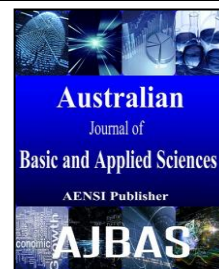




ISSN:1991-8178

Australian Journal of Basic and Applied Sciences

Journal home page: www.ajbasweb.com



The Effects of Using the STAD Method in Reading Comprehension Among Secondary Students

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ARTICLE INFO

Article history:

Received 13 November 2013

Accepted 23 October 2013

Available online 30 November 2011

Keywords:

The STAD method, Comprehension, Secondary schools, Social skills, Implicit questions, Explicit questions.

ABSTRACT

Background: Reading skills of many Malaysian students at secondary level are not with desirable or acceptable level. **Objective:** The objective of this study is to ascertain the effectiveness of using the STAD method (one of the cooperative approaches) in reading comprehension among Form Four students. In this study the researchers investigated whether the utilization of the STAD method enhanced the achievement of the experimental group in reading comprehension compared to the control group which was taught using the conventional method. The researchers also investigated whether the STAD method significantly enhanced the social skills of the subjects from the experimental group compared to the control group. **Results:** The findings indicated that the mean scores of the experimental group in reading comprehension enhanced significantly compared to the control group. The findings also revealed that social skills of students from the experimental group enhanced significantly compared to the control group. **Conclusion:** The findings of this study show that the STAD method is a good alternative for ESL teachers to make a paradigm shift from teacher-centered to one that is student-centered in teaching comprehension.

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To Cite This Article: Subdrah Madhawa Nair and Vasanthi Periasamy., The Effects of Using the STAD Method in Reading Comprehension Among Secondary Students. *Aust. J. Basic & Appl. Sci.*, 9(18): 19-24, 2015

INTRODUCTION

English language literacy and good reading comprehension skills are necessary tools to succeed in today's globalized world (Sarojinee, 2012). Miller (2002) stressed that reading is a complex process which is correlated with the thinking process. In a reading process, a reader looks for meaning from the printed text. Therefore, reading is an interactive process whereby the reader uses his prior knowledge to give meaning to the information gained from the text (Anderson, 1985). Subdrah and Norain (2006) viewed reading as a complex process which involves the emotion, perception and cognition of the readers. This process also involves the interaction between the reader and the writer. In this process the reader constructs meaning from the printed symbols based on his existing schemata.

Problem Statement:

Reading comprehension is a complex task and not an easy acquired skill. According to Asha (1999), in spite of the fact that reading is an important skill in language learning, to master even the minimum level of reading ability is not an easy task. Gan (2001) and Sharifah Sheiha (2004) stressed that there have been

a lot of complaints regarding students' performance in reading comprehension, specifically at the upper secondary level. This is especially so when it comes to answering comprehension questions in ESL classes and public examination (SPM English Language Paper 2).

Students' poor performance in reading as a respective skill also affects their other productive language skills, especially in writing, which is also an important skill tested as part of the English paper in public examination. Studies by Nist and Kirby (1986) revealed that students who perform poorly in academic writing and reading in language of instruction (English as first or second language) also perform poorly in their mainstream courses. Ambigapathy (2000) claimed that 76.2% of secondary school pupils were reluctant readers of English Language materials. Students' poor performance in reading is also associated with classroom pedagogy employed by the teacher. A study by Ambigapathy (2007) revealed that although ESL teachers were exposed to various teaching methods at teacher training colleges and universities, they still resort to conventional methods (chalk and talk and teacher centered methods) in classroom teaching. Therefore, the issue on improving reading

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comprehension should be addressed from a new perspective of teaching approach which is more to a student centered approach which engages students actively in the learning process.

Cooperative learning approaches such as the STAD method help students in mixed ability classes to motivate each other to develop learning concepts and ultimately to experience meaningful learning in a conducive learning environment. This approach is student centered and based on the social constructivist theory by Vygotsky (1917, 1978). According to Vygotsky a child can reach the zone of proximal development if given the right scaffolding by adults or peers. The STAD method (Slavin, 1978) can be fully exploited by teachers in the classroom to facilitate students' reading comprehension skills. In this method students work together in groups and reach their zone of proximal development with the help of peers and teachers. As such the focus of this study is to compare the effects of utilizing the STAD method and the conventional method in teaching reading comprehension

Research Objectives:

The following are the research objectives of this study:

1. To ascertain whether there is a significant difference between the mean scores of the experimental group and the control group in their overall achievement in comprehension.
2. To ascertain whether there is a significant difference between the mean scores of the experimental group and the control group in the area of explicit questions.
3. To ascertain whether there is a significant difference between the mean scores of the experimental group and the control group in the area of implicit questions.
4. To ascertain whether there is a significant difference between the mean scores of the experimental group and the control group in their social skills.

Research Hypothesis:

Based on the objectives of the research four null hypotheses are formulated.

Ho1. There is no significant difference between the mean scores of the experimental group and the control group in their overall achievement in comprehension

Ho2. There is no significant difference between the mean scores of the experimental group and the control group in the area of explicit questions

Ho3. There is no significant difference between the mean scores of the experimental group and the control group in the area of implicit questions.

Ho4. There is no significant difference between the mean scores of the experimental group and the control group in their social skills.

Literature Review:

Johnson and Johnson (1989) suggest five primary elements in cooperative learning. They are:

1. Face to face interaction in small heterogeneous groups, constantly helping and supporting each other; in other words there is optimum interaction and participation.
2. Individual accountability or all; self success and the group's success and collaboration among members to obtain skills and success.
3. Social skills for cooperation when carrying out the group task.
4. Positive interdependence to achieve the same aim.
5. Group processing to carry out task as a group.

The STAD method is one of the cooperative learning methods developed by Slavin (1978). In line with cooperative concept, the STAD method gives attention to intrinsic motivation. He adds that group contingency is vital where the behavior of one or many in a group has a long bearing on the group's reward. This condition makes group contingency an important factor to stimulate the group members to work better in fulfilling their task.

Numerous studies by famous researchers such as Johnson and Johnson (1989), Slavin (1987), Sharan (1999), and Gaith (2004) indicate cooperative learning having positive effects on students' achievement and social skills. Studies by Kagan (1994) and Yager (1986) also indicate similar results. Cooperative learning approach has been studied and practiced widely in America, Canada, Israel and England.

Studies by Kim (2012), Gopalakrishnan (2005), Fletcher (2006), Nagarajan (2006), Suguna (2007), Najamudin (2009) and Suhaida (2002) also indicate that the utilization of the STAD method enhanced students' academic achievement significantly. On the other hand, there are also several studies which indicate that the STAD method is less effective than other methods in the process of teaching and learning. Studies by Malar (2010) show that students who were taught History using the Needham Five Phase method scored significantly higher points in the post-test on retention of knowledge compared with the group who was taught using the STAD method.

A study by Sarojinee (2012) also indicated that students who were taught using the conventional method had better retention knowledge of messages in short stories (English literature component) compared with the students taught using the STAD method. This is probably because the teacher in the control group did constant revision and drilling work with her pupils but students in the STAD group faced problems due to lack of vocabulary and language proficiency and lack of scaffolding from the teacher.

Since the effects of utilizing the STAD method in the process of learning is inconclusive this study explores the effects of utilizing the STAD method in teaching reading comprehension.

Methodology:

This is a quasi experimental study using the quantitative approach. The sample of the study consists of 61 Form Four students (Grade 9, 16 years old) from two sub-urban secondary schools in Kulim District, Kedah. The samples from the two schools are almost similar in their academic achievement, combination of gender, and the grades of the schools. The subjects from school A (31 students) make up the experimental group while the subjects from school B (30 students) represent the control group. The experimental group was taught using the STAD method and the control group was taught using the conventional method. The researchers have done this arrangement so that the learning instructions given to one group do not influence the other.

The duration of the study was eight weeks. During the first week the experimental group and the control group were given the pre-test consisting of four reading texts (two descriptive and two narrative types of reading passages). Both the groups were also given questionnaires on social skills (12 items). The pre-test and the questionnaires were administered prior to the intervention to determine students' reading performance and their social skills. Following this the experimental group was taught using the STAD method and the control group was taught using the conventional method for eight weeks

(eighty minutes a week) During the eighth week, both groups were given the post-test and the questionnaires to gauge their achievement and their social skills. The contents of the pre-test and the post-test were the same. During the intervention, the control group used the same topics and materials as the experimental group but the teacher only employed the conventional method in the classroom.

Prior to the actual study a pilot test was carried out on forty Form Four students in a school in Kulim which has similarities with the schools involved in the study. The purpose of the pilot test was to ascertain the reliability and validity of the instruments used in this study. The reliability of the questionnaire showed Cronbach's Alpha at 0.86 (high reliability). The findings of the pilot test also indicated that the content, clarity and the time allocated for the pre-test and the post-test were suitable. The validity of the pre-test and the post-test were obtained by asking two senior English teachers to verify and determine the validity of the test.

Findings and Discussion:

1. There is no significant difference between the mean scores of the experimental group and the control group in their overall achievement in comprehension.

Table 1a: Comparing of mean for overall achievement in reading comprehension in the pre-test.

Group	N	Mean	SD	Mean Difference	t- value	df	p-value
Experimental	31	21.32	.96	.12	.47	59	.64
Control	30	21.2	1.07				

Level of significance is at $p < 0.05$

Table 1b: Comparing of mean for overall achievement in reading comprehension in the post-test.

Group	N	Mean	SD	Mean Difference	t- value	df	p-value
Experimental	31	37.35	.80	15.25	56.19	59	.000
Control	30	22.10	1.26				

Level of significance is at $p < 0.05$

The results of the pre-test show that there is no significant difference between the mean scores of the experimental group and the control group in their overall achievement in reading comprehension ($t = 0.47$, mean difference = .12, $df = 59$, $p = 0.64$). On the other hand, the findings of the post-test indicate that there is a significant difference between the mean scores of the experimental group and the control group for overall achievement in reading comprehension ($t = 56.19$, mean difference = 15.25, $df = 59$, $p = .000$). The findings fail to accept Null Hypothesis 1. The findings also show that the systematically planned STAD method has helped the subjects in the experimental group to obtain higher

scores in the area of overall achievement in reading comprehension compared with the control group taught using the conventional approach. These findings are also in line with the findings of Gopalakrishnan (2005), and Suguna (2007) who were of the view that students' active interaction in reading, discussion, and searching for answers in groups enhance their meta cognitive skills in reading comprehension and enable them to perform better than the control group.

2. There is no significant difference between the mean scores of the experimental group and the control group in the area of explicit questions.

Table 2a: Comparing of mean scores for explicit questions in the pre-test.

Group	N	Mean	SD	Mean Difference	t- value	df	p-value
Experimental	31	17.06	.98	.09	.42	59	.67
Control	30	16.97	.80				

Level of significance is at $p < 0.05$

Table 2b: Comparing of mean scores for explicit questions in the post-test.

Group	N	Mean	SD	Mean Difference	t- value	df	p-value
Experimental	31	29.9	.89	11.90	39.62	59	.000
Control	30	18.00	1.40				

Level of significance is at $p < 0.05$

The findings of the pre-test show that there is no significant difference in the mean scores of the experimental group and the control group in their achievement in the area of explicit questions ($t = 0.42$, mean difference = .09, $df = 59$, $p = .67$). The findings of the post-test revealed that the mean scores of the experimental group were significantly higher than the control group ($t = 39.62$, mean difference = 11.90, $df = 59$, $p = 0.00$). Therefore the findings fail to accept Null Hypothesis 2. Additionally, in the STAD method the more proficient students were able to guide the weaker ones during their group activity and this helped them

in the process of learning and performed better in the post-test compared with the control group. These findings are similar to the findings by Nagarajan (2006) and Slavin (1991) who stressed that the STAD method is student centered learning and provide platform for students to discuss and give meaning to the text. These enhance their skills in answering explicit questions compared to the control group.

3. There is no significant difference between the mean scores of the experimental group and the control group in the area of implicit questions.

Table 3a: Comparing the mean scores for the implicit questions in the pre-test.

Group	N	Mean	SD	Mean Difference	t- value	df	p-value
Experimental	31	4.08	.63	.21	1.47	59	.15
Control	30	3.87	.49				

Level of significance is at $p < 0.05$

Table 3b: Comparing the mean scores for the implicit questions in the post-test.

Group	N	Mean	SD	Mean Difference	t- value	df	p-value
Experimental	31	7.45	.15	3.35	34.73	59	.000
Control	30	4.10	.52				

Level of significance is at $p < 0.05$

The results of the pre-test show that there is no significant difference between the experimental group and the control group in their scores in the area of implicit questions ($t = 1.47$, mean difference = .21, $df = 59$, $p = .15$). The findings of the post-test indicate that the experimental group performed significantly better in the area of implicit questions compared with the control group ($t = 34.73$, mean difference = 3.35, $df = 59$, $p = .00$). Therefore the findings fail to accept Null Hypothesis 3. Here the team-work of students in

the experimental group would have improved their skills in comprehension such as understanding the underlying meaning, inferring and analyzing and making judgments and this enabled them to answer the implicit questions better than the control group (Suguna, 2007; Shaaran, 1999; & Gaith 2005).

4. There is no significant difference between the mean scores of the experimental group and the control group in their social skills.

Table 4a: Comparing the mean scores for social skills before the intervention.

Group	N	Mean	SD	Mean Difference	t- value	df	p-value
Experimental	31	39.65	6.86	.78	.48	59	.64
Control	30	38.87	5.85				

Level of significance is at $p < 0.05$

Table 4b: Comparing the mean scores for social skills after the intervention.

Group	N	Mean	SD	Mean Difference	t- value	df	p-value
Experimental	31	54.04	3.61	13.54	7.85	59	.000
Control	30	40.50	8.89				

Level of significance is at $p < 0.05$

The results of the pre-test show that there is no significant difference between the experimental group and the control group in their mean scores on social skills ($t = .48$, mean difference = .78, $df = 59$, $p = .64$). On the other hand the findings of the post-test revealed that the experimental group scored

significantly higher in social skills compared with the control group ($t = 7.85$, mean difference = 13.54, $df = 59$, $p = .000$). The findings thus fail to accept Null Hypothesis 4. As stressed by Malar (2010) and Nagarajan (2006) the STAD method improves students' social skills significantly. The STAD

method encourages students to interact, support and help among group members in the learning process, this giving them confidence, improving their communication skills and developing their social skills.

Conclusion:

This study has strong implications on the teaching and learning of reading comprehension skills in the ESL classroom. The findings show that the STAD method is an effective alternative method that can be used by teachers to enhance the mastery of reading comprehension among secondary school students. This method is able to improve students' comprehension at explicit as well as implicit level compared with the conventional method. However, in the STAD method, the teacher is the main person who shoulders the responsibility of planning and implementing the cooperative learning activities and student centered learning activities during reading comprehension lessons in the classroom. As such, teachers need thorough training and exposure on how to carry out the activities in this method before implementing it. Besides that, the STAD method also improves students' social skills significantly compared with the conventional method. Students who were exposed to this method possess several positive traits and values like tolerance, willingness to listen, support and help amongst group members, responsibility and self confidence. Moreover, the cooperation that develops among students during group discussion strengthens their collaboration and improves their communicational skills. These skills are also very important in reading because comprehending is also a form of communicative behavior and enhances learning. The findings of this study also serve as a guide to the Education Ministry, in particular The Teacher Education Division to make the STAD method an important input for the teaching of English Language in secondary schools. This study has some limitations. The effects of using the STAD method were analyzed in the teaching of English among Form Four students in two sub-urban secondary schools. More research should be conducted to investigate the effects of using this method on teaching English in rural schools and urban schools. This study only involved 61 students as sample; as such it is essential to do further research using larger sample and different age groups to determine the effects of utilizing the STAD method in teaching comprehension among ESL learners. In this study the researcher only analyzed the quantitative data. As such it is hoped that future research will also use qualitative data to investigate the effects of using the STAD method on students' comprehension and social skills in learning English.

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