Chapter 1   Introduction

1.1 Background

Vocabulary knowledge is critical to both L1 and L2 reading, as Joshi (2005) put it, "A well-developed vocabulary is a prerequisite for fluent reading, a critical link between decoding and comprehension." In recent years, vocabulary acquisition has even played a central role in learning second language (Nation, 2001; Schmitt, 2000). For both English teachers and EFL learners in junior high schools in Taiwan, there are two demands pertaining to vocabulary teaching/learning: (1) junior high school students need to develop larger vocabulary size, and (2) English teachers need to provide more individualized learning opportunities tailored to students at different language proficiency levels. These demands have stemmed from several factors:

First, a junior high school student's required English vocabulary of 1000 words (see Taiwan Elementary and Secondary Education Community, 2003) is not sufficient for reading in the target language. According to Nation and Waring (1997), there are well over 54,000 word families in English. As reported by Nagy and Herman (1987), printed school English contains about 88,500 distinct word families, with upwards of 100,000 distinct meanings and this figure would be even higher. In Nation and Waring's (1997) study, it was indicated that knowing 2000 high frequency word families could give about 80% coverage of written text. However, 95% coverage is the minimum for adequately guessing the meaning of the unknown words (Nation, 1990). Therefore, a vocabulary size between 3000-5000 word families is considered as necessary for comprehending general, unsimplified texts (Nation, 1990; Nation & Waring, 1997). To sum up, these figures though varied widely reflect that a junior high school student needs larger vocabulary size to enhance reading ability, or, at the very least to increase uptake rate, i.e., the probability of acquiring the meaning of a new word. It is noted

by Meara (1997) that the more words learners know, the easier they acquire the meaning of new words they encounter.

Secondly, the deficiency of the basic vocabulary causes a serious problem related to students' required vocabulary of 4000-7000 in their future study in senior high school. Since vocabulary knowledge is acquired over time, it would be impossible for an average student, heavily burdened with studies, to bridge a 3000-word to 6000-word gap in vocabulary size within one or two years. That is why many senior high freshmen (or even the 11th, 12th graders) are always frustrated by their poor English grade and complain about a daunting number of unknown words awaiting for them to memorize.

So far as these factors are concerned, it seems reasonable to conclude that vocabulary instruction in junior high school deserves our attention. However, this conclusion may be tentative in terms of the nature of learning. According to Thorne (2003), learning is one of the most individual and personal activities that we ever undertake. In the same vein, it was noted by Graves (1987) that students actually do most of their word learning independently regardless of how much teachers instruct in schools. Therefore, offering individualized opportunities for vocabulary learning is perhaps more significant than merely providing explicit vocabulary instruction. In addition, another reason for the quest of more individualized opportunities is due to individual differences and the prevailing so-called "double-peaked phenomena" existing in EFL class in junior high schools in Taiwan. The discrepancy in English language proficiency of the advanced achievers and the lower achievers within the same class has been always challenging the instructors who strive to give mix ability teaching. If a teacher ignores the heterogeneity of the population in a class, he or she would unlikely to provide moderate instruction suitable for students at different language proficiency levels. In turn, it would be difficult for students to be involved in learning because the advanced students might think English class is boring while the under achievable students

might think English is all Greek to them.

Based on the factors, the demands mentioned in the beginning of this chapter have to be placed in an English teacher's teaching agenda as follows: (1) how to help junior high school students learn new words to enhance their reading ability and adjust themselves to their future study of English in senior high school, and (2) how to provide individualized vocabulary learning opportunities which, as Schouten and Parreren (1992) stated, "would improve foreign language acquisition by less able pupils without injuring the perspectives of more able pupils" (p. 94). In order to deepen our understanding of how to put these items on our agenda into practice, we will then turn to the background of research available for vocabulary learning and seek for feasibility of providing individualized vocabulary learning opportunities.

The 1980s saw a wealth of research into vocabulary acquisition. A number of research has paid attention to the nature of vocabulary acquisition (e.g., Arnaud & Béjoint, 1992; Cho, 2002; Gu, 2003; Jones, 2004; Laufer, 1992; McKeown & Curtis, 1987; Morris & Cobb, 2004; Nation, 1990; Schmitt & McCARTHY, 1997; Scurfield, 2003; Segler et al., 2002; Wolter, 2002).

Currently, the question of how far learners can acquire words in an L2 through exposure to reading materials has begun to assume some importance in the literature (see, for example, Hermann, 2003; Horst et al., 1998; Horst & Meara, 1999; Krashen, 1989; Krashen, 1993; Nation, 1990; Taguchi, Takayasu-Maass & Gorsuch, 2004; Waring & Nation, 2004). Researchers like Krashen (1989; 1993) and Hermann (2003) claimed that vocabulary can be efficiently acquired by easy and comprehensible leisure reading or free voluntary reading. Extensive reading, especially a book-length treatment was confirmed by Waring and Nation (2004) to lead to a higher pick-up. Extensive reading is recognized as an approach to helping EFL learners build their reading vocabulary to an advanced level (Hunt & Beglar, 2005). So

far as long term lexical retention is concerned, reading is preferable to paired-associate learning (Hermann, 2003).

In addition to the receptive approach (i.e., acquiring vocabulary through reading), productive approach (i.e., acquiring vocabulary through writing) is also considered critical to second language vocabulary learning (Laufer & Nation, 1995; Lee, 2003; Muncie, 2002; Nation, 1990). Word-focused writing like writing original sentences or incorporating words in a composition was reported to exhibit even better than the receptive approach in terms of vocabulary gains (Laufer, 2003). Furthermore, some researchers have argued that reading and writing are closely connected and should be taught together (e.g. Krashen, 1993; Tsai, 2006). The following statement given by Krashen (1993) may shed light on the importance of connecting reading and writing activities in vocabulary learning/teaching:

> Even with extensive free voluntary reading, gaps in literacy may remain. …When readers consider themselves to be potential members of "the literacy club," — that is, people who use reading and writing—they absorb the enormous amount of information that writers possess. (pp.71-72)

Over the last few decades, considerable interest has been expressed in the use of technology in EFL learning. Generally, computers are suggested to be incorporated into English classrooms by integrating CALL as a stand-alone language task, a pedagogical platform, asynchronous distance learning or synchronous learning (Liou, 1999). The advances of technology along with pedagogical concerns have been thought to benefit vocabulary learning, reading and reading-writing in L2 learning. Accordingly, quite a few studies have been carried out on the effectiveness of computer-aided vocabulary acquisition (e.g., Goodfellow, 1994; Groot, 2000; Ma & Kelly, 2006; Tozcu & Coady, 2004; Wood, 2001), online reading activities with rich annotation have been widely investigated (e.g., Al-Seghayer, 2001; Streiter, et al., 2004), and a greater number of web-based reading-writing activities have

been conducted for they are assumed to provide interesting and substantial activities that increase students' word power, reading speed, and broaden their horizons (Liou, 1997; Lin & Hsu, 2001; Huang, 2001; Pino-Silva, 2006).

Through the literature, we can find the strong assumption of the link between vocabulary learning and reading, and the link between vocabulary learning and reading-writing connection. However, rarely can we see such assumption transferred into a CALL environment. In other words, there are few studies on vocabulary learning through online reading or online reading-writing.

1.2 Purpose of the Study

Sökmen (1997) has reminded us that there is "the fairly uncharted world" of the Internet, which can serve as a resource of meaningful vocabulary activities for both classroom instruction and independent learning. Without doubt, such an uncharted world can only be exploited by means of usable CALL application that is sufficiently motivating, easy, and effective (Hémard, 2003). In view of the request for usable CALL application, the newly emerged course management system (CMS), Moodle (Modular Object-Oriented Dynamic Learning Environment), is considered as an option for implementing vocabulary learning via online reading and reading-writing -- for its versatility and adaptability (see Brandl, 2005; O & Shally, 2005; O & Shally, 2006; Robb, 2004).

Currently, the blended learning environments which, by definition, combine both face-to-face and computer-mediated instructional environments at the course level are assumed to balance independent learning with human interaction (Allen & Ure, 2003; Morgan, 2002; cited in Graham et al., 2003). It is also advocated by Thorne (2003) that e-learning which blends online learning with more traditional methods of learning, e.g., traditional forms of classroom training and one-to-one coaching, is the most elegant solution to the challenges

of tailoring learning and development to the needs of individuals.

Bearing the concepts of usable CALL application and blended learning in mind, this study has three goals: (1) to seek for the feasibility of vocabulary learning through computer technology, online reading and reading-writing by reviewing previous research, (2) to implement a computer-aided vocabulary learning course by making reference to traditional vocabulary learning methods and studies on CALL, and (3) to assess the efficacy of the proposed online learning activities in a course management system named Moodle via learners' vocabulary gains and their perceptions.

1.3 Organization of the Thesis

The remainder of this thesis is divided into four chapters. The first chapter deals with the theoretical foundations and empirical supports for the development of the research, including the relationships between vocabulary and computer-aided learning, online reading and online reading-writing. Next, the research methodology follows with detailed description of the participants, the study procedure, data collection instruments, and data analysis. Results are then presented with descriptive statistics. The last chapter discussed the findings of the study in response to research questions, the pedagogical implications drawn from the findings, limitations of the study, and recommendations for future research.