

INTEGRATING ENGLISH INSTRUCTIONAL TECHNOLOGY TO EMPOWER STUDENTS' READING COMPREHENSION

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Abstract: The integration of technology into English Language Teaching (ELT) has been developed recently. Many studies revealed that the impacts of English instructional technology can enhance the students' English learning achievements. However, there are some problems that need more concern from educators. One of them is reading comprehension as it is one of the crucial skills in National Examination in Indonesia. To empower students' reading comprehension, the successful integration of English instructional technology into ELT could be the solution to cope with it. In this study, Webquest is an instructional technology tool used to increase students' reading comprehension achievements. Sixty two of senior high school students were involved as participants of this study. By conducting experimental research, thirty-one students were in the experimental group and the others were in the control group. The results revealed that the experimental group achieved higher scores than the control group. It indicates that Webquest is effective to improve students' reading comprehension achievements. In a nutshell, the implementation of technology in ELT could empower students' reading comprehension.

Keywords: *English instructional technology, reading comprehension, Webquest*

Today's technological advances have affected many aspects including English Language Teaching (ELT). Many studies confirm that the application of technology in ELT contribute to students' learning achievements (Ybarra & Green, 2003;

Marzban, 2011; Davood, Azizolah & Hossein, 2015).

Technology yields positive outcomes for educational purposes especially dealing with increasing motivation, facilitating active learning, providing efficient resources, and giving better access to information

(Kizil, 2011). Realizing this positive trend, the researchers are encouraged to conduct a similar research dealing with the integration of technology into academic setting which focus on reading, one of English skills tested in National Examination.

It is noted that most of questions in National Examination for English subject consist of reading comprehension questions. Thus, reading should be a primary concern in English language teaching.

However, the acquisition of reading is rather challenging as readers have to solve many problems such as absorbing information from the text, finding the main ideas of the text, reading the text quickly, answering questions related to the text, summarizing the text, and understanding the implied written symbols in the text (Chaniago, Badusah & Embi, 2011).

Successful implementation of technology in ELT may contribute to students' achievements. Webquest is one of learning tools that can facilitate the improvement of students' reading comprehension achievement.

According to Erben, Ban, and Castaneda (2009), Webquest is a tool used to make the learners focus on particular content and promote their inquiry through the World Wide Web. It allows the students to access the content that they need to complete without spending a lot of time searching.

Hassanien (2006) also states that Webquest is stimulating and useful for the students because it provides motivating and authentic materials that enable the students to remember the lesson better via Webquest than through traditional learning ways. Therefore, Webquest can be an alternative learning tool that

facilitates the students in studying and mastering language skills including reading.

This study integrates English instructional technology into ELT by using Webquest to empower students' reading comprehension.

METHODOLOGY

This study used quasi experimental: non-equivalent control group design as random selection was quite impracticable (Cohen, Manion, & Morrison, 2000). This study involved eleventh grade students of a state junior high school in Palembang. Sixty-two of two hundred and twenty four students were selected as the sample of this study by using purposive sampling technique. They were divided into two groups: experimental and control group. The experimental group students received treatment by using Webquest for fourteen meetings. Meanwhile, the control group students studied by using conventional method.

Prior to starting the learning sessions, the students were introduced to Webquest and all components of it (introduction, task, process, evaluation, and conclusion). After that they studied various topics by using Webquest. Each session was conducted in three phases. In pre-activities, the students were introduced to the topic and task. After that, in whilst-activities, they worked in pair or group to complete the task and discussed it together with the researchers. At last, in post-activities, the researchers summarized the lesson and led the students to review targeted skills or knowledge.

The materials included in Webquests covered narrative texts for two grades below and two grades above the students' readability level.

Based on the results of the test, the readability of most of students (81%) were in level 6. Therefore, narrative texts used as teaching materials were in level 4, 5, 6, 7, and 8.

To meet the validity, three experienced EFL teachers checked reading texts to ensure that the texts were appropriate with students' proficiency level and curriculum. In relation to it, Flesh Kincaid grade level was used to measure the reliability of the texts.

Test and questionnaire were used to collect the data of this study. The test was administered before and after the treatment. Meanwhile the questionnaire was only distributed to experimental group after the treatment.

The test was in the form of multiple choices administered to measure students' reading comprehension achievement. The test included questions reflecting reading comprehension skills: main idea, detail, inference, cause and effect, vocabulary, and sequence. In reading test, students had to answer 30 multiple choice questions related to narrative texts.

Content validity was used to check the validity of the test. Therefore, to meet the validity, the test was designed based on teaching materials that were adjusted to curriculum used. In addition, through Cronbach Alfa, it was found that the test was reliable since its reliability coefficient was 0.880.

The questionnaire written by Sen and Neufeld (2006) was administered to find out students' perceptions toward the use of Webquest in learning English. The questionnaire comprised 20 statements in terms of five likert-scales and covered five categories, namely: instruction and

timing, task, collaborative learning, relevancy and involvement, and evaluation.

Paired sample t-test and independent t-test were used to analyze the results of students' reading comprehension test. Moreover, simple percentage analysis was applied to see experimental group students' perception towards the use of Webquest in learning.

FINDINGS AND DISCUSSION

Based on the result of paired sample t-test, it was figured out that the mean score of experimental group students' reading pretest was 65.87, and the mean score of their reading posttest was 80.58. Hence, the mean difference between experimental group students' pretest and posttest was 14.71.

The mean score of students' reading pretest in the control group was 66.45, and the mean score of their reading posttest was 68.26. Therefore, the mean difference between control group students' pretest and posttest was 1.81. These results inferred that students in both groups made significant improvements in their reading achievements. Table 1 shows the results of paired sample t-test.

Table 1
Result of Paired Sample t-test

| | Exp Group | Control Group |
|-----------------|------------------|----------------------|
| Mean Pretest | 65.87 | 66.45 |
| Mean Posttest | 80.58 | 68.26 |
| Mean Difference | 14.71 | 1.81 |
| Std. Deviation | 14.71 | 2.386 |
| t-value | 9.081 | 4.215 |
| Sig. 2 tailed | .000 | .000 |

In conjunction with it, the results of independent sample t-test on students'

reading achievement revealed that there was a significant difference in reading achievement between the students who were taught by using Webquest and those who were not with mean difference between both groups was 12.32. Table 2 presents the results of independent sample t-test.

Table 2
Result of Independent Sample t-test

| Grp | Mean Score | Mean Diff. | t (Sig. 2 tailed) |
|-----|------------|------------|-------------------|
| Exp | 80.58 | 12.32 | 6.602 (.000) |
| Con | 68.26 | | |

The results of tests above inferred that although students in both groups made significant improvement in their reading achievements, the improvement made by experimental group students was higher than control group students. In a nutshell, Webquest was an effective instructional learning tool that can be used to enhance students' reading achievement.

Based on the results of students' responses to each statement of the questionnaire, it was found that there were 15 students or 48.38% of all respondents were in very good category, 11 students or 35.48% of all respondents were in good category, and 5 students or 16.12% of all respondents were in average category. In addition, none of respondents were in poor and very poor categories. Table 3 displays the result of questionnaire.

Table 3
Result of Questionnaire

| Category | Score Range | Score Category | N | % |
|-----------|-------------|----------------|----|-------|
| Very Good | 85-100 | 5 | 15 | 48.38 |
| Good | 69-84 | 4 | 11 | 35.48 |
| Average | 53-68 | 3 | 5 | 16.12 |

| | | | | |
|-----------|-------|---|---|---|
| Poor | 37-52 | 2 | 0 | 0 |
| Very Poor | 20-36 | 1 | 0 | 0 |

As shown in Table 3, the students' perceptions towards the use of Webquest in learning English were favorable. Students believed that Webquest could be an alternative learning tool that facilitated them to gain better improvement in reading achievements.

Based on the findings above, Webquest helped students to gain significant improvement in their reading achievement. This result is in agreement with some research (Kocoglu, 2009; Shan, 2011; Tuan, 2011; Alshumaimeri & Almasri, 2012). There were some factors which might influence the significant differences in the students' reading achievement of this study.

First, Webquest provides meaningful tasks which require students to receive certain information and achieve certain purposes. It covers activities that allow students indulge in critical thinking which involve problem solving, judgments, analysis, and synthesis (March, 1998). During the treatment, students did some meaningful activities based on the task provided in the Webquest that helped them to develop their comprehension such as: working in pair or in group, discussing together, and sharing ideas in solving problems and answering reading comprehension questions given.

Second, Webquest exposes students to the authentic materials which are motivating. It is an interesting and engaging learning tool that provides a valuable environment especially for an extensive reading activity (Barros & Carvalho, 2007). It gives students opportunities to confront with a lot of authentic tasks

that require them to solve a problem, make a comparison, or construct a hypothesis in relation to real life situation (March 1998). When the students are motivated, they will put much effort on their study to improve their achievement.

Third, Webquest supports students in enriching their vocabulary and knowledge. When the students are exposed to different resources, their vocabulary will be improved (Alfadda, et al., 2011). Even when they found new vocabulary or expression, they discussed it together. As the vocabulary mastery was influential to the students' comprehension in reading a text, therefore, it might contribute to the improvement of their reading achievement.

CONCLUSION AND SUGGESTIONS

On the basis of findings and discussions of the study, two conclusions could be drawn, namely: (1) there was a significant difference in reading achievement between the students who were taught by using Webquest and those who were not, (2) the students' perceptions towards the use of Webquest in learning English was favorable. These results proved that Webquest was an effective instructional tool which could promote English teaching and empower students' achievements in reading.

However, the integration of English instructional technology into teaching and learning process must be supported by good facilities and sufficient ICT skill both from teachers and students. In addition, selected texts which are taken from the internet should be appropriate with students' reading level. Therefore, teachers have

to check readability of the texts before they are given to the students.

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