

# Learning Bridge: A Reading Comprehension Platform with Rich Media

Yu-Chin Kuo, Szu-Wei Yang, and Hsin-Hung Kuo

**Abstract**—A Reading Comprehend (RC) Platform has been constructed and developed to facilitate children's English reading comprehension. Like a learning bridge, the RC Platform focuses on the integration of rich media and picture-book texts. The study is to examine the effects of the project within the RC Platform for children. Two classes of fourth graders were selected from a public elementary school in an urban area of central Taiwan. The findings taken from the survey showed that the students demonstrated high interest in the RC Platform. The students benefited greatly and enjoyed reading via the technology-enhanced project within the RC Platform. This Platform is a good reading bridge to enrich students' learning experiences and enhance their performance in English reading comprehension.

**Keywords**—English Teaching, Multimedia-based Learning, Learning Platform, Reading Comprehension, Technology Enhanced Learning.

## I. INTRODUCTION

ACQUIRING good English reading skills, strategies and abilities is often an important educational goal to achieve for learners of English as a Foreign Language (EFL) in Taiwan; however, it is a real challenge for them, especially for beginning readers. One possible solution to this problem is Reading Comprehension Platform with digital projects. There are two obvious reasons for this. First, studies have shown that the technology-based programs not only increase children's motivation [2] & [4], but also improve students' comprehension and production of text in multimedia styles [3]. Additionally, with technological advancement, instructional materials designed via rich media platform have provided wonderful teaching and learning opportunities and environment [1], [5], [6]. We may expect greater learning gains when the animated visuals are integrated, and when learning is involved the understanding of concepts from context [1]. Another reason is that picture-books have long been regarded as one of the important teaching styles for young kids. The practice of reading comprehend via picture-books in English classrooms is getting more attention in Taiwan and around the world. It is time for English teachers to foster students' interest through study is to investigate the

multimedia-based learning. Therefore, the purpose of this effects of the Reading Comprehension (RC) Platform with rich media for children.

## II. READING COMPREHENSION

As we know, comprehension is definitely the reading goal for every learner. In order to help students learn English reading comprehension successfully, two main issues must be addressed:

- (a) the appropriate reading strategies to be used for helping children to enhance English comprehension;
- (b) the appropriate system to integrate verbal and graphic information.

Clearly, comprehensible input is a very important factor in second language acquisition for learners [7]. Reading is a process in which learners monitor their comprehension by language skills; for example, looking ahead to predict, looking back to clarify, selecting and comparing new information to prior knowledge [8]. Another appropriate reading strategy is summarization which is an effective method used to retain a clear memory or knowledge of the main ideas from the text.

Basically, skilled readers are able to use the following various ways [8]:

- to locate information within the text;
- to represent what they read;
- to analyze and describe what is important and unimportant;
- to integrate and synthesize what they learn.

In the digital era, multimedia-based learning has become a well-known and promising instructional design technique [6]. Additionally, researches [6], [9] have expressed the advantages regarding computer-assisted or Web-based learning. Furthermore, multimedia-based content can enhance learning by helping learners to achieve academic goals [6]. Moreover, in order to increase students' learning motivation and performances, the online platform is a good way to attract young kids' attention. Therefore, this technology-based platform was planned, designed and developed to integrate verbal and graphic information for children.

## III. METHODOLOGY

### A. Methodological Framework

The effects of RC Platform on EFL fourth graders' reading comprehension, their opinions and their learning attitudes are under investigation. Quantitative was mainly conducted in the study. The subjects were administered English reading comprehension tests before and after instruction. At the end of

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instruction, the students were responded about their opinions and their attitude scale toward RC Platform.

### B. Subjects

Seventy fourth graders from two classes in an elementary school were selected from a public elementary school in central Taiwan. The students involved in this research have learned more than three years in English at the school.

### C. Instrument

#### 1. English Reading Comprehension Test

In this study, English reading comprehension tests conducted in written form were developed by the authors. The subjects were administered the tests for both pretest and posttest stages.

#### 2. Opinions Scale toward RC Platform

*Opinions Scale toward RC Platform* was developed by the researchers. The subjects scored their answers on the basis of their opinions from 'strongly agree', 'agree', 'no-comment', 'disagree', to 'strong disagree'. These were numerically converted from a score of 5 to 1. The instrument was piloted and then used in the formal study.

#### 3. Attitude Scale toward RC Platform

*Attitude Scale toward RC Platform* was developed by the researchers. The subjects scored their answers on the basis of their opinions from 'strongly agree', 'agree', 'no-comment', 'disagree', to 'strong disagree'. These were numerically converted from a score of 5 to 1. The instrument was piloted and then used in the formal study.

## IV. RESULTS

The data in the study were mainly collected from the above mentioned instruments. The first type was the students' English comprehension test, and the others were from all the subjects' responses to the feedback questionnaires. Quantitative analyses were conducted by using SPSS, version 12.0.

### A. Analysis of Comprehension Tests

In the study, the results of the students' English reading comprehension tests were first analyzed. The results showed that students' total scores in posttest were significantly higher than those in pretest.

### B. Analysis of Opinions Scale toward RC Platform

One of the other types of the feedback questionnaires was the students' *Opinions Scale toward RC Platform*. General speaking, the result of the pilot study showed that the questionnaire was acceptable in terms of reliability. The results on *Opinions Scale toward RC Platform* were presented in Table I.

TABLE I  
RESULTS ON OPINIONS SCALE TOWARD RC PLATFORM

	1*	2*	3*	4*	5*
1. Understanding the meanings of the new words	2	1	11	18	38
2. Learning pronunciation	0	4	6	22	38
3. Understanding the meanings of the new sentences	1	2	6	21	40
4. Predicting the content from its title	0	3	4	13	50
5. Understanding the content from its illustration	3	2	5	26	34
6. Facilitating English learning	0	4	7	22	37
7. Summarizing for Memorizing the content better	3	1	12	28	26

\*1 = Strongly Disagree; 2 = Disagree; 3 = No Opinion; 4 = Agree; 5 = Strongly Agree.

### C. Analysis of Attitude Scale toward RC Platform

Another feedback questionnaire used in this study was *Attitude Scale toward RC Platform*. Most subjects mentioned that they not only enjoyed reading picture books on RC Platform very much, but also learned a lot. The Results on *Attitude Scale toward RC Platform* were presented in Table II.

TABLE II  
RESULTS ON ATTITUDE SCALE TOWARD RC PLATFORM

	1*	2*	3*	4*	5*
1. RC Platform with rich media raised my English learning interests.	2	5	5	18	40
2. RC Platform made me much progress in English learning.	1	4	8	15	42
3. Even though the learning process of RC Platform was harder for me, I still wanted to learn.	5	2	6	21	36
4. If there is a free web-based platform like RC Platform to learn English, I am glad to try.	1	4	9	12	44
5. Using RC Platform with rich media helped me learn English well.	3	1	8	17	41
6. I liked English activities via RC Platform.	4	4	7	16	39

\*1 = Strongly Disagree; 2 = Disagree; 3 = No Opinion; 4 = Agree; 5 = Strongly Agree.

Results from the subjects' open-ended questions of the questionnaire are as follows:

- The RC Platform is so interesting that I enjoy reading very much.
- The online instruction is really cool. I wish I could stay here to learn longer.
- The RC Platform should be arranged more, because I have made much progress in English learning. Besides, I hope to make further progress in the coming monthly

English test.

- The RC Platform makes English learning interesting, not boring.
- I want to thank you, my English teacher, for doing many things for us. I learn many new words and sentences from the vivid and interesting RC Platform. After this instruction I like English gradually, not hate it anymore.
- The reading material on the RC Platform is easy for me. It should be harder.
- I wish I could be here and learn via the RC Platform again and again.
- The use of computers facilitates my English learning.
- The RC Platform is helpful for me to read. Now I love English very much. When I grow up, I hope to be an English teacher.
- I think my English teacher, Miss Kuo, works very hard because she often arranges a variety of activities for us, and this makes my English achievement and performance from bad to good.
- My English teacher often gives us many opportunities to practice; thus, my English is better and better. Thank you, Miss Kuo.

The participants offered some suggestions regarding the RC Platform. To researchers' surprise, some participants have already been aware of their preferences. For example, "The Platform would be better if more games regarding the new words we learn."

Results shown as mentioned above revealed that most of the participants had responded with favorable and positive attitudes toward the RC Platform. With its multiple presentation and rich media entertainment qualities, the students had a good opportunity to build their reading skills gradually.

## V. CONCLUSION

Based on the feedback from the students, this study found that RC Platform with rich media could not only improve students' reading comprehension, but also motivate them from the multimedia-based instruction. The learners of this study enjoyed reading and benefited greatly via the technology-based project within the RC Platform. Like a reading bridge, this Platform enriched students' English learning experiences and enhanced good performances in English reading comprehension. Thus, the elementary school teachers are recommended to use the RC Platform with rich media for enhancing students' English reading comprehension and their English reading interests as well.

## VI. SUGGESTIONS FOR FUTURE RESEARCH

Based on the limitations of this study, three suggestions are provided for future studies. First, in order to facilitate young kids' reading comprehension, the examination of the subjects' prior knowledge before instruction is a must. Another suggestion is more participants from other elementary schools to make the study more objective and representative. Additionally, to understand what difficulties children may

encounter, researchers could diagnose young learners' problems of reading as well as vocabulary; then take appropriate measures to promote not only students' reading abilities but also their achievement.

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