

The Effectiveness of Scaffolding Strategy in EFL reading comprehension

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Abstract - The aim of this article is to examine the effectiveness of scaffolding in improving reading comprehension skills in an EFL reading context. An experimental design was applied in this article. Participants of this study were 60 students of English Education at Jambi University. The students in the experimental and the control group read the same English texts. In the experimental group, students were helped by scaffolding questions in cooperative learning condition. In the control group, students had no scaffolding questions in conventional learning condition. A pre-test and post-test were administered to measure students' comprehension before and after reading classes in both groups. Statistical analyses using an independent sample t-test were conducted to compare mean scores of scaffolding reading class as the experimental group and non-scaffolding class as the control group. The results revealed that scaffolding provides a differential effect on reading comprehension gain for the lower and higher ability students in the experimental group. This suggests that the lower students of scaffolding group benefited more in terms of reading comprehension gain than the higher ability students.

Keywords: scaffolding, EFL, reading comprehension

1. Introduction

Reading skills in English as a foreign language context are important for students at a university level because almost all of academic activities in this environment require reading skills. For students of English program study or English education, the importance of those skills becomes more obvious. Reading skills to comprehend or to summarize book chapters, report, journals, and various genres of texts which are written in English need to be grasped by all of the students to complete their tasks. In this sense, as argued by Grabe and Stoller (2002), students' ability in texts comprehension is the key success for academic achievement.

In the EFL context at the university level, it may be useful to investigate particular strategies to help the students develop their reading skills so that they will be successful in their study. For this reason, using scaffolding as a learning strategy has been believed effective to improve reading skills of students in college. In this sense, scaffolding means "support given by a teacher to a student when performing a task that the student might otherwise not be able to accomplish" (van de Pol, Volman & Beishuizen, 2010: 274). This support can be in posing questions, and giving feedback, examples, or

explanations. The essence of scaffolding is the temporary support a teacher gives to help students individually or collectively to complete a task that they might not be able to do without help (Graves, Watts, & Graves, 1994). The support is intended to facilitate novice to improve their abilities, skills, and knowledge gradually (Rogoff, 1990; Poorahmadi, 2009; Wachyuni, 2015).

Specifically for educational context, scaffolding can be seen as a process or activity in which a teacher (or other experts) helps students by supporting their learning temporarily. The teacher provides scaffolded assistance when students need it and then gradually reduces and removes it as they learn and develop their knowledge and skills (Wachyuni, 2015).

In line with this, various studies have been done to measure the effectiveness of scaffolding in improving students' achievement and reading skills in an EFL. As experimented by Wachyuni (2015), Attarzadeh (2011), and Poorahmadi (2009) scaffolding strategy significantly impacts reading comprehension skills in the EFL classroom context. The findings from these studies show the effectiveness of scaffolding in improving students' performance in getting the main idea, making inferences, and summarizing from the text they read in a cooperative learning context.

Shortly, the previous studies show the effectiveness of scaffolding as a potential strategy to enhance students' performance, attitude and reading skills in reading cooperative learning condition. Therefore, the primary purpose of this article is to examine in more detail the effectiveness of scaffolding strategy in increasing reading comprehension gain in a specific condition, i.e. in a cooperative learning classroom.

Essentially, cooperative learning in this sense is working together to reach shared goals (Johnson, Johnson, & Holubec, 1998; Slavin, 1982). In reading comprehension classroom context, cooperative learning can be characterized by reading cooperatively in a small group wherein all of members helping each other to comprehend the text they read.

In an EFL context, it is visible to consider scaffolding as an alternative strategy to improve students' skills in reading in a cooperative learning context. Differ from previous studies that stress on the general effect of scaffolding on reading comprehension gain, the present study also examines differential effect of scaffolding on low and high-level ability of students. Therefore, the effectiveness of the scaffolding strategy can be measured in a more specific way. So, this article may contribute some valuable findings in enhancing

students learning through scaffolding strategy in reading English as an EFL.

2. Method

2.1 Design

This present article applied an experimental design to investigate the effectiveness of two different learning conditions: scaffolding and non-scaffolding strategy in improving reading comprehension gain. Two classes of sophomore students of the Faculty of Teacher Training and Education majoring in English Education were randomly assigned to an experimental and a control group. In the experimental group, students read texts cooperatively within a group of four. They read to comprehend the texts guided by scaffolding questions. In the control group, on the other hand, students work alone without scaffolding questions. In this group, students read individually in a classical condition as commonly taught by the lecturer in the university. Both of groups were taught by the same lecturer, read the same texts in the same duration of time.

2.2 Participants

60 undergraduate students of English Education, at the Faculty of Teacher Training and Education, Jambi State University in Indonesia participated in this study. They are mostly native speakers of various local languages with numerous dialects, such as dialects of Kerinci, Palembang, Riau, Bengkulu, and Jambi Malay, whereas Indonesian language (*bahasa Indonesia*) commonly is used as their second language in a limited context. English is used as the language of instruction in the classroom. Yet, Indonesian will be used when they fail to understand utterances or sentences in English.

2.3 Materials

5 sets of HAVO (literally means: “the higher general continued education”) English test was adapted as the materials of this study. The test is a proficiency test developed by Dutch Ministry of Education, Culture and Science constructed by a team of experts in a carefully controlled procedure and pretested to make sure that the questions are reliable. Each of the set consisted of 1 passage with various multiple choice comprehension questions. If there were less than 10 questions, the researcher added a few to keep the numbers similar.

2.3.1 The Scaffolding Worksheet

The worksheet consisted of a reading passage, scaffolding questions, and key answers. Essentially, the scaffolding

consisted of guidance questions that help students come up with the correct answers. Through answering the questions, students were assisted at the very least in activating their background knowledge, enriching and deepening vocabulary knowledge related to the topic of the text, and finding the main idea in the paragraphs.

2.3.2 Test Instrument

The reading test instrument was modified from HAVO test, which comprises reading passages and 10 multiple choice items. The test had acceptable validity and reliability. The test was constructed to measure students’ comprehension in reading English text. Furthermore, a statistical analysis to measure the reliability of test showed that 10 items for pre-test and 10 items for post-test had adequate internal consistency as indicated from Cronbach Alpha=.70.

2.4 Procedures

Research procedures depicted in the following table are replication of Wachyuni’s (2015).

Table 1. Activities and procedures

Time	Action	Experimental group SCL Group	Control group IL Group
20’ 5’	Pre-reading activities	-Pre-test -Procedure and objective of the lessons are explained	-Pretest -Procedure and objective are explained
50’	While-reading activities	Working on worksheet together -answering scaffolding questions -checking the answer	Read passage -listing difficult words -generating questions -answering questions
20’	Post-reading activities	RC test	RC test

2.5 Data Analysis

To analyse the data, an independent sample t-test was conducted to examine the differences in reading comprehension gain between experimental and control groups. The gain score in reading was calculated by post-test minus pre-test scores. The independent variables were scaffolding cooperative learning and non-scaffolding learning condition. The dependent variable was reading comprehension gain.

Table 2. Descriptive statistics of experimental and control group

Group	N	Mean	SD	SE Mean	
Pretest	Scaffolding cooperative learning strategy	32	4.25	1.37	.24
	Non-scaffolding strategy	28	4.78	1.42	.27
Posttest	Scaffolding cooperative learning strategy	32	6.37	1.50	.26
	Non-scaffolding strategy	28	5.71	1.58	.30
Reading gain	Scaffolding cooperative learning strategy	32	2.13	1.48	.26
	Non-scaffolding strategy	28	.93	1.80	.34

Furthermore, the same analysis procedure was also conducted to measure the effectiveness of scaffolding strategy in improving reading comprehension gain of low ability and high ability students. The two levels of students' ability, low and high, were determined from pre-test scores. The students' scores below mean were determined as the low ability and above mean were the high ability.

3. Result and Discussion

The main question of the current article is: Is scaffolding strategy effective in improving students' comprehension in an EFL classroom? To answer this question an independent samples t-test was conducted to compare reading comprehension gain as an effect of scaffolding cooperative learning strategy and non-scaffolding conditions. Descriptive statistics of the experimental group (scaffolding cooperative learning strategy) and control group (non-scaffolding strategy) are summarized in table 2.

Table 3. Mean gain of low and high ability students in scaffolding cooperative learning condition

SE Mean	SD	Mean	N	Level of ability
33	1.41	2.72	18	<= 4.00 Low ability
32	1.22	1.36	14	5.00+ High ability

Reading gain

Based on the descriptive statistics in table 2, the result of t-test with equal variance assumed revealed that there was a significant difference in the gain scores for scaffolding strategy (M=2.13, SE=.26) and non-scaffolding strategy (M=.93, SE=.34); $t(58)=2.83$, $p=0.006$, effect size=.12. These results suggest that scaffolding cooperative learning strategy is more effective in improving students' comprehension gain than non-scaffolding strategy.

The finding of this study strengthened the previous studies which demonstrated that scaffolding may be visible in giving transfer effect on students' gain in reading comprehension (Wachyuni, 2015; Poorahmadi, 2009; Attarzadeh, 2011). It means that scaffolding questions can be used as substantial clues for students to comprehend texts better. This proposes that guided questions which consisted of questions asking for the meaning of the text, getting main ideas, making inferences, and summarizing are essential to enhance students' comprehension (Wachyuni, 2015).

Similarly, Poorahmadi (2009) and Attarzadeh (2011) showed the effectiveness of scaffolding in improving students gain in reading comprehension. Specifically, students' skill in reading comprehension and general English proficiencies can be enhanced through scaffolding strategy. To sum up, findings of these studies confirmed the effectiveness of scaffolding strategy as a substantial tool to help students enhance their English reading skills in an EFL context.

Furthermore, the more specific question is: Do low level of students benefit more than a high level of students from the scaffolding cooperative learning strategy? To answer this, the same statistical analysis using t-test showed that low-level students in the scaffolding cooperative learning condition performed better in reading comprehension than the high ability students. Descriptive statistics of reading gain of low and high ability students in scaffolding cooperative learning condition is summarized in Table 3.

The result of an independent sample t-test with equal variance assumed revealed that there was a significant difference in gain for low ability students of the scaffolding cooperative learning strategy ($M=2.72$, $SE=.33$) and the high ability ($M=1.36$, $SE=.32$); $t(30)=2.89$, $p=0.007$, effect size=.22. The results indicate that the low ability students achieve more gain in reading comprehension than the high ability. This suggests that the low level of students benefited more than the high level of students in scaffolding cooperative learning strategy condition. This result reinforces Wachyunni (2015) and Stockdale and Williams (2004) who found that low ability students performed better gain than high ability in cooperative learning condition.

In other words, scaffolding strategy in cooperative learning condition is more effective to improve students gain for the low ability students than for the high ability.

As it is suggested above, scaffolding cooperative learning strategy consisting of guided questions related to meaning of the text provides more benefit for low ability students. This implies that scaffolding strategy in cooperative learning condition is very useful to help low ability students to improve their reading skills along with their comprehension enhancement. For high ability students, scaffolding strategy in cooperative learning condition did not provide freedom in time for them to explore and elaborate meaning of the text in more detail because most of their time is used to help low ability students. As a result, they only have very limited time to comprehend the text thoroughly. This finding is similar to the results of previous studies conducted by Gaith and Bouzeineddine (2003), Stockdale and Williams (2004), and Wachyunni (2015) who found that as an effect of scaffolding on cooperative learning condition, the low ability students achieve better gain than the high. The scaffolding is very helpful for the low ability to improve their reading skills. In other words, this finding shows a differential effect of scaffolding on a different level of ability: scaffolding strategy is more effective for low ability students.

These suggest that in practicing scaffolding strategy in cooperative learning condition, different levels of ability need to be considered. Moreover, the finding suggests that 'time' is

not the only factor that causes the high ability students achieve less than the low students. We need to consider other interrelated factors affect in learning process and outcome, such as students' attitude, motivation, and learning circumstances.

4. Conclusion

To conclude, this article supports many findings in practicing scaffolding as an effective strategy in reading comprehension in an EFL context. The scaffolding used by the teacher in cooperative learning condition provides the substantial effect in enhancing students' skill in reading comprehension as indicated from the gain. Specifically, as far as levels of ability in reading comprehension are concerned, scaffolding is quite helpful for low ability students to achieve better comprehension. This suggests that the low ability take more advantages from reading through scaffolding questions as it was experimented in this study. As a result, they achieve more gain than the high ability students. To end, as scaffolding revealed the effectiveness in enhancing students skills in reading comprehension it is reasonable to suggest teachers implement this strategy in an EFL reading classroom.

5. References

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