An Investigation of Young EFL Learners’ Use of Online Reading Strategies

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Abstract

Tablet PCs have become a powerful instructional device for students to read and write stories (Robin, 2008). To assist young learners to cultivate efficient learning strategies in the early ages, students in the current study were guided to read three authentic online storybooks and then write their own digital stories with the Android applications. The study aims to investigate Taiwanese elementary school students' use of online reading strategies, and their relationship with students' performance on reading proficiency tests. The target population consisted of upper-grade learners (<i>n</i> = 83) at an elementary school in Taipei City. The instruments were a modified Survey of Reading Strategy (M-SORS) questionnaire with 30 items (Mokhtari & Sheorey, 2002), and a reading proficiency test in the General English Proficiency Test developed by The Language Training & Testing Center (LTTC). Major findings were as follows: Taiwanese elementary school students used online reading strategies at medium level; among the three types of online reading strategies, young learners tended to rely on problem solving strategies the most, followed by support strategies, and global reading strategies; (3) problem solving strategies were proven to significantly correlate with students' performance on vocabulary and sentence structure, cloze, and reading comprehension test, and (4) there was a significant difference between higher and lower reading proficiency learners' use of online reading strategies, particularly in the use of problem solving strategies. Pedagogical implications of the findings and suggestion for future research are discussed.

Key words: online reading strategies, reading proficiency, young EFL learners
INTRODUCTION

Currently, the emergence of mobile technologies such as tablet PCs in language classrooms, particularly in EFL elementary schools, is bringing new possibilities to language learning and literacy development. Elementary school teachers have also started to contemplate the potential of using these emergent technologies to provide authentic language experiences and facilitate literacy development. Today, school teachers are encouraged to incorporate technology in their classrooms.

Digital story reading can enhance subject content learning, critical thinking skills, and literacy development. Given that completing a successful story in digital form requires instructors to pose questions relevant to the reading content, students are challenged to think critically about effective integration of text and multimedia elements (Sadik, 2008). Digital story reading and writing also provides opportunities for students to monitor their learning process, thus fostering confidence and the sense of task accomplishment (Banaszewski, 2002). Each digital reading and writing challenges students to meticulously choose and compose their own storylines with the support of multimedia resources and thereby develop technical skills as well.

Regarding the importance of the technology and its impact on language learning, the current study presents an empirical study conducted in an elementary school in Taiwan. Particularly, the study aims to investigate young EFL learners’ and their English teachers’ perceptions towards the use of tablet PCs in a reading course.

LITERATURE REVIEW

In this section, two major parts are presented. The first section elucidates the theoretical background of second language reading strategies. The second section discusses research on digital story reading in L2 contexts.

Second language reading strategies

In the previous studies on second language reading, it has been suggested that readers use a variety of strategies to help themselves with language learning, including storage and retrieval of linguistic input. The employment of reading strategies in the L2 contexts has played an important role to promote reading comprehension (Anderson, 2003; Cohen, 1998). There are two dimensions of the studies on L2 reading in a second language.

First, the interactive model for teaching and reading refers to the dynamic relationship between bottom-up and top-down processes in reading, between decoding and interpretation, and between text and reader (Goodman, 1986; Rumelhart, 2004). Top-down processing, the strategy that is directed by reader’s goals and expectations about text information, is also called global strategy.

The second dimension of L2 reading revealed by previous studies is that readers’ language proficiency levels correlate to their determination in strategy use (Hong-Nam & Leavell, 2006; Huang, 1999; Green & Oxford, 1995; Shen, 2003; Wharton, 2000; Yang, 2002). These studies found that high proficiency readers have a tendency to use global strategies. In other words, higher achievers utilize more strategies that
aid textual comprehension and apply more self-monitoring strategies when reading different difficulty levels (Chang, 1998; Kletzien, 1991; Zhang & Wu, 2009; Hunag, 1999). However, low proficiency readers frequently use the so-called local strategies that are not specifically useful for understanding the text as a whole (Gan, Humphreys, & Hamp-Lyons, 2004; Huang, 1999; Zhang & Wu, 2009).

**Online second language reading**

Among previous research on L2 paper-based reading strategies, few studies have been investigated online reading strategies. Online second language reading relies on multimedia features, such as oral reading, digital highlighting, animations, sound and music effects, all of which are impossible with printed books (Adam & Wild, 1997; Matthew, 1996). Research has shown that presenting students with visual representations of animated words and illustrations can help them overcome comprehension-processing difficulties (Liu, 2004). Tablet PCs can be used to do e-books reading, with the potential for multimodal texts and multidimensional representations of background information. The literature on online reading strategies investigates three dimensions: comparing paper and online reading strategies, labeling EFL/ESL (English as a second language) learners’ online reading strategies, and examining the effectiveness of strategy use in an online reading program.

First, paper-based storybooks have already been used in class to help students understand complex concepts, while digital story reading is an innovative idea to motivate students to read independently (Sadik, 2008). Readers use different strategies when reading in the two types of texts, i.e., paper and online reading materials (Foltz, 1996). Foltz stated that readers relied heavily on the map online for orientation and they had a strong need for coherence when studying complex materials.

In addition to comparing paper and online reading strategies (Foltz, 1993), recent studies have focused on labeling EFL/ESL (English as a second language) learners’ online reading strategies (Anderson, 2003; Elshair, 2002). Results indicated that reading strategies used by learners in print are transferable to online reading whether in ESL (e. g., Akyel & Ercetin, 2009; Altun, 2000; Konishi, 2003; Elshair, 2002) or in L1 (e. g., Bland, 1995; Elshair, 2002; Foltz, 1993). For example, in Altun’s (2000) study, the result indicated that expert readers tend to skillfully transfer their print text reading strategies to the computer reading environments. The pedagogical implications are that it is suggested to integrate both text-related and web-related reading strategies in reading online texts. Moreover, the effective use of reading strategies has been recognized as an important way to increase reading comprehension.

Third, studies have demonstrated that there is a positive effect of computer-assisted strategy training on reading. For example, Coiro and Dobler (2007) explored online reading comprehension strategies among elementary school sixth-grade skilled readers in a web-based reading program. The study found that students’ reading comprehension is enhanced and the frequency of their strategy use, including prior knowledge sources, inferential reasoning strategies, and self-regulated reading processes also increased. From the previous studies, we have witnessed a growing body of studies devoted to investigating readers’ online reading behaviors and exploring the possible contributions that technology can make to L2 reading.
The Present Study

The study described here was conducted in spring 2012 on a course required for an elementary school. The digital story project was one of the major assignments in the English reading course for fifth graders. Before the two English teachers explained the project in class, the students were asked about their prior experience with reading digital stories. None of the forty-eight students knew about digital story reading and none have had experience in creating their own digital stories.

This investigation aims to understand students’ and English teachers’ perception of story reading and writing via tablet PCs. The following two research questions were addressed.

1. What are the online reading strategies used by the young EFL learners in Taiwan?
2. What is the relationship between young EFL learners’ online reading strategy use and their reading proficiency?
3. Is there any difference between online reading strategies used by high and low proficiency learners?

METHOD

Participants

Five classes of upper-grade Chinese-speaking children (n = 83) at an elementary school in Taipei City were recruited to participate in the study. Students in this study were used to reading paper-based storybooks. Each student was equipped with individual tablet PC, which was used as a media for digital story reading and writing. To compare different proficiency Ss’ online reading strategy use, students who scored at H (top 33%) and L (bottom 33%) in the reading proficiency test were selected.

Design and Materials

The online storybooks are from Reading A-Z. It is a PreK-6 educational resource company specializing in online delivery of leveled readers and supplementary curriculum. There are three main criteria for selecting three appropriate storybooks for the participants in this study. First, the storybook should be a fiction with sufficient story elements, including plots, characters, setting, problems and solutions; therefore, students can easily collaborate, discuss, and share their comprehension skills and reading strategies within groups or with the whole class. Second, each animated storybook will have three levels, with each sharing similar content and vocabulary. Third, the book whether it is at the beginning, intermediate, or advanced level is about 120 to 530 words in length, which make it possible not only for the students in different levels to complete their own digital story reading and writing, but also for the teacher to conduct the post-reading discussion within the 40 minutes time frame of a class period. The word range for each level is 100-200 for the beginning level; 200-350 for the intermediate level, and 300-550 for the advanced level. Based on the selection criteria, three storybooks are selected: I’d Like to Be, The Three Little Pigs, and Friends around the World. The children are exposed to a total of three books across six weeks.
Treatment Procedure
Students needed to read three online storybooks across 12 weeks. After that, they filled in online reading strategy use M-SORS questionnaire in L1, and a reading proficiency test was administered. Higher and lower achievers’ responses toward the questionnaire and performances in reading proficiency test were singled out for further analysis.

Data Analysis
Descriptive statistics was adopted to identify students’ online reading strategies. The relationship between these students’ use of online reading strategy and their reading proficiency tests were analyzed via Pearson product-moment correlations. Independent-sample t-tests were applied to examine whether there was any significant difference between higher and lower reading proficiency learners in their use of online reading strategies.

RESULTS
Major findings are as follows:
1. Generally speaking, Taiwanese elementary school students used metacognitive reading strategies at medium level (see Table 1).

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<th>The Frequency of Use of Three Categories of Metacognitive Reading Strategies</th>
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2. Among the three groups of metacognitive reading strategies, elementary school students tended to rely on problem solving strategies the most, followed by support strategies, and global reading strategies.
3. Problem solving strategies were proven to significantly correlate with students’ performance on reading comprehension test.
4. Reading aloud was the least used metacognitive reading strategy by all participants. However, it was found to correlate significantly with learners’ overall reading proficiency. In addition, it was a crucial strategy that distinguished high proficiency learners from low ones.
5. There was a significant difference between high and low reading proficiency learners’ use of metacognitive reading strategies, especially in the use of problem solving strategies. Low achievers’ frequent use of translation method was found to negatively correlate to their reading performance.

DISCUSSION AND CONCLUSION
The present study set out to investigate Taiwanese elementary school students’ use of metacognitive reading strategies. General pattern and specific use of strategies were studied. In addition, the relationship between students’ metacognitive reading strategy use and their performance on reading proficiency test were also examined. Lastly, high and low reading proficiency learners’ differences in their use of metacognitive...
reading strategies have also been pinpointed. Instruments adopted in the present study included the Modified Survey of Reading Strategy (M-SORS) based on Mokhtari and Sheorey’s (2002) Survey of Reading Strategy (SORS), and a reading proficiency test adopted from the intermediate level of General English Proficiency Test (GEPT).

Among the three types of online reading strategies, young EFL learners tended to rely on PROB strategies the most, followed by SUP strategies, and GLOB reading strategies (e.g., Anderson, 2003; Hung, 2005; Ilustre, 2011; Lee & Liao, 2007; Zhang & Wu, 2009). PROB strategies were proven to significantly correlate with students’ performance on reading proficiency test. Moreover, there was a significant difference between higher and lower reading proficiency learners’ use of online reading strategies, particularly in the use of PROB strategies (e.g., Zhang & Wu, 2009).

**Pedagogical Implications**
The present study has been demonstrated that the use of metacognitive reading strategies did play a critical role in learners’ reading proficiencies. Within the thirty individual metacognitive reading strategies, reading aloud was the least used one, but it significantly separated high from low reading proficiency learners. Over dependence on translation resulted in lower reading proficiency levels. Followings are pedagogical implications that echo the above mentioned issues.

**The Use of Reading Aloud**
As discussed earlier, reading aloud was crucial in differentiating high achievers from low ones. Moreover, when readers encountered comprehension breakdown, or met challenging articles, reading aloud offered an alternative to facilitate understanding of a written text. The double enhancement of learning has also been proven to significantly correlate with learners’ overall reading proficiency. Moreover, reading aloud allows readers to understand the phrasing of a language while developing reading fluency, as well as the structure of the articles (Fountas & Pinnell, 1996).

**Direct Teaching of Metacognitive Reading Strategies**
In the present study, the importance of metacognitive reading strategies has been reaffirmed. In addition, problem solving strategy group has also been found to be not only the most favored type of metacognitive reading strategies by elementary school students, they also play a crucial role in influencing learners’ overall reading proficiency levels and performance on reading comprehension tests. To help learners improve their reading abilities, language teachers are recommended to give direct instruction of metacognitive reading strategies. The “combined-strategy instruction” has been proven to be beneficial (Baker, 2002; Mokhtari & Sheorey, 2002; Pearson & Duke, 2002; Pressley, 2000).

**Limitations of the Present Study**
This study had several limitations. The first limitation concerns the number of participants. The study was conducted during the intensive regular class period. Thus, the participants were required to do their teaching under pressure. Future research could recruit more teachers who might be more available during summer or winter vacations, so that the qualitative and quantitative results might lead to greater insights into teachers’ and predictors of cultural intelligence.
First, one cannot tell with absolute certainty from the instrument alone whether students actually engage in the strategies they report using. Therefore, qualitative data from observations toward students’ actual use of strategies and interviews of learners’ decisions are needed.

Second, there were only eighty-four students participated in the study. Though significant results have been obtained through the responses of these EFL learners, it would definitely be more convincing if more elementary school students from different schools, or even various parts of Taiwan were to participate in the study.
REFERENCES