), those participants were temporarily identified as outliers. Altogether, there were four, one in the pretest and three in the post test. ANCOVA was run after excluding them from the data. A significant relation was still found between the covariate (simulated TOEIC pretest scores) and the dependent variable (simulated TOEIC post test scores), $F(1, 148) = 19.35$, $p < .001$. A significant difference was also detected in groups' TOEIC post test scores after controlling the effect of pretest scores, $F(2, 148) = 10.01$, $p < .001$, partial $\eta^2 = .12$.

Table 7

Participants with Absolute Z-Score Values Higher Than 2.58

Participant's group	Pre-TOEIC			Post TOEIC		
	Score	Z-score	%	Score	Z-score	%
CG				48	-2.95	2
CG	50	-2.88	2			
MG				330	2.93	
MG				314	2.60	4

To ensure that the data was not *contaminated* by the participants who had done the extensive reading of either linear or multimodal text that was not the independent variable of their group, participants' responses to the first four questions and #14 and 15 on the English Online- and Print-Reading Questionnaire (Appendix B) were examined. For example, if an LG or CG participant's most-performed and/or second-most performed English Internet activity (responses to item #2 in Appendix B) was searching for and reading certain English Web sites to learn more about a topic and the student spent approximately at least 30 minutes[23] weekly on it, it was considered possible that this LG or CG participant had also done online extensive reading unintentionally and voluntarily. It was unintentional because

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[23] Thirty minutes is used as the benchmark because 24 minutes is the average weekly online reading time reported by MG participants on their weekly Reading Log sheets (Appendix D), and 24 minutes is close to half an hour. An hour is the benchmark used to identify non-LG participants who appeared to have read graded readers as much as LG participants because the weekly average reading time reported by LG participants is 51 minutes.

the person probably had not intended to read on line to improve English. It was voluntary

because, being an LG or CG participant, the student had not been required to do English

online reading. Since it was possible that this had certain impact on the person's TOEIC post

test score, it appeared necessary to consider whether this participant should be excluded from

the data of LG or CG. Altogether 26 such cases were identified, and ANCOVA was run after

excluding their data. The results were still a significant relation between the covariate

(TOEIC pretest scores) and the dependent variable (TOEIC post test scores), $F(1, 126) =$

24.48, $p < .001$, and a significant difference in groups' TOEIC post test scores, $F(2, 126) =$

8.67, $p < .001$, partial $\eta^2 = .12$ after controlling the effect of pretest scores. In brief, the test

for outliers and the test for contaminators showed that they did not impact the overall

ANCOVA test results of simulated TOEIC. Consequently, the decision was using the

available data without excluding any participants.

Second Hypothesis: Difference in MRQ Scores

All participants took the pre-MRQ (Appendix A: Motivation for Reading

Questionnaire) in the first week of implementing extensive reading programs to experimental

groups in October 2010. In the final implementation week in January 2011, they took the post

MRQ, the content of which was exactly the same as that of pre-MRQ. The ordinal scale of

the response to each questionnaire item ranges from 1 to 6. The numeric 1 indicates that a

statement *hardly* described a participant's reading in English either of printed materials or on

the Internet, or that the description was 0-10% appropriate. The numeric 6 indicates that a

statement *excellently* described a participant's reading in English, or that the description was

90-100% appropriate. The averages of individual participants' responses were calculated.

Then, ANCOVA was applied by holding participants' score averages of pre-MRQ as the

covariate. The pre-MRQ scores were significantly related to the post MRQ scores, $F(1, 150)$

$= 102.11$, $p < .001$, $r = .64$. However, there was not a significant difference in groups' post

MRQ scores after controlling the effect of pre-MRQ scores, $F(2, 150) = .04$, $p > .05$, partial

$\eta^2 = .00$. The result indicates that extensive reading did not have an effect on participants'

motivation for reading as estimated by the 15-item MRQ after controlling the effect of

pre-MRQ scores.

Third Hypothesis: Regression Between TOEIC and MRQ and Extensive Reading

Multiple regression tests were employed to inspect the association between post

TOEIC scores as a dependent variable and post MRQ score sums, having the extensive

reading of linear text, and having the extensive reading of multimodal text as three predictors.

Post TOEIC scores are an interval scale. Therefore, individual participants' post MRQ score

sums, not score averages (which are an ordinal scale) were used to run multiple regression

tests. Because post MRQ score sums resemble an interval scale, assumption tests were

applied to examine data distribution and variances. The K-S test statistics were not

significant except that of LG's post MRQ score sums, the significance value of which was

smaller than .01 (Table 8). As for Levene's tests of homogeneity of variance, the variances were equal across groups, $F(2, 135) = 3.31$, *ns*.

Table 8

Kolmogorov-Smirnov Test Results of Post MRQ Score Sums

		Post MRQ	
Group	df	Statistic (*D*)	Sig.
CG	45	.12	.15
LG	51	.16	.00
MG	42	.11	.20

Obviously, the assumption test results indicated that LG participants' MRQ post questionnaire sums violated the assumption of normal distribution. One option to deal with non-normality is data transformation. However, Field (2009) cautioned that transforming data inaccurately could lead to consequences worse than not transforming data. Thus, an alternative criterion of examining the Q-Q plot[24] graph of LG's post MRQ score sums was resorted to. It appeared that the deviation from normality could be considered minor (Figure 1) because most of the deviated dots[25] stayed close to normality, which was denoted by the black line on the graph. (On Figure 1, *Group = 1* refers to Linear Group.)

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[24] *Q-Q plot* stands for *quantile-quantile plot*. The Q-Q plot of LG participants' post MRQ score sums plots the quantiles, not individual values, of their post MRQ against the quantiles of a normal distribution.
[25] On Figure 1, the dots represent the quantiles of LG participants' post MRQ score sums.

Figure 1. Normal Q-Q Plot of LG's Post MRQ Sums

Normal Q-Q Plot of post MRQ sums
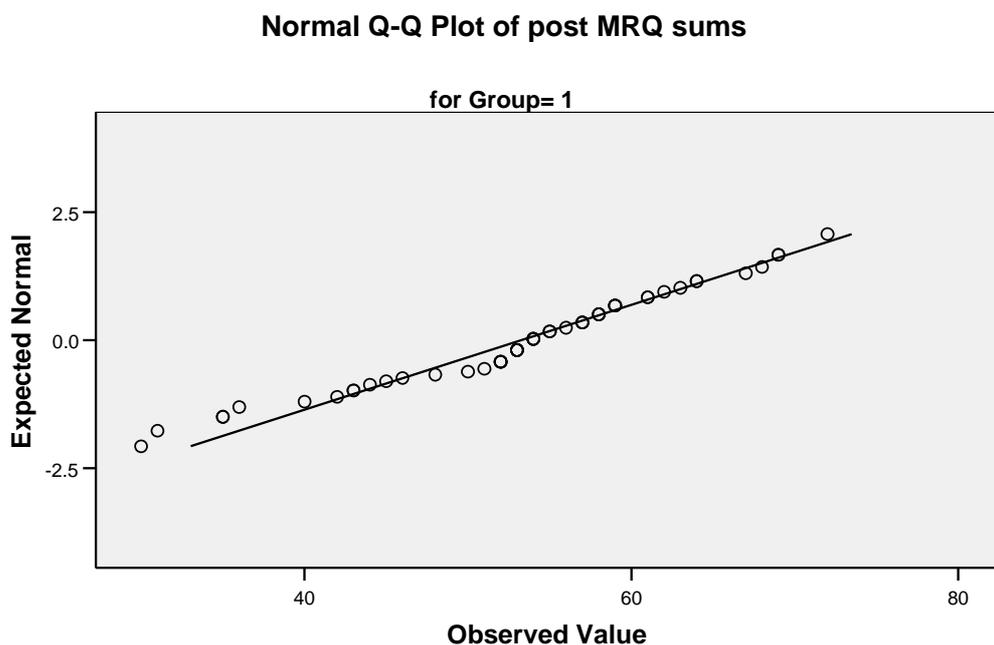
After the assertion that the participants' MRQ post questionnaire score sums generally

met the assumptions of parametric data, multiple regression tests were run. When

participants' post MRQ score sums were used alone to predict their post TOEIC scores, the

simple regression model did not make a prediction. The relevant statistics are in the Step-1

part of Table 9 below ($\beta = .18$, $p > .01$). This accounted for about 3% of the variation (R^2

$= .03$). After pulling into the model the variables of extensive reading programs, whether

participants had done the extensive reading of linear text ($\beta = .32$, $p < .001$) or multimodal

text ($\beta = .39$, $p < .001$) predicted their post TOEIC scores, while the post MRQ scores were

still not a significant predictor ($\beta = .15$, $p > .01$), and this accounted for about 13% more of

the variation ($\Delta R^2 = .13$). The similar standardized beta values of the extensive reading of

linear text (β = .32) and that of multimodal text (β = .39) indicate that both kinds of

extensive reading attained similar importance in this model. In sum, post MRQ score sums,

the extensive reading of linear text, and the extensive reading of multimodal text accounted

for about 16% of the variation in simulated TOEIC post test scores, in which post MRQ was

not a significant predictor.

Table 9

Multiple Regression of TOEIC, MRQ, and Extensive Reading

	B	SE B	β
Step 1			
Constant	141.53	22.83	
Post MRQ Scores	.91	.42	.18*
Step 2			
Constant	127.05	21.63	
Post MRQ Scores	.74	.40	.15*
Extensive Reading of Linear Text	32.26	9.01	.32**
Extensive Reading of Multimodal Text	40.38	9.36	.39**

Note: R^2 = .03 for Step 1, and ΔR^2 = .13 for Step 2 (p < .001). * p > .01. ** p < .001

Fourth Hypothesis: Association Between Reading Strategies and Extensive Reading

The purpose of giving items #5, 7, 8, 11, and 12 on the English Online- and

Print-Reading Questionnaire (Appendix B) was to unveil participants' application of the

strategies of locating, predicting, and evaluating multimodal text when reading on the

English Internet (#5, 7, and 8) and the strategies of predicting and evaluating linear text when

reading books (#11 and 12). Responses were grouped into two categories. Those of *Almost*

Never, *Seldom*, and *Sometimes* were categorized as *Rarely* applying a reading strategy, while

those of *Often*, *Usually*, and *Nearly Always* were categorized as *Yes*. Moreover, because LG

and MG participants did not differ in their simulated TOEIC post test scores as indicated by

the ANCOVA test results, they were merged into one category in contrast to the other

composed of CG participants. Chi-square tests were run question by question, and the results

are displayed in Table 10 below. Having or not having extensive reading was not

significantly associated with participants' self-reported application of the reading strategies

of location, prediction, and evaluation. The only chi-square test statistic value that is closest

to the pre-set alpha level of .01 is whether or not participants evaluated the linear text they

were reading, $\chi^2(1) = 4.94$, $p < .05$. About 59% of the participants who had done either the

extensive reading of linear or multimodal text appeared to evaluate the linear text while

reading in comparison with approximately 39% of the participants who had not done

extensive reading. The odd ratio suggests that the odds of participants evaluating the linear

texts they were reading were 2.25 times higher if they had extensive reading than if they did

not have it. However, the aforementioned disparities were not statistically significant.

Table 10

Chi-Square Results Regarding Applying Reading Strategies

Q		Strategy	χ^2	df	Asymp. Sig.
5	You are good at figuring out where to go on the English Internet to find what you want.	Locate	3.55	1	.06
7	You predict the content of what you will be reading, watching, and/or listening to while using the English Internet.	Predict	.42	1	.52
8	You evaluate the relevance, accuracy, reliability, and/or meaningfulness of what you are reading, watching, and/or listening to while using English Internet.	Evaluate	.07	1	.79
11	You predict what the coming text will be while reading English books (stories; textbooks).	Predict	1.03	1	.31

| 12 | You evaluate the relevance, accuracy, reliability, and/or meaningfulness of what you are reading while reading English books (stories; textbooks). | Evaluate | 4.94 | 1 | .03 |

In brief, the statistical analysis results posit that undergraduate EFL learners' interactions with narrative text available on the English Internet contributes to their development of English proficiency as much as reading traditional printed stories in English does. Moreover, this improvement in English proficiency is not associated with their motivation in reading. In other words, those who are better motivated to read in English do not necessarily score higher in an English proficiency test. In addition, involvement in the extensive reading of either printed linear or digital multimodal text does not impact their motivation for reading. Finally, experience with the extensive reading of either linear or multimodal text is not related to the application of such reading strategies as locating text on the Internet and predicting and evaluating reading text. The implications of these findings will be discussed in the coming chapter.

CHAPTER FIVE

DISCUSSION

This study was prompted by two notions. One is informed by the studies that posit the extensive reading of linear text as effective in developing English literacy. The other notion is that traditional literacy of linear text has evolved into modern literacy of multimodal text due to the widespread use of Information and Computer Technology (ICT). Furthermore, because the trend of ICT is irreversible, multimodal text should be included in literacy curricula. This quasi-experimental study then aimed at examining effects of English Internet extensive reading on the development of Taiwanese undergraduate English learners' English proficiency by comparing it against the relatively acknowledged effect of the extensive reading of linear text. Participants were freshmen taking a five-credit required course of English as a foreign language (EFL). Because participants had to be intact convenience groups, a comparison group was involved to hold the effect of this EFL course constant when evaluating the effect of extensive reading programs.

The findings from the statistical analyses suggest that the extensive reading of multimodal text is as effective as that of linear text in increasing undergraduate EFL learners' English proficiency. In contrast to the second, part of the third, and the fourth hypotheses, the increase does not seem to be associated with participants' motivation for reading or application of certain reading strategies. First, the results of the analysis of covariance

(ANCOVA) indicate that doing extensive reading of multimodal text is as effective as doing extensive reading of linear text in increasing undergraduate EFL learners' English proficiency. However, the experience with extensive reading does not impact learners' motivation for reading. Next, the analysis of multiple regression does not suggest an association between motivation for reading and English proficiency test scores but confirms that extensive reading is significantly associated with improvement in English proficiency test scores. Finally, the analysis of chi-square tests does not support a relation between learners' experience with extensive reading and their self-reported application of the reading strategies of locating, predicting, and evaluating reading text.

Internal Validity

Unavoidable variables other than the independent variable of extensive reading existed in this quasi-experiment. To maintain that the findings of significant improvement in TOEIC scores resulted from the intervention of extensive reading but not other unavoidable coexisting variables, it is necessary to address two issues of internal validity, selection and history.

Selection. Because the participants of the comparison group (CG), linear group (LG), and multimodal group (MG) were not randomly selected from their population, the specific characteristics they possessed might have affected the dependent variable of simulated TOEIC scores. The major concern was whether a certain group of participants was

linguistically better equipped to out perform the others in the simulated TOEIC. An examination of their backgrounds and CSEPT score averages suggests that such possibility either did not exist or did not exert an impact.

First, as presented in Table 1, a higher percentage of CG participants (80%), in comparison with that of LG (53%) and MG (62%), came from Northern and Southern Taiwan, which are historically more prosperous regions. What is usually associated with higher economic prosperity is more chances to learn English outside of regular classrooms. However, CG participants' CSEPT score average (M = 161.7; SD = 7.4) is nearly exactly the same as that of LG participants (M = 161.4; SD = 7.9) and lower than that of MG participants (M = 195.2; SD = 10.8) (Table 4). This should serve to eliminate the concern that they might have the characteristic of being linguistically more competent than LC and MG participants, which could result from having more chances to learn English before enrolling in the same college. Second, as shown in Table 2, a substantially higher percentage of MG participants (36%), in comparison with that of CG (7%) and LG (11%), had studied with an emphasis on English in their vocational high schools. In addition, MG participants' CSEPT group score mean (195.2) was indeed higher than that of CG (161.7) and LG (161.4). Nevertheless, this possible threat to internal validity was expected to be controlled in the analysis of covariance (ANCOVA) tests in which participants' simulated TOEIC pretest scores were the covariate. In other words, if MG participants' English competence was

indeed higher than that of CG and LG participants to begin with, the difference was dealt with in the ANCOVA tests.

History. Besides the intervention of extensive reading, LG and MG participants were simultaneously taking a five-credit required English subject. Moreover, any CG, LG, and MG participants could use the English Internet without affiliation to this study of extensive reading. These variables outside the independent variable of extensive reading could interfere with the dependent variable of participants' simulated TOEIC post test scores. The possibility that their significant improvement in English proficiency could result from taking the English required course was controlled by the inclusion of the comparison group, who underwent the same English curriculum. The application of ANCOVA tests to examine differences across three groups further served to minimize possible threat of this coexisting variable of required English course.

As for the other predictable possible threat that individual participants used the English Internet, their responses to the first two questions on the English Online- and Print-Reading Questionnaire (Appendix B) before and after the implementation of extensive reading should serve to diminish the concern. According to their responses to the first question, similar percentages of participants in respective groups visited English Web sites before and during the implementation of extensive reading (Table 11). In this case, if individual participants' interactions with the English Internet had impact on their simulated TOEIC scores, the

impact should not differ much across their respective groups' pre- and post test score means.

Table 11

Participants Having Visited English Web Sites

Group (Pre-Q total # / Post Q total #)	Pre-Q: # (%)	Post Q: # (%)
CG (58 / 53)	51 (88%)	40 (76%)
LG (57 / 56)	29 (51%)	33 (59%)
MG (52 / 50)	48 (92%)	49 (98%)

Moreover, the top one or two most performed activity on the English Internet rated by the greatest percentages of participants in each group was the same. In response to the second question on the English Online- and Print-Reading Questionnaire (Appendix B), participants rated downloading English music, films, or games as either their most-performed or second-most-performed activity on the English Internet. The total percentages of participants rating this item as the most or second most performed English Internet activity ranged from 76% to 82%. Downloading English music, films, or games is usually considered a recreational activity. However, it is also possible to argue that music, films, or games are examples of multimodal text based on Fecho and Meachan's (2007) expanded definitions of text and reading. Nevertheless, the total percentages of participants who rated this activity as their most-performed or second-most-performed English Internet activity varied little before and after the experiment in each group (Table 12). This then suggests that if the contact with

such multimodal text had impact on participants' simulated TOEIC test scores, the impact

should be similar.

Table 12

Downloading English Music, Films, or Games: Top 1 or 2 Most-Performed Activity

Group (Pre-Q total # / Post Q total #)	Rated as 1		Rated as 2		1 & 2 (%)	
	Pre-Q	Post Q	Pre-Q	Post Q	Pre-Q	Post Q
CG (51 / 40)	23	22	19	9	42 (82%)	31 (78%)
LC (29 / 33)	14	14	9	11	23 (79%)	25 (76%)
MG (48 / 49)	25	28	14	9	39 (81%)	37 (76%)

If the arguments above are convincing to diminish the concern of possible threats to

internal validity, it then is plausible to posit that doing the extensive reading of either linear

or multimodal text indeed leads to recognizable improvement in English proficiency. In other

words, the significant difference in simulated TOEIC post test scores and the multiple

regression test findings that doing or not doing extensive reading predicted simulated TOEIC

post test scores are likely to reflect factual associations between the improvement in English

proficiency and extensive reading of either linear or multimodal text.

The Role of Multimodal Text

On one hand, the findings that reading/listening to/viewing stories available on the

English Internet facilitates undergraduate EFL learners' development of English proficiency

as well as reading printed English stories underscores the role of multimodal text available

via the Information and Computer Technology (ICT) in literacy development. The

significance of the role has been advocated by many scholars who have argued for the need

to re-conceptualize traditional literacy and incorporate the literacy associated with ICT in

academic instruction (e.g., Bearne, 2005; Evans, 2005; Coiro, 2003; Kress, 2003; Lankshear

& Knobel, 2006; Leu and Kinser, 2000; Leu et al., 2004; Warschauer and Ware, 2008). On

the other hand, this study presents a different picture. Specifically, MG participants' KWL

Worksheet (Appendix C) and responses to the post experiment Extensive Reading

Questionnaire (Appendix F) hint that these undergraduate EFL learners might not share the

same view.

First, MG participants appeared to be much less enthusiastic in the extensive reading

activity than LG participants. This does not support the premise proposed by such scholars as

Bearne (2005) and Evans (2005) that learners today grow up with frequent interaction with

ICT and therefore should benefit from the instruction incorporating electronic literacies. As

shown in Table 13, MG participants' average weekly reading time (25 minutes) was just

about half of LG participants' (51 minutes). Moreover, only about one third (32%) of MG

participants turned in weekly assignments for at least four times during the 12-week

implementation of extensive reading. In contrast, two thirds (68%) of LG participants did

that.

Table 13

Reading Quantity

Group	Average weekly reading time	Frequency of assignment submission $\geqq$ 4
LG	51 min (43% of expected 120 min)	39 (68% of 57 participants)
MG	25 min (21 % of expected 120 min)	17 (32% of 53 participants)

Second, a low percentage of MG participants demonstrated interest in experiencing the

multimodality available on the English Internet. To provide chances for MG participants to

experience and benefit from the multimodality on the English Internet, the researcher gave

both implicit and explicit instructions. One implicit instruction was conveyed via the list of

Suggested Web Sites (Appendix G) to MG participants. Eight out of the total 13 suggested

Web sites provide oral reading of some stories and/or music, and several have illustrations to

view. The other implicit instruction was embedded in their KWL Worksheet, which was titled

Online KWL Worksheet (in Appendix C). It contained a fourth item that was not on the KWL

Worksheet for LG participants. This item asked for the URL of an English Web page, be it a

film clip, oral reading, or other kinds of digital materials, related to the story a participant had

read, and a brief statement telling what the person had learned from visiting that Web page.

To ensure that MG participants understood how to respond to this fourth item, explicit

instructions were given by means of three examples prepared by the researcher and

demonstrated by the classroom instructor to MG participants what they could do. For

instance, after reading a story titled "Mr. Coyote Met Mr. Snail"

(http://www.magickeys.com/books/coyote/index.html), they could view coyote pictures on

Google or watch a film clip and listen to coyote howling on the National Geographic Web

site for children (http://kids.nationalgeographic.com/kids/animals/creaturefeature/coyote).

Considering that some MG participants might need to review the examples and their steps,

the researcher further uploaded them on the participants' college e-learning cyberspace[26] and

the PBWorks Web site[27] that the researcher had prepared for the MG participants. Moreover,

when the researcher detected that a participant repeatedly missed responding to this fourth

item, she would encourage the person to do it via e-mail.

In spite of the aforementioned efforts to encourage interaction with multimodality

available on the English Internet, a small number of MG participants' KWL Worksheets

revealed that they had listened to the story. Moreover, MG participants explored other Web

sites to respond to the fourth item on KWL Worksheet for only 55 times, which is about 33%

of the total 167 times of English Internet story extensive reading recorded on their submitted

KWL Worksheets. Obviously, such data did not present the majority of MG participants as

being interested in interacting with the multimodality available on the English Internet for the

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[26] The access to the college e-learning cyberspace required a username and a password authorized by the college administration.
[27] The permission for access to this PBWorks Web site was controlled by the researcher.

purpose of improving their English literacy.

The final three pieces of data suggesting that MG participants might not appreciate opportunities to interact with English multimodal text are discerned from the percentages of their responses to two items (6a and 10c) on the post experiment Extensive Reading Questionnaire (Appendix F) in comparison with the percentages of LG participants' responses to the same items, and one item (2j) applicable only to MG participants (Table 14). One piece of data is that about 88% of MG participants would choose to read printed English books if they could choose either book or online extensive reading (item 6a on the questionnaire). The percentage was nearly as high as that of LG participants' choice (about 95%). This suggests that after experiencing online extensive reading, most MG participants preferred to read books. Another piece of data is only about 55% of MG participants rated the 12-week extensive reading as a good and helpful activity (item 10c on the questionnaire), while about 84% of LG participants checked this item as a comment on their experience of extensive reading. This piece of data is noteworthy when it is juxtaposed with the finding of similar significant improvement in simulated TOEIC post test scores across MG and LG. Apparently, less MG participants perceived this positive effect of online extensive reading than LG participants did of book extensive reading. The third piece of data is about 53% of MG participants' reason for not spending more than 100 minutes per week on extensive reading is it was tiring to read English words on a computer screen (item 2j on the

questionnaire). These pieces of data hint that after experiencing reading multimodal text on the English Internet, in general, MG participants did not appreciate interacting with it as much as their generation is assumed to by scholars.

Table 14

Preference for Reading Linear Text

Item		Group	LG		MG	
			#	%	#	%
6a	Reading English printed books		53	95	43	88
10c	It is a good and helpful activity		46	84	27	55
2j	It is tiring to read English words on a computer screen.	NA	NA		18	53

In short, multimodal text available via ICT might indeed play an indispensible role in the literacies of this era, but the role is not endorsed by the findings of this research study. These findings partly reflect Arnold's (2009) statement that the present generations' inclination for technology might have been overestimated especially in association with academic learning. Arnold qualitatively analyzed the data collected from seven undergraduate students and one graduate student who were eight of the participants (n = 12) involved in his study of German online extensive reading. (They were advanced learners of German as a foreign language. The students whose data was excluded from analyses were two auditors and two who had dropped the course by the end of the semester.) The students

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had complete freedom to choose what to read on line and 74% of their chosen text was journalistic articles. Similarly to the participants in the current study, Arnold's students did not demonstrate a strong preference for online reading although he observed an increase in motivation to read, self-confidence, and development in reading skills.

Extensive Reading and Motivation

The ANCOVA test results revealed no significant differences in participants' score averages of Motivation for Reading Questionnaire (MRQ) (Appendix A) between the pre- and post questionnaire across three groups. In addition, the multiple regression test results showed that participants' score sums of post MRQ did not predict their simulated TOEIC post test scores. These findings suggest that experiences with extensive reading did not have an impact on motivation for reading and motivation for reading did not play a significant role in these undergraduate EFL learners' development of English proficiency. This interpretation of the results in the current study is in contrast to studies which suggest that extensive reading of either printed stories (e.g., Asraf & Ahmad, 2003; Lao & Krashen, 2000) or Internet text (e.g., Arnold, 2009) motivated language learners to read for pleasure. Reading for pleasure is a characteristic of extensive reading (Day & Bamford, 2002) and should, according to the current study findings, lead to improvement in English competence. Nevertheless, none of the reviewed studies measured participants' motivation with a scale. The notion that participants were motivated was derived from their responses to researchers'

questions or from instructors' observation. In other words, these studies did not provide

knowledge of specific measurable elements for motivation for reading. The attempt to fill

this gap led to the application of part of the widely employed MRQ developed by Wigfield

and Guthrie (1997) in the current study. The statistical analysis findings of no difference in

participants' 15-item MRQ pre- and post questionnaire scores and no association between

post MRQ score sums and post TOEIC scores then propels a retrospective discussion of the

appropriateness to measure motivation for reading with the 15-item MRQ.

Measuring motivation with MRQ. The 15-item MRQ (Appendix A) used in the

current study was derived from Wigfield and Guthrie's (1997) MRQ. The employment was

supported by two sources of reviewed studies that presented the MRQ as a reliable

instrument to measure reading motivation. One was reports of its relatively acceptable

reliability in studies in which the instrument was used. For example, Wigfield et al. (2008)

reported the Cronbach's alpha[28] value of .88 for the reliability of four aspects (altogether 18

items on the questionnaire) of intrinsic motivation, namely challenge, involvement, curiosity,

and efficacy. (The nine aspects included in the MRQ for the current study contain these four

aspects.) The other source was the fact that all or parts of the full MRQ (54 items) have

continued being adopted, with or without modification, to measure motivation for reading in

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[28] According to Field (2009), a consensus is that a Cronbach's alpha value of .7 to .8 indicates that a scale is
reliable. However, it is also advised that the criteria differ when the construct that a scale measures differs. For
example, the acceptable value for intelligent tests should differ from that for ability tests.

recent studies conducted by scholars who are not the authors of MRQ. For instance, Law

(2008) used it to measure extrinsic motivation of second-grade Chinese children in Hong

Kong. Using Wigfield and Guthrie's MRQ for children as their blueprint, Schutte and

Malouff (2007) developed a motivation for reading questionnaire for their adult participants

in Australia. Tercanlioglu (2001) implemented the full 54-item version by Wigfield, Guthrie,

and McGough (1996) to measure the reading motivation of high-school EFL learners in

Turkey. Unrau and Schlackman (2006) administered the same full version to middle-school

children of different ethnicity backgrounds, the majority of which were Hispanic (75%)

followed by Asian (20%). Such wide application of the MRQ coupled with statistical reports

of relatively acceptable reliability (i.e., Wigfield & Guthrie, 1997; Wigfield et al., 2008)

encouraged the application of part of the MRQ in the current study.

Attempting to explain the statistical findings that supported association between

neither motivation and extensive reading nor motivation and changes in English proficiency,

the researcher resorted to further literature review. It led to two speculations. One speculation

is informed by Watkins and Coffey's (2004) study that questioned the validity of the MRQ.

Analyzing several studies in which the reliability of the MRQ was examined prompted

Watkins and Coffey to conclude that the complete MRQ of 54 items and 11 aspects of

reading motivation were multidimensional. However, they further pointed out that past

examinations applying confirmatory factor analysis (e.g., Baker & Wigfield, 1999) contained

flaws which rendered their findings debatable. They then collected MRQ responses from two

samples of elementary third-, fourth-, and fifth-grade students. They first ran confirmatory

factor analyses (CFAs) with all the 11 aspects as 11 factors and found that the 11-factor

structure did not fit their collected data. Then, exploratory factor analyses were conducted,

and eight factors, namely Grades-Compliance, Social, Competition, Involvement, Curiosity,

Recognition, Efficacy, and Work Avoidance, emerged for both samples. They further

cross-validated the results across both samples and found that the results from one sample did

not fit the other sample well. Based on these findings, Watkins and Coffey proposed that the

11 aspects of motivation used in MRQ should be modified.

Re-conceptualizing motivation. The other speculation informed by further literature

review is the possible need to study English learners' motivation for reading by

re-conceptualizing the motivation for second language (L2) learning. The major advocate of

this re-conceptualization is Dörnyei (2009). The idea is theorizing the motivation to learn

English as an L2 by encompassing English learners' *self* (Dörnyei, 2009; Ushioda & Dörnyei,

2009) in the model. The central notion of this model is the *ideal self*, the qualities that one

wants to possess in association with learning English. According to the researcher's

comprehension of this notion, an example of ideal self is seeking mastery in English because

a learner wishes to possess the trait of being able to communicate with people of different

nationalities in English. This example of *ideal self* can be one of *ought-to self* if the person is

obliged to be proficient in English owing to, for instance, parental expectation.

This notion of ideal self and ought-to self, in the researcher's opinion, is different from the intrinsic and extrinsic motivation measured by the MRQ. Wigfield and Guthrie (1997) defined intrinsic motivation as doing an activity for the sake of doing it. An example is reading to satisfy curiosity. Obviously, intrinsic motivation is different from ideal self, the focus of which is on the qualities that one wishes to possess. Although extrinsic motivation appears to be similar with ought-to self in that the incentive is external, they are fundamentally distinct. An example of extrinsic motivation is reading to earn a high grade in an English subject or test. It is extrinsic because earning a high grade is an external incentive. A comparable example of ought-to self could be reading to possess the ability of comprehending English text well because one has the obligation or responsibility; for instance, one is taking a required English reading course. If self is essential to conceptualizing undergraduate EFL learners' motivation for reading, employing part of the MRQ to measure participants' motivation for reading in English would not provide sufficient insight into these learners' motivation.

In brief, in spite of the wide use of the MRQ to measure motivation for reading in various research studies, the validity of existing MRQ appears to require further investigation. Taking account of this, the researcher reserves the assumption that experiencing extensive reading of either linear or multimodal text is not associated with undergraduate EFL learners'

motivation for reading in English and increase in English proficiency. Instead, she proposes

conducting further studies to examine the reliability and validity of the MRQ and considering

studying English learners' motivation for reading by theorizing it with the notion of English

learners' *self*.

Extensive Reading and Reading Strategies

Chi-square tests were applied to examine the association between having or not having

experienced the extensive reading of either linear of multimodal text and applying the

reading strategies of locating multimodal text on the internet (question #5 in Appendix B)

and predicting and evaluating either multimodal text (questions # 7 and 8 in Appendix B) or

linear text (questions # 11 and 12 in Appendix B) while reading. This attempt to unveil

possible existence of such association was mainly informed by Coiro and Dobler's (2007)

findings that Internet reading demands more complicated applications of prior knowledge

(schemata) and inferential reasoning than print reading.

The chi-square test results indicate that having or not having experienced the extensive

reading of either linear of multimodal text is not significantly associated with applying

reading strategies. One interpretation of this finding is that extensive reading does not

contribute much to developing reading comprehension strategies. This interpretation is in fact

endorsed by participants' answers to the first two questions on KWL Worksheet (Appendix

C): (1) *What do I know about the story?* (2) *What do I want to know about the story?* The

function of the first question was to prepare participants for the second question, which is predicting content of the story, because answering the first question should invite them to activate their knowledge, based on which a reader can predict the coming text. Even though participants had been instructed that they answered these two questions before starting to read a story and demonstrated how they could do so, many answers give the impression that they were given after the story had been read. For example, on an LG participant's last KWL Worksheet submitted in the 12th week, the person's answer to the first question is: *I know there has a cat help two kids to solve the problem*, and the answer to the second question is: *I want to know the detail about this adventure, because it's really funny*. (The story that this participant read is *The Cat in the Hat*, one Dr. Seuss story book.) Some answers even suggest that the participant did not know how to answer these questions that invite prediction. For instance, an MG participant's answer to the first question is: *A fish having a lot of trouble*. Similar with the LG participant's answer to the same question, this in fact shows that the participant had read at least part of the story. Then, the person's answer to the second question is: *It wants to see the sky*. (This online story is titled "The Journey of the Noble Gnarble."[29]) This statement does not answer the second question asking what a reader wants to know about a story. Even after the researcher respectively gave explanations via e-mail to

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[29] The story URL is http://www.magickeys.com/books/noblegnarble/index.html. Gnarble is a small fish that took a long and sometimes dangerous journey up to the surface of the ocean to see the sky.

about two dozens participants who repeatedly did not seem to know how to answer these two

questions at all, such answers that did not suggest participants had applied the strategy of

predicting reading text reoccurred in the answers given by at least a dozen of them.

Apparently, the contextual data discerned from participants' responses to the first two

questions on their KWL Worksheets (Appendix C) supports the interpretation of the findings

that experience with extensive reading was not associated with participants' application of

reading strategies. Perhaps these findings reflect Clark's (1980) *short-circuit hypothesis*

shared by Eskey (2005). According to Eskey's explanation, Clark's notion is that before

second language (L2) learners have accumulated enough proficiency in the language, they

cannot transfer their reading skills in first language to reading in the second language. It then

is possible that most participants' English proficiency had not reached that crucial level. As a

result, experiences with extensive reading neither facilitated nor developed their application

of reading strategies.

In sum, Coiro and Cobler's (2007) findings suggest that when reading informational

text on line, skilled readers of online text utilize more complicated reading strategies than

those required to comprehend printed text. This prompted the inclusion of questions related

to the application of the reading strategies of location, prediction, and evaluation in the

English Online- and Print-Reading Questionnaire (Appendix B). However, chi-square results

supported by the contextual data from participants' KWL Worksheet responses lead to the

speculation that EFL learners might not, as proposed by Clark (1980), transfer their reading

strategies in their first language to reading in English before their English proficiency reaches

a critical level. In his article, Clarke gave several pedagogical implications. One was for

teachers to help L2 learners develop efficient reading strategies. It then should be

pedagogically informative for future research to investigate how extensive reading of either

linear text or multimodal text or both can contribute to EFL learners' development of

efficient reading strategies.

Extensive Reading and Comprehensible Input

In essence, findings of the current study support Krashen's (1982; 1985) advocacy of

the importance of comprehensible input to language proficiency. The reason is what the

majority of LG and MG participants chose to read appear to bear the characteristics of

comprehensible input proposed by Krashen (1982). Receiving such input resulted in their

improvement in English proficiency even though the motivation for reading and application

of certain reading strategies did not seem to differ between those who had and those who had

not done extensive reading. At this point, caution is needed to prevent interpreting the

following discussion as implying that comprehensible input is *the* key to EFL learners'

development of English proficiency. To be precise, the discussion delineates that collected

contextual data suggests that comprehensible input was available to LG and MG participants.

However, the availability of comprehensible input via extensive reading cannot be interpreted

as *the* key primarily because the multiple regression results reveal that the extensive reading

of linear text and that of multimodal text accounted for about 16% of the variation in

simulated TOEIC post test scores (Table 9). That is, at least 80% of the variation was not

explained by the positive association between extensive reading and participants' English

proficiency. This finding, in fact, echoes Pica's (2005) notion that comprehensible input is

definitely crucial to second language acquisition but, by no means, sufficient. Therefore,

comprehensible input is undeniably a key to improvement in English proficiency, but it is not

the key.

Juxtaposing a more detailed understanding of characteristics of comprehensible input

proposed by Krashen (1982) with the information obtained from participants' assignment

sheets, namely KWL Worksheet (Appendix C) and Reading Log (Appendix D), should

manifest the claim that the current study findings reinforce the importance of comprehensible

input. According to Krashen, "optimal input" (p. 62) should be comprehensible, interesting

and/or pertinent to the learner, not intentionally sequenced by following the principle of $i +$

1,[30] and available to the learner in adequate quantity. The text that the majority of LG and

MG participants read seems to possess those characteristics except the last one, unless a

different criterion is applied.

Being comprehensible. First, the majority read linguistically easy stories. Krashen

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[30] The term, $i + 1$, refers to the level that is next to the learner's present level of competence (Krashen, 1985).

(1982), citing Hatch's (1979) summary of several linguistic features of comprehensible input, explained further three traits of comprehensible input, among which were the use of high frequency vocabulary and simple syntactic sentence structures. The text that the majority of LG and MG participants read, as recorded on their KWL Worksheet (Appendix C), should possess these traits. A great number of MG participants read simple stories available on such Web sites as Children's Storybooks Online, childhoodREADING.COM, and storyarts.org (Table 15). Totally about 58% of the times MG participants read stories on one of the aforementioned Web sites. Moreover, nearly all of those who read stories on storyarts.org picked Stories in a Nutshell, each of which is approximately 150 to 200 words long. As for LG participants, throughout the 12 weeks of experiment, they read totally about 247 books, and around 61% of them were graded readers such as *The Adventure of Huckleberry Finn*, a Level-3 simplified classic of Penguin Readers series published by Pearson Education Limited, and *The Secret Garden*, a Stage-3 simplified classic of Oxford Bookworms series published by Oxford University Press. Graded readers are simplified texts. According to Crossley et al.'s (2007) analyses of simplified texts, one reason why they facilitate reading comprehension is the use of frequent and familiar words. The next frequently read books by LG participants were children's literature, for example, *Christmas in Camelot*, #29 of Magic Tree House series written by Mary Pope Osborne, and *Poppy and the Vanishing Fairy*, #2 of the Fairy Blossoms series written by Suzanne Williams targeting at ages four to seven.

However, the researcher did not attempt to calculate the percentage of children's literature because not all information provided by participants was sufficiently accurate for identification. For instance, a story title was not typed accurately and/or the publisher was not provided on the KWL Worksheet, which then made it difficult for the researcher to locate a book on the Internet to confirm its type.

Table 15

Three Story Web Sites Visited with High Frequency

Web site	Children's Storybooks Online[a]	storyarts.org[b]	childhoodREAD.COM[c]
Frequency (%)	41 (24.6%)	31 (18.6%)	25 (15%)

Note. The total number of frequency is 167. (In total, MG participants recorded reading stories on the English Internet for 167 times.)

[a]The URL of Children's Storybooks Online is http://www.magickeys.com/books/.

[b]The URL of storyarts.org is http://www.storyarts.org/index.html.

[c]The URL of childhoodREAD.COM is http://childhoodreading.com/.

Being interesting and/or pertinent. Second, participants' responses to two items on the Reading Log (Appendix D) suggest that the input had the second characteristic of "optimal input" Krashen (1982, p. 62) proposed as necessary—being interesting and/or

pertinent to individuals. The second item on the Reading Log invited participants to give the

reason(s) why they completed/continued reading a story or changed from one story to

another by checking the available reason(s) on the log or writing one. Very few participants

changed from one story to another, and when one did, the most checked reason was the story

was not interesting. For at least 90% of the times, participants completed/continued reading a

story, and the most frequently checked reason was the story was interesting. Furthermore,

this reason of interest was reiterated in quite a number of participants' responses to the last

item on the Reading Log, which invited a comment on individual extensive reading

experience of the week. (The item is: *This week, I feel that extensive reading is … because …*)

Most participants gave positive comments and the reasons were mostly related to the stories

they read although some mentioned that they learned new vocabulary and/or were able to

read faster. A repeatedly used word in a comment is *interesting*. For example, an LG

participant wrote: *I enjoy reading, because the extensive reading is very interesting*. An MG

participant wrote: *I feel that online extensive reading is interesting because I like to read*

fairy tales. Some participants' comments suggest that the stories were relevant to the persons.

For instance, an LG participant wrote: *I like story like this. The story is full of love. I*

remember my childhood when I read the story. (The story was *Lucy and Tom's Christmas* by

Shirley Hughes.) An MG participant's comment written on this student's final Reading Log,

which sounded like winding up the person's overall comment on extensive reading as a

whole, was: *I feel that online extensive reading is really useful for me because I can understand many things and learn from these stories*. Expressions as such suggest that what they read was interesting and/or pertinent to them.

Providing unintentionally sequenced *i* + 1. Third, the design and implementation of the experimental extensive reading programs allow the speculation that participants experienced unintentionally sequenced *i* + 1 input. Krashen (1982) maintained that the *i* + 1 suitable for individuals differed from learner to learner. Therefore, systematic sequential presentation of *i* + 1 to a group of learners could not provide comprehensible input for all. Instead, Krashen postulated that input that is comprehensible to individuals leads to the presence of *i* + 1 for them and "natural review and recycling" (p. 69) of linguistic structures. One principle abided by the design of this experimental extensive reading was that participants had the freedom to choose texts at their independent reading levels, which was informed by scholars such as Asraf and Ahmad (2003), Rodrigo et al. (2007), and Day and Bamford (2002). The principle dictates that readers choose what they want to read. Moreover, they do not have the obligation to finish what they have started reading, and indeed, several participants in both groups indicated that they did not finish reading a story or changed from one story to another. Under these circumstances, neither this study researcher nor respective instructors had control over the linguistic levels of participants' English input available by means of extensive reading. Juxtaposing the fact that the input participants received via

extensive reading was not intentionally sequenced by the researcher or their instructors with the statistical finding of significant improvement in simulated TOEIC post test scores, the researcher postulates that they received unintentionally sequenced $i + 1$ input.

Being quantitatively adequate. The final characteristic of the most favorable input laid out by Krashen (1982) is that adequate quantity be available to learners. In general, neither LG nor MG participants had read enough based on the criterion suggested by Day and Bamford's (2000), which is reading at least a book per week. Day and Bamford contended that the expectation should be practical because books targeting learners of limited English proficiency were relatively short. Informed by this criterion, the researcher instructed LG participants to aim at reading a book a week. Since MG participants would read on the English Internet, it was impossible to have them estimate their amount of reading by numbers of books. Therefore, the instruction of expected reading amount to MG participants was decided by estimating the rough total number of words in a graded reader, 250 words $\times$ 36 pages = 9000 words. Without doubt, it was impractical to expect MG participants to count words they had read on the English Internet. The number was given with the intention of providing them with a sense of expected weekly reading amount. To make it easier for participants of both groups to follow the instruction, it was stated on their Reading Log (Appendix D) that they were expected to do extensive reading for about 20 minutes a day and six days a week.

Regardless of the instruction, the actual amounts of reading roughly[31] discerned from

participants' individual reports recorded on their Reading Logs (Appendix D) indicate that

most participants had not read *extensively* except that they did read regularly since once a

week they were given more or less 20 minutes to read their chosen stories in class as revealed

by respective instructors' logs (Appendix E). Table 13 shows that, on average, LG

participants did extensive reading for about 51 minutes weekly, which is not even half of the

instructed 120 minutes. MG participants' average weekly reading time is even less, only

about half of LG participants'. Moreover, according to the weekly reading frequencies

recorded on the submitted Reading Logs (Appendix D), most LG participants did extensive

reading for more than one time per week, while nearly half of MG participants did it once

only.

Perhaps what the collected data suggest is another criterion with which to measure

adequate input. It is that doing extensive reading regularly for about 15 to 30 minutes each

time is a key for its efficacy, as concluded by Pilgreen (2000) after her review of successful

extensive reading programs. Concerning the minimum frequency, Pilgreen's finding is twice

a week because it was the frequency of 97% of the successful studies she had reviewed.

When this criterion is applied, on average, LG participants (51 minutes and mostly more than

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[31] Participants' weekly reading time can only be a rough estimate because it is impossible to make sure that all
recorded time accurately on Reading Logs. For example, they were instructed to record the amount of time
spent on weekly in-class extensive reading. However, a number of them did not record it.

once per week) read extensively enough and MG participants (25 minutes and nearly more

than once per week) read roughly extensively.

As a result, relevant information detected in participants' KWL Worksheets (Appendix

C) and Reading Logs (Appendix D) suggest that involvement in this quasi-experiment of

extensive reading of either linear or multimodal text provided most of these undergraduate

EFL learners with roughly adequate amount of comprehensible input which was interesting

and/or pertinent to individuals. Possibly, it also allowed the occurrence of unintentionally

sequenced $i + 1$ that met individual needs to achieve progress in English proficiency. These

then seem to account for the significant increase in English proficiency as measured by the

simulated TOEIC tests. Meanwhile, they also endorse Krashen's (1982; 1985) advocacy that

comprehensible input is essential to the development of language proficiency.

Pedagogical Implications

Statistical findings and contextual data obtained from this research study allow the

postulation that undergraduate EFL learners benefit from an extensive reading program of

either linear or multimodal text. Thus, three plausible pedagogical implications are discussed

with practical teaching recommendations.

Incorporation into formal curricula. The first pedagogical implication is to

incorporate extensive reading into formal EFL curricula. This means both allocating regular

class time for sustained silent reading and estimating the time students need to spend on the

activity out of class as part of their time for regular homework. In other words, unlike the implementation of extensive reading for this research study, an extensive reading program should not be deemed as an extra or supplementary activity.

The support to this idea results from step-by-step reasoning with relevant feedback on the post experiment Extensive Reading Questionnaire (Appendix F). First, the most frequent comment on their overall experience with extensive reading (LG: 84%; MG: 55%) is that the activity was good and helpful (Item 10c in Table 16). As for reasons why they enjoyed extensive reading, those that were marked by at least 60% of either LG or MG participants (Table 16) reflect reviewed scholars' research findings. One, Item 4a, is having the freedom of choice (e.g., Asraf & Ahmad, 2003; Day & Bamford, 2002; Rodrigo et al., 2007). Another, Item 4b, is improving English (e.g., Bell, 2001; Mason & Krashen, 1997; Tanaka, 2007). The others, Items 4c and 4d, are increasing English reading speed (e.g., Bell, 2001; Lao & Krashen, 2000) and English vocabulary (e.g., Lao & Krashen, 2000). Next, even though they valued the extensive reading activity relatively highly, approximately 62% of them indicated that they had not spent more than 100 minutes per week on extensive reading (Table 17). This self-estimated amount of reading time is confirmed when it is compared with the weekly amounts of reading time recorded on individual Reading Logs (Table 17). (However, it is interesting to notice that MG participants tended to over estimate the amounts of time they had spent on online extensive reading as revealed in Table 17). Finally, the most frequent

reason students provided for why they had not spent more than 100 minutes on extensive

reading weekly is not having time for it because of the need to tend to course work (Item 2b

in Table 16). In general, participants in both groups rated the extensive reading relatively

positively and apparently perceived some of the same benefits of extensive reading proposed

by several scholars. However, the majority did not spend more than 100 minutes per week on

the activity, and the main reason was they were quite occupied by course work. Therefore,

the first recommendation for pedagogical practice is integrating an extensive reading

program into English language learners' formal EFL curricula.

Table 16

Some Feedback on Extensive Reading

		LG		MG	
Item		#	%	#	%
10c	It is a good and helpful activity.	46	84	27	55
4a	I can choose what I like to read.	50	91	44	88
4b	I can improve my English.	43	78	37	74
4c	I can increase my English reading speed.	40	73	32	64
4d	I can increase my English vocabulary.	41	75	35	70

| 2b | I didn't have time for extensive reading because I had enough course work to tend to. | 16 | 49 | 20 | 59 |

Table 17

Participants Reading for Approximately Less or More Than 100 Minutes Per Week

| | Weekly reading time reported on the post experiment Extensive Reading Questionnaire (Appendix F) | | | | Weekly average reading time recorded on Reading Log (Appendix D) | | | |
| | < 100 min | | > 100 min | | < 100 min | | > 100 min | |
Group	#	%	#	%	#	%	#	%
LG	34	60.7	22	39.3	32	60.4	21	39.6
MG	31	62.0	19	38.0	31	79.5	8	20.5

Provision of linear and multimodal text. The second recommendation is providing

EFL learners with both linear and multimodal text to choose from. The overarching support

to this suggestion is the finding of the current research study that the extensive reading of

either linear or multimodal text contributes to improvement in English proficiency. Moreover,

this freedom of choice is aligned with a fundamental principle of extensive reading sketched

out by Day and Bamford (2002). Undeniably, contextual data collected from participants

involved in this study does not underscore the need for online extensive reading, which

echoes Arnold's (2009) perception from his advanced foreign language learners of German

that they did not demonstrate strong preference in online reading. (Detailed discussion is in

the section of Role of Multimodal Text in this chapter.) This suggestion of including online

reading in an extensive reading program is, nonetheless, justified by two facts. One is that

research on online extensive reading is just at its preliminary stage. The other is many

scholars who can be credited as pioneers of ICT literacy *frontier* (e.g., Bearne, 2005; Coiro,

2003; Evans, 2005; Kress, 2003; Lankshear & Knobel, 2006; Leu and Kinser, 2000; Leu et

al., 2004; Luke, 2003; Smolin & Lawless, 2003; Warschauer and Ware, 2008) have

advocated that the literacy of multimodal text is indispensible. Consequently, it should be

sensible to suggest giving students the freedom to choose either reading linear or multimodal

text or both.

However, the aforementioned does not dictate that practitioners have to provide

learners with both linear and multimodal text for English learners to choose in an extensive

reading program. It is possible that the college or university library does not have a collection

of appropriate books for all students but can arrange each class to do online extensive reading

in a computer lab once per week. In this case, practitioners are still encouraged to provide the

extensive reading of only multimodal text because, according to the current study, it is as

effective as that of linear text. On the contrary, if easy and stable Internet connection is a

problem but a collection of appropriate books is available, an extensive reading program of

only linear text should be beneficial to learners, too. Doubtlessly, it is better to incorporate

extensive reading of either linear or multimodal text in formal EFL curricula than arranging it

as a supplementary or extra activity.

Inclusion of multimodal informational text. The final pedagogical implication

derived from this study is including the genre of informational text when the extensive

reading is performed on line. This implication originates from the fact that the genre of

online reading which brought positive impact on the participants of the reviewed studies is

informational text, for instance, journal articles (Arnold, 2009; Pino-Silva, 2006). Moreover,

it is possible that the extensive reading of multimodal text available on the English Internet

would exert its effects well if it is designed as a process of problem solving, as exemplified

by Coiro and Dobler's (2007) study, or information gathering and sharing, as exemplified by

Pino-Silva's study. This recommendation is further subtly supported by juxtaposing the

following contextual data with the findings in the current study from the multiple regression

and ANCOVA of simulated TOEIC test scores. On average, MG participants read less than

LG participants in terms of both amount of time and frequency (MG: 25 minutes and nearly

more than once per week; LG: 51 minutes and mostly more than once per week). However,

for 33% of the total 167 times of English Internet story extensive reading recorded on their

submitted KWL Worksheets (Appendix C), MG participants experienced exploring the

English Internet to locate and then read, watch, and/or listen to whatever they had found as related to the online stories they had read. This is an activity that LG participants did not experience in their extensive reading program. Furthermore, this activity resembles that the participants in Coiro and Dobler's study went through to answer questions posed by the researchers. Having read less than LG participants but experienced exploring the English Internet, MG participants' involvement in extensive reading, similar with LG participants', predicted their simulated TOEIC post test scores, and their improvement on the simulated TOEIC post test was as significant as that of LG participants. Consequently, it should be plausible to suggest that EFL learners be given chances to interact with informational text on the English Internet in an extensive reading program.

To sum up, three pedagogical implications are derived from this research study. One is that if EFL instructors consider having their English learners benefit from extensive reading, they should integrate it into the formal curricula. The others are such an extensive reading program should give English learners the freedom of choosing whether to read linear or multimodal text or both and the opportunities to interact with informational text on the English Internet.

CHAPTER SIX

CONCLUSION

The current study is a pioneer in exploring effects of English Internet extensive reading on undergraduate EFL learners' language proficiency. Statistical results posit extensive reading itself as a key to improvement in English proficiency whether the narrative reading text is multimodal or linear. They do not indicate significant association between extensive reading and motivation for reading, motivation for reading and English proficiency, or extensive reading and the application of several reading strategies. Juxtaposing statistical findings with contextual data obtained from participants' assignment sheets (Appendix C: KWL Worksheet; Appendix D: Reading Log) suggests that extensive reading provides EFL learners with comprehensible input. The aforementioned data together with other contextual data detected in participants' responses to questionnaires (Appendix B: English Online- and Print-Reading Questionnaire; Appendix E: Extensive Reading Questionnaire) and relevant reviewed studies inform both EFL pedagogy and future research.

Extensive Reading: A Key to Improvement

The major finding of this quasi-experiment is that the extensive reading of multimodal text available on the English Internet is as effective as that of printed linear text in improving Taiwanese undergraduate EFL learners' English proficiency as measured by the simulated TOEIC tests. Moreover, the effect does not seem to be associated with learners' motivation

for reading as measured by the 15-item MRQ. Nor is motivation for reading associated with extensive reading. Furthermore, extensive reading does not appear to be significantly related with applying the reading strategies of locating text on the English Internet or predicting and evaluating either printed or online reading text. In other words, the statistical results support doing extensive reading of either linear or multimodal text *per se* as an effective key to improvement in English proficiency.

Extensive Reading: Comprehensible Input

The current study was not designed to examine Krashen's (1982; 1985) advocacy of the important role comprehensible input plays in the development of language proficiency. However, the study findings turned out to endorse it because the input participants received appears to bear four characteristics of efficacious input for language development proposed by Krashen (1982). First, contextual data discerned from participants' KWL Worksheets (Appendix C) and Reading Logs (Appendix D) suggest that at least half of all the participants' chosen reading text was linguistically simple enough to provide them with comprehensible input. Second, other contextual data from the same instruments reveals that the majority read stories that were interesting and/or pertinent to them. Third, the application that participants had the freedom to choose what to read and whether to change from one story to another seemed to allow the occurrence of unintentionally sequenced $i + 1$. Finally, the implementation of doing in-class extensive reading once per week for about 20 minutes

during the 12-week experiment roughly meets the quantity criteria concluded by Pilgreen (2000). Therefore, the extensive reading appeared to provide participants with adequate input, which is the fourth characteristic of efficacious input. These findings nurture the notion that extensive reading of either traditional printed linear text or modern multimodal text provides access to comprehensible input. However, it is equally important to be aware of the multiple regression finding that extensive reading accounted for about 16% of the variation in participants' simulated TOEIC post test scores. Therefore, comprehensible input explained only part of participants' improvement in English proficiency.

Suggestions for EFL Pedagogy

The first suggestion for EFL pedagogy is practitioners have the options of conducting an extensive reading of either linear or multimodal text or both based on what is available at the academic institute. The overarching reason is the extensive reading of multimodal text is posited to be as effective as that of linear text in improving Taiwanese undergraduate EFL learners' English proficiency. Hence, if a college or university library does not have hundreds of graded readers and/or children's literature but it is possible to arrange at least one course period for each EFL class to do online extensive reading in a computer lab, practitioners can conduct an online extensive reading program and anticipate that their students benefit from it. Conversely, if access to the English Internet for individual learners is more difficult than access to printed books, practitioners can conduct an extensive reading of printed text

without the concern that it might be less beneficial to their students' development of English

proficiency in this era of ICT.

However, if both linear and multimodal text is equally accessible, it is preferable that

undergraduate EFL learners have the freedom to choose doing the extensive reading of either

linear or multimodal text or both. The underlying premise is the current study findings that

the extensive reading of either type of text is effective in increasing EFL learners' English

proficiency but MG participants appeared less enthusiastic in their extensive reading than LG

participants. The legitimacy of this suggestion is further reinforced by two notions informed

by the review of literature. One is extended from a fundamental principle of extensive

reading—having the freedom to choose what a learner is interested in reading (e.g., Asraf &

Ahmad, 2003; Day & Bamford, 2002; Rodrigo et al., 2007). The other notion is the advocacy

that the literacy of multimodal text is indispensible in this era of ICT (e.g., Bearne, 2005;

Coiro, 2003; Evans, 2005; Kress, 2003; Lankshear & Knobel, 2006; Leu and Kinser, 2000;

Leu et al., 2004; Luke, 2003; Smolin & Lawless, 2003; Warschauer and Ware, 2008).

Moreover, practitioners should consider introducing students to the genre of informational

text on the English Internet because it is the genre used in the reviewed studies of online

extensive reading that had positive impact on the participants (Arnold, 2009; Pino-Silva,

2006).

The last and by no means the least suggestion is incorporating an extensive reading

program into Taiwanese undergraduate EFL learners' formal English curricula. This proposal

is mainly derived from relevant contextual data collected from participants' feedback on the

Extensive Reading Questionnaire (Appendix F). Most participants' overall comments on the

extensive reading they had experienced was it was a good and helpful activity. However, on

average, they spent not even half of the expected 120 minutes per week on the activity, and

the most frequent reason checked by at least half of those who spent less than 100 minutes on

the activity weekly is not having time for it because of course work.

To sum up, an extensive reading program of either linear or multimodal text should

serve English language learners equally adequately when easy access to only one type of text

is provided in an academic institute. When access to both types is available, the pedagogical

recommendation is learners have the freedom of choice and those who choose to read on the

English Internet should be introduced to the genre of informational text. Finally, when it is

implemented, an extensive reading program should be part of English learners' formal

curricula.

Directions for Future Research

Four directions for future research arise from statistical findings, contextual data

obtained from questionnaires and participants' assignment sheets, and relevant reviewed

studies. One direction is identifying the role of multimodal text in English learners' English

literacy. Many scholars (e.g., Bearne, 2005; Coiro, 2003; Evans, 2005; Kress, 2003;

Lankshear & Knobel, 2006; Leu and Kinser, 2000; Leu et al., 2004; Luke, 2003; Smolin & Lawless, 2003; Warschauer and Ware, 2008) emphasize that the literacy of multimodal text is indispensible in this era of ICT. However, participants of this study did not demonstrate enthusiasm in developing it, which echoes Arnold's (2009) study finding of advanced learners of German as a foreign language. Moreover, at least 76% of CG, LG, or MG participants who visited English Web sites rated downloading English music, films, or games as their top first or second most-performed English Internet activity. Furthermore, the other top first or second most-performed English Internet activity rated by about half of English Internet users in each group is using e-mail, Instant Messenger, chat rooms, or Facebook. These English Internet activities are rather recreational and/or social than academic. Based on such collected data, the researcher suggests that one direction for future research be focused on understanding English learners' perception of the role of multimodal text in their English literacy and then detecting how EFL learners' perception affects their development of English literacy.

Another conceivable direction for future research is exploring effects of informational kinds of multimodal text as opposed to literary kinds used in this study. The rationale for this direction is that informational text is used in the reviewed studies which posit Internet reading as effective in, for instance, exercising reading strategies (Coiro & Dobler, 2007). Regarding the design of exploration, it can be a process to answer a question or solve a

problem as exemplified by Coiro and Dobler's study. It can also be information gathering and

sharing, as exemplified by Pino-Silva's (2006) study. Both can further be expanded to

examine effects of adopting Lankshear and Knobel's (2006) definition of new literacies on

EFL learners' development of English proficiency. The reason is in their definition, newness

includes "participation," "distributed expertise," "collective intelligence," "collaboration,"

"dispersion," and "sharing" (p. 60), all of which can be developed in the process of

interacting with informational text on the Internet with a class of peers.

The third suggestion for future research is identifying essential elements a measure of

motivation for EFL reading should contain to provide insight into learners' reading

motivation. This suggestion results from the following reasoning. First, one statistical finding

of the current study is that participants' motivation for reading as measured by the 15-item

questionnaire (Appendix A) derived from Wigfield and Guthrie's (1997) MRQ was

associated with neither their experience with extensive reading nor development in English

proficiency. Nevertheless, Watkins and Coffey (2004) advised that the widely employed

MRQ needed revision. Taking account of this advice implies the possibility that the current

study did not measure participants' motivation for reading effectively. Besides considering

the advice that the MRQ needs modification, it should be credible to embrace Dörnyei's

(2009) advocacy of re-conceptualizing the motivation to learn English as an L2 by

encompassing English learners' *self* (Dörnyei, 2009; Ushioda & Dörnyei, 2009). When EFL

learners' ideal self is included, the qualities they desire to possess in association with learning English should contribute to identifying essential elements a measure of their motivation for EFL reading should contain.

The final direction for future research is examining how an extensive reading program can help EFL learners to develop strategies that facilitate reading comprehension in English. In Clarke's (1980) study, based on which Eskey (2005) explained the need for an L2 learner to cross a certain critical level for reading strategies to transfer from L1 to L2, one pedagogical implication proposed by Clarke was to foster efficient reading behavior. One example of efficient reading behavior Clarke mentioned was making prediction and then reading on to verify, modify, or discard the prediction. If an extensive reading program is, as recommended by the current study, incorporated in EFL learners' formal English curricula, it would be feasible for future research to examine, for instance, if explicit instructions of effective reading behavior accompanied by having learners practice with it while reading their own chosen text will contribute to the development of the target reading strategy.

In a nutshell, the current study findings posit that an extensive reading program of multimodal text is pedagogically worthy of implementation as much as that of linear text for the purpose of improving Taiwanese undergraduate EFL learners' English proficiency. However, EFL learners' perception of the role of multimodal text in this era of evolving literacies in association with ICT and the influence of their perception on their development

of English literacy remain to be unveiled by future research. So does the role of motivation

for EFL reading in relation with extensive reading and improvement in English proficiency. It

should also be beneficial for future research to explore ways that extensive reading can

facilitate learners' development of efficient EFL reading strategies. No matter what future

studies in these directions will reveal and inform both the pedagogy and the research of EFL

in Taiwan, it should be practical to consider Spiro's (2004) sharing of his belief:

 My research has led me to believe that all credible approaches are useful on some

occasions, that none are always useful, and that the relevance of one does not preclude

the simultaneous relevance of others with which it might be fruitfully combined. (pp.

657-658)

It then should be wise for both practitioners and researchers to maintain a sensible and open

mind for the optimal benefits of English language learners.

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APPENDIX

Appendix A: Motivation for Reading Questionnaire

INSTRUCTIONS: Read a statement. Decide how well the statement describes your present **reading*** in English either of printed materials

or on the Internet. Put a check (✓) in the box under the expression that describes your situation the most appropriately. (If you don't think

that you understand a statement well, ask your instructor for clarification.)

*The meaning of **reading** (or **to read**) here is broad. It means **making sense** out of something, or **understanding** something. Therefore,

reading here includes reading printed English and understanding spoken English and English film contents.

		Hardly (0-10%)	A little (11-30%)	Somewhat (31-59%)	Satisfactorily (60-74%)	Mostly (75-89%)	Excellently (90-100%)
1.	I am a good English reader.						
2.	I like to read hard, challenging English texts.						
3.	I look for and read English materials to learn about						

	something new and interesting to me.						
4.	When reading about something interesting in English, I sometimes lose track of time.						
5.	It is very important to me to be a good English reader.						
6.	My friends sometimes tell me I am a good English reader.						
7.	I talk to my friends about what I have read in English.						
8.	I read English materials not assigned by teachers.						
9.	I don't like English texts that have many English words that I don't know.						

10.	I know I will do well in English reading next semester.					
11.	If the content is interesting, I keep reading even though the English is difficult.					
12.	I make pictures in my mind when I read English texts.					
13.	I like to be praised for my English reading.					
14.	I always try to finish my English reading assignment on time.					
15.	I don't like complicated English stories.					

Appendix B: English Online- and Print-Reading Questionnaire

INSTRUCTIONS: Read a statement. Based on your own English reading experiences, decide the expression that describes your present situation the best. Circle that expression. (The percentages under an expression are the percentages of times when the expression describes your situation accurately.) For example, if a statement **nearly always** describes your reading in English correctly, you will circle **Nearly Always** as your answer. (If you don't think that you understand a statement well, ask your instructor for clarification.)

1. Do you visit English Web Sites? (This includes being required to visit English Web sites by you course instructor.)   Yes   No

    (If your answer is "Yes," please continue answering question #2. If your answer is "No," please skip and continue from question #10.)

2. Please rank the following seven activities in order of use from 1 to 7. Write "1" beside the English Internet activity you do the MOST, "2" beside the activity you do second most, and so on, ending by writing "7" beside the English Internet activity you do the LEAST. Write "0" beside the English Internet activity that you don't do at all.

    ____ Playing games on the English Internet

    ____ Searching for and reading certain English Web sites to learn more about a topic

    ____ Using e-mail, Instant Messenger, chat rooms, or Facebook in English

    ____ Browsing or exploring different English Web pages

___ Downloading English music, films, or games

___ Reading English news and/or watching English news reports

___ Watching English films without Chinese subtitles

3. Find the activity you rated as "1" in question #2 and circle the approximate amount of time

   you spend doing that activity in one week.

   < 30 min   30 min – 1 hr   1 – 1.5 hrs   1.5 – 2 hrs   2 – 2.5 hrs   > 2.5 hrs

4. Find the activity you rated as "2" in question #2 and circle the approximate amount of time

   you spend doing that activity in one week.

   < 30 min   30 min – 1 hr   1 – 1.5 hrs   1.5 – 2 hrs   2 – 2.5 hrs   > 2.5 hrs

5. You are good at figuring out where to go on the English Internet to find what you want.

   Almost Never   Seldom   Sometimes   Often   Usually   Nearly Always

   (0-10%)   (11-30%)   (31-59%)   (60-74%)   (75-89%)   (90-100%)

6. You are good at understanding English on the Internet.

   Almost Never   Seldom   Sometimes   Often   Usually   Nearly Always

   (0-10%)   (11-30%)   (31-59%)   (60-74%)   (75-89%)   (90-100%)

7. You predict the content of what you will be reading, watching, and/or listening to while

   using English Internet.

   Almost Never   Seldom   Sometimes   Often   Usually   Nearly Always

   (0-10%)   (11-30%)   (31-59%)   (60-74%)   (75-89%)   (90-100%)

8. You evaluate (評估) the relevance (相關;切題), accuracy (準確), reliability (可靠性),
and/or meaningfulness (意義) of what you are reading, watching, and/or listening to while
using English Internet.

Almost Never	Seldom	Sometimes	Often	Usually	Nearly Always
(0-10%)	(11-30%)	(31-59%)	(60-74%)	(75-89%)	(90-100%)

9. You prefer reading stories to reading articles on the English Internet.

Almost Never	Seldom	Sometimes	Often	Usually	Nearly Always
(0-10%)	(11-30%)	(31-59%)	(60-74%)	(75-89%)	(90-100%)

10. You are good at understanding what you read in English books (stories; textbooks).

Almost Never	Seldom	Sometimes	Often	Usually	Nearly Always
(0-10%)	(11-30%)	(31-59%)	(60-74%)	(75-89%)	(90-100%)

11. You predict what the coming text will be while reading English books (stories;
textbooks).

Almost Never	Seldom	Sometimes	Often	Usually	Nearly Always
(0-10%)	(11-30%)	(31-59%)	(60-74%)	(75-89%)	(90-100%)

12. You evaluate (評估) the relevance (相關;切題), accuracy (準確), reliability (可靠性),
and/or meaningfulness (意義) of what you are reading while reading English books
(stories; textbooks).

Almost Never	Seldom	Sometimes	Often	Usually	Nearly Always

(0-10%)　　　(11-30%)　　(31-59%)　　(60-74%)　　(75-89%)　　(90-100%)

13. You prefer reading stories to reading articles when you read English books.

　Almost Never　　Seldom　　Sometimes　　Often　　Usually　　Nearly Always

　　(0-10%)　　　(11-30%)　　(31-59%)　　(60-74%)　　(75-89%)　　(90-100%)

14. Do you have the habit of reading English graded readers? (The habit may be involuntary,

　for example, being required to read graded readers.) (If your answer is "Yes," respond to

　#15. If your answer is "No," move on to answer #16.)

　Yes　　No　　Don't know what they are

15. If you read English graded readers, circle the approximate amount of time you spend

　reading English graded readers in one week.

　< 30 min　　30 min – 1 hr　　1 – 1.5 hrs　　1.5 – 2 hrs　　2 – 2.5 hrs　　> 2.5 hrs

16. You prefer learning English by reading English printed texts to using the English Internet.

　Almost Never　　Seldom　　Sometimes　　Often　　Usually　　Nearly Always

　　(0-10%)　　　(11-30%)　　(31-59%)　　(60-74%)　　(75-89%)　　(90-100%)

Appendix C: KWL Worksheet

Graded-Reader KWL Worksheet

Class: _____　Name: _____　No.: _____　Date: ___

Story title: _____

Publisher: _____   Level: _____

INSTRUCTIONS: Answer the first two questions BEFORE you start reading, and answer the

last question AFTER you finish reading the story. (You can write your answers in either

English or Chinese.)

(1) What do I **k**now about the story?

(2) What do I **w**ant to know about the story?

(3) What do I **l**earn after reading the story?

Online KWL Worksheet

Class: _____   Name: _____   No.: _____   Date: ___

Story title: _____

Web site URL: _____

INSTRUCTIONS: Answer the first two questions BEFORE you start reading, and answer the

other items AFTER you finish reading a story. If your chosen online story is short (less than

9,000 words), you'll need to read more than one story in a week. Use a different KWL

worksheet for another story. If you read more than two short stories in a week, choose to

report only two of them. (You can write your answers in either English or Chinese.)

(1) What do I **k**now about the story?

(2) What do I **w**ant to know about the story?

(3) What do I **l**earn after reading the story?

(4) I've explored other English Web pages related to the story and found the following:

 •The English Web page is: ☐ a film clip of the story

 ☐ oral reading of the story   ☐ other: _____

 •The Web site URL is _____

 •From the related English Web page, I've learned _____

 _____

 (If you've visited and learned from more than one related English Web site, repeat the

 above items in the space below.)

Appendix D: Reading Log

Graded-Reader Reading Log

Class: _____   Name: _____   No.: _____

Instructions: Fill out this Graded-Reader Reading Log every time you do extensive

reading (ER) either in class or on your own.

Goal: Do ER for about 20 minutes a day and six days a week, that is, altogether about 2 hours a week (including the time spent on in-class sustained silent reading). This also means that you read at least 9,000 words per week or finish one story every week.

Reminder: For research purpose, what is important is you fill out this log HONESTLY.

Date	Time spent on ER	Date	Time spent on ER
	From: to: Total:		From: to: Total:
	From: to: Total:		From: to: Total:
	From: to: Total:		From: to: Total:

(I) Weekly total ER time: _____ minutes

(II) Check the right box and fill in the related blank(s).

☐ I completed/continue reading one story because … (You can check more than one reason.)

☐ the story was interesting.　　　☐ the story was not complicated.

☐ the language was just right.

☐ other: _____.

☐ I've changed from one story to another because … (You can check more than one reason.)

☐ the story was not interesting.　　　☐ the story was too complicated.

☐ the story was too long.   ☐ the language was difficult.

☐ other: _____.

(III) This week, I feel that extensive reading is … because …

_____

Online Reading Log

Class: _____ Name: _____ No.: _____

Instructions: Fill out this Online Reading Log every time you do extensive reading (ER) either in class or on your own.

Goal: Do ER for about 20 minutes a day and six days a week, that is, altogether about 2 hours a week (including the time spent on in-class sustained silent reading). This also means that you read at least 9,000 words per week (including the words read while you are looking for the right English Web sites).

Reminder: For research purpose, what is important is you **fill out this log HONESTLY**.

Date	Time spent on ER	Date	Time spent on ER
	From: to: Total:		From: to: Total:
	From: to: Total:		From: to: Total:
	From: to: Total:		From: to: Total:

(I) Weekly total online ER time: _____ minutes

(II) Check the right box and fill in the related blank(s).

☐ I finished/continue reading some story(-ies) because … (You can check more than one

reason.)

☐ the story was interesting.   ☐ the story was not complicated

☐ the language was just right.

☐ other: _____.

☐ I've changed from one story to another because … (You can check more than one

reason.)

☐ the story was not interesting.   ☐ the story was too complicated.

☐ the language was difficult.   ☐ the language was too simple.

☐ other: _____.

(III) This week, I feel that online extensive reading is … because …

_____

Appendix E: Instructor Log[32]

Please keep this log every time you have the extensive reading class. Please respond to every

question unless relevant information is indeed not available.

	ID# of student(s) being late for …

---

[32] Appendix D is the log for the MG instructor. The log for the LG instructor differs from this one only in the wording of #1 and #4.

1-10 min	
11-20 min	
21-25 min	
	ID# of student(s) being …
absent	

1. During sustained silent reading, are students engaged? How many appear to be

   absent-minded or distracted? How many are browsing or trying to browse non-English Web

   sites? (If yes, please try to find out their reasons for doing so.)

2. When students are sharing stories with a neighboring classmate, are they engaged? How

   many are chatting about something else? How many follow the instruction and talk in

   English? What about when individuals are invited to share their paired classmates' stories?

3. What other support do you think students need so that they make the most of this extensive

   reading activity?

4. Informed by students' participation in the extensive reading activity this week, what

   comments do you have on this online extensive reading program in general?

1. How much time did you usually spend on extensive reading weekly? (Check (✓) your

   answer.)

   ☐ ＜100 minutes　　　☐ 100 -130 minutes　　　☐ ＞130 minutes

2. If you spent less than 100 minutes weekly on extensive reading, what was the reason(s)?

   Please check (✓) all reasons that apply. If you spent at least 100 minutes on extensive

   reading weekly, go on to Item #3.)

   2a. ☐ The extensive reading is not an interesting activity.

   2b. ☐ I didn't have time for extensive reading because I had enough course work (課業)

   　　 to tend to.

   2c. ☐ I didn't have time for extensive reading because I had extra-curriculum activities

   　　 (課外活動) to tend to.

   2d. ☐ I don't really know the purpose of extensive reading.

   2e. ☐ I don't really know how to do extensive reading.

   2f. ☐ I don't like to read stories.

   2g. ☐ I don't think that reading stories can improve my English.

   2h. ☐ I finished reading one story in less than 100 minutes. Although the story was not

---

[33] Appendix F is the feedback survey for MG participants. The one for LG participants is the same as this one except that it does not contain the items specific to reading on the English Internet, for example, *It is tiring to read English words on a computer screen*.

long, I thought that should be enough reading for the week.

2i. ☐ If the extensive reading had been reading English articles, I would have done it

more.

2j. ☐ It is tiring to read English words on a computer screen.

2k. ☐ When I log on to the Internet, I don't feel like studying.

2m. ☐ When I use the Internet, I want to use Chinese, not English.

3. If you could choose between **doing extensive reading** and **not doing extensive reading**,

which would you choose?

3a. ☐ Doing extensive reading   3b. ☐ Not doing extensive reading

4. Please check what you enjoy about extensive reading. Check all that apply.

4a. ☐ I can choose what I like to read.

4b. ☐ I can improve my English.

4c. ☐ I can increase my English reading speed.

4d. ☐ I can increase my English vocabulary.

4e.[34] ☐ I can practice with using English to search on the Internet.

4f. ☐ None of the above

5. Please check what you do NOT enjoy about extensive reading. Check all that apply.

5a. ☐ It is not an interesting activity.

---

[34] Item 4e for LG participants is: *I like the feeling of having a book and finishing reading it.*

5b. ☐ I don't think it can improve my English.

5c. ☐ I don't have time for it.

5d. ☐ I don't like to read when what I'm reading is not printed out.

5e. ☐ When using the Internet, I don't feel like studying English.

5f. ☐ When using the Internet, I prefer using Chinese, not English.

6. If you could choose to read **printed English books** or **English materials on the Internet**,

which would you choose? (Check both if you like both of them.)

6a. ☐ Reading printed English books (*Please also answer Item 7.*)

6b. ☐ Reading English materials on the Internet (*Please also answer Item 8.*)

7. Please check what you enjoy about reading printed English books. Check all that apply.

7a. ☐ I get a sense of achievement when I finish reading a book that I can actually hold

in my hand(s).

7b. ☐ What is printed on paper is usually more valuable than what is posted on the

Internet because not everybody can publish a book while nearly everybody can post

something on the Internet.

7c. ☐ I can read a book at any place and any time, but I can read on the Internet only

where and when I have the Internet connection.

7d. ☐ I have been encouraged to read English books or magazines but not English on the

Internet.

7e. ☐ None of the above

8. Please check what you enjoy about reading English materials on the Internet. Check all that apply.

8a. ☐ I can choose and find what I like to read without going to a library or a book store.

8b. ☐ I can easily look for and use any information on the Internet to help me understand what I am reading.

8c. ☐ I can not only read but also watch films and listen to English on the Internet.

8d. ☐ When I don't like what I'm reading, I can look for something else on the Internet without much trouble.

8e. ☐ As an English learner, I should practice with using the English Internet.

8f. ☐ None of the above

9. If you could choose to read English articles or English stories, which would you choose?

9a. ☐ Articles   9b. ☐ Stories   9c. ☐ Both articles and stories

10. What comment(s) do you have on this 12-week extensive reading activity? (You can check (✓) more than one comment.)

10a. ☐ I don't see differences between having and not having the activity.

10b. ☐ It has helped me to develop a habit in reading English.

10c. ☐ It is a good and helpful activity.

10d. ☐ It is some extra burden to students.

10e. ☐ It is not long enough. We should continue doing it.

10f. ☐ It is difficult to find what I like to read.

10g. ☐ I have no comments.

Appendix G: Suggested Story Web Sites

(I) Story Arts Online (http://www.storyarts.org/index.html)

Click on STORY LIBRARY (http://www.storyarts.org/library/index.html) to read very

short stories.

Click on **Story Theater** (http://www.storyarts.org/theatre/index.html) to listen to story

telling.

Stories in a Nutshell... (http://www.storyarts.org/library/nutshell/index.html)

Aesop's ABC ... (http://www.storyarts.org/library/aesops/index.html)

(II) Children's Storybooks Online (http://www.magickeys.com/books/)

Illustrated stories for young children, older children, and young adults

Young Children (http://www.magickeys.com/books/#yc)

Older Children (http://www.magickeys.com/books/#oc)

Young Adults (http://www.magickeys.com/books/#ya)

(III) Storyline Online (http://www.storylineonline.net/)

Choices: (1) Listen to story telling, read captions (story text), and view illustrations all

at the same time. (2) Hide captions; listen to story telling and view illustrations.

(IV) *Graded* Talking Books (http://www.lextutor.ca/ra_read/graded/)

Stories of beginning level for silent reading and listening

(V) ChildhoodREADING.COM (http://childhoodreading.com/)

Illustrated short classic stories

(VI) Aaron Shepard's World of Stories (http://www.aaronshep.com/stories/index.html)

A variety of stories with origins, intended reader age(s), themes, and lengths (number of

words) provided for reference

Click on **Aaron's Extras** and get to read a performance script of the story, listen to

pronunciations of names in the story or some music, view an illustration, and/or more.

Folktales (http://www.aaronshep.com/stories/folk.html)

Legends (http://www.aaronshep.com/stories/legend.html)

Magical Tales (http://www.aaronshep.com/stories/classic.html)

Scared Stories (http://www.aaronshep.com/stories/sacred.html)

New Tales (http://www.aaronshep.com/stories/original.html)

Funny Stories (http://www.aaronshep.com/stories/humor.html)

Fantasy Stories (http://www.aaronshep.com/stories/fantasy.html)

Historical Stories (http://www.aaronshep.com/stories/historical.html)

Beginner Stories (http://www.aaronshep.com/stories/beginner.html)

(VII) American Folklore (http://www.americanfolklore.net/)

A variety of short stories including Spooky Series, Tall Tales, Myths and Legends,

Ghost Stories, U.S. Folklore, Heroes and Villains, Campfire Stories, Native American,

Children's Stories, Canadian Folklore, and Mexican Folklore.

Stories to listen to—LISTEN

(http://www.americanfolklore.net/spooky-podcasts.html): Spooky podcasts

Stories for English learners—ESL

(http://americanfolklore.net/folklore/esl-reading/)

(VIII) ClassicAuthors.net (http://www.classicauthors.net/)

Stories are grouped under authors' names arranged alphabetically by their surnames.

Some stories are accompanied by illustrations and/or story telling for listening.

(XI) The Free Library (http://www.thefreelibrary.com/literature.aspx)

Links to stories arranged under Title Index and Authors

Title Index: Click on a letter, which is the first letter of a story title. For example,

for *The Adventures of Peter Pan*, click on "**A"** and you will find the story.

Authors: Click on an author's name and then choose a story written by that author.

(X) Hans Christian Andersen (http://hca.gilead.org.il/)

Fairy tales and stories written by Andersen and arranged in time order

(XI) Kids4Classics (http://www.kids4classics.com/index.php)

Classic stories to read and listen to

Wikipedia links to introductions of stories

Author Index (http://www.kids4classics.com/index.php#author_index): stories

grouped by authors' surnames

Title Index (http://www.kids4classics.com/title_index.php): stories grouped by

titles

(XII) Literature.org (http://www.literature.org/)

Classic stories grouped by authors' names

(XIII) The Moonlit Road (http://themoonlitroad.com/)

Featured stories change regularly and are available for listening as well as reading.