

STUDENT TEAM ACHIEVEMENT DIVISIONS (STAD) AND ACHIEVEMENT IN READING COMPREHENSION OF LOW ACHIEVING STUDENTS IN MAKURDI METROPOLIS, BENUE STATE

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Abstract

The paper sought to investigate the effect of the Student Team Achievement Divisions (STAD) strategy of cooperative learning on achievement in reading comprehension of low achieving students in selected secondary schools in Makurdi Metropolis. A total of 21 low achieving students in selected Junior Secondary Schools constituted the sample of the study. One research question and one hypothesis guided the study. The quasi- experimental design was adopted using intact classes. The Reading Comprehension Achievement Test (RCAT) was used to generate data. It was trial tested and found to be reliable. Data generated were analyzed using mean scores to answer the research question and Analysis of Co-variance (ANCOVA) to test the hypothesis at 0.05 level of significance. The finding showed that low achieving students taught using STAD performed significantly better than those taught using the non-cooperative method of instruction. A major recommendation was also proposed: sensitize teachers, students and school proprietors to regular and correct use of cooperative learning.

Keywords: STAD, Cooperative Learning, Reading Comprehension, Low Achieving Students.

Introduction

Reading is a process through which students construct meaning by consciously interacting with the text with the help of their background knowledge (Cohen & Cowen, 2011). It is a complex and interactive process that is actualized with the help of comprehension (understanding). Students who find it difficult to read may perform poorly in all forms of writing, and consequently in the totality of their academic achievement. By implication therefore reading to a larger extent determines the academic achievement of students in the formal school setting.

According to Fang and Coatoam (2013), the formal school setting is dependent on the ability of students to pass all or most of the subjects they have been taught. For this to be possible, teachers have to consciously develop the reading skills of students through regular application of viable and appropriate instructional strategies. Sadly, the situation in most schools is depressingly worrisome. This is graphically captured by the United Nations Division for Sustainable Development goal (UN DESA, 2018) report that more than half of children and adolescents are not meeting minimum proficiency in reading and mathematics. Since

this is a worldwide report on the state of reading, it could be inferred that a developing continent like Africa and a country like Nigeria could be at the centre of this problem. There is therefore need for teachers to use appropriate strategies that could bring about the needed learning outcomes in students within and beyond the classroom, especially in the development of reading skills. A strategy that necessarily deviates from the conventional method of teaching that may have instilled and continues to instill unhealthy competitive spirit in students when it comes to learning, to a more collaborative and inclusive strategy that enables students consider one another as partners in the learning environment.

The conventional approach to teaching has also created a gap between high and low achieving students. There is an urgent need to strive to bridge this gap through healthy interaction between these two groups of students as submitted by age long theories and researches (Bandura, 1977; Vygotsky, 1978). Tohamba (2017) opines that the performance of high and low achievers is significantly different because high achievers have better study orientation, study habit and attitude towards study than low achievers who, on the other hand, struggle to barely keep their grades up.

Low achieving students are learners found in normal classrooms who on daily basis struggle academically and still perform significantly below the par. Carman (2015) defines low achieving students, thus:

Non-classified students who are struggling academically or performing below proficiency. These low achievers have been identified by teachers as needing academic support, whether the students perform poorly on assessment or daily classroom work. Additional characteristics of low achieving students may include below-level grades and making little or no academic progress (p.2)

There is therefore an urgency to help low achievers with the use of a strategy that encourages healthy interaction between them, high achieving students and other peers in a group setting. This apparent daunting task may be possible in the cooperative or collaborative learning classroom. Cooperative or collaborative learning refers to an instructional procedure that enables learners of variant academic levels work together in small groups in order to collectively

accomplish tasks and enjoy rewards (Cruickshank, 2006). Notable among these strategies are Student Team Achievement Divisions (STAD) developed by Slavin (1988), Think-Pair-Share (TPS) by Lyman (1981), among others.

In STAD, students are grouped heterogeneously based on their achievement levels and gender; they take a group quiz during which they reach consensus on decision making. Individual tests are also taken. Student's tests are then summed up to form team scores. Teams that earn the required mark are then rewarded (Eriba & Iwanger, 2018). STAD consists of five interrelated components: class presentation, teams, individual improvement scores, quizzes and team recognition. These components have to be effectively and efficiently managed by the teacher for maximum result.

The popularity of STAD as a viable collaborative strategy could be due to the fact that it facilitates the interaction of students across achievement levels, ethnicity and gender, improves the attitude and self-esteem of students. Educational researchers further opine that it facilitates interpersonal relationship, helps low achievers to learn from peers and enables students to fit into the contemporary society by allowing them work together efficiently and effectively. Following a series of studies, it was found that STAD helps students achieve better in comprehending printed texts, in not only English language, but in other content areas such as Social Studies, Integrated Science and Government, among others (Tohamba, 2017; Iqbal, Saaed & Mahmood, 2007)

The touted advantages of STAD are better harnessed if the teacher takes his/her time to identify low achievers and meticulously pairs them with high achievers. The idea is that low achieving students may at the end of the lesson learn better from interacting with their high achieving peers, as well as peers from other levels of achievement, than from the teacher.

Reading comprehension is a tool that enables students get meaning from the entire subject they are exposed to in school. Since students have different levels of achievement, there is need to adopt a strategy that may cater for this disparities. This task could be better accomplished with the help of Student Teams Achievement Division (STAD), as it enables low achieving students learn from their peers

who may have higher level of achievement . A study on students' attitude towards cooperative learning, specifically STAD, by Lee (2010) revealed that students liked to engage in cooperative activities because it is exciting, improves the relationship with their peers, decreases conflict in the class and enhances their self-esteem. These key advantages of STAD as backed by empirical results, necessitated the urgency of the present study on the effect of STAD in improving the achievement of low achieving students in reading comprehension.

Purpose of the Study

The study sought to establish the purpose below:

Determine the differences in the reading comprehension achievement scores of low achieving students taught using Student Team Achievement Divisions (STAD) and those taught using non-cooperative method of instruction.

Research Question

The research question below guided the study:

What are the differences in the reading comprehension achievement mean scores of low achieving students taught using STAD and those taught using non-cooperative method of instruction?

Research Hypothesis

The hypothesis below guided the study:

The reading comprehension achievement mean scores of students using STAD will not significantly differ from those taught using non-cooperative method of instruction.

Methods

The non-equivalent control group pretest-posttest design was adopted for the study. As a quasi-experimental design, the independent variable of the study is measured once before treatment or experiment is carried out and once after same is carried out (Price, Jhangian & Chiang, 2018). The study made use of intact classes, namely, experimental and control groups. This choice was premised on the fact that schools would normally not allow disruptions by researchers of already existing class arrangements (Shuttleworth, 2008; Price, Jhangian & Chiang, 2018).

A total of 21 Junior Secondary School II students in four public secondary schools in Makurdi Metropolis constituted the population of the study. The students' dossiers and inputs from their teachers were used in determining the students' level of achievement. Furthermore, the choice of JSS II students is informed by its stable nature. An instrument titled *Reading Comprehension Achievement Test* (RCAT) was developed by the researchers and used in generating data. It was trial tested using Cronbach's alpha and yielded a coefficient value of 0.76, considered to be of high reliability content.

All the 21 low achieving students constituted the sample of the study. The purposive sampling technique was used to select four junior secondary schools. Two intact classes each from the four schools were used as experimental and control groups. The research questions were answered using mean scores and standard deviation, while the Analysis of Co-variance (ANCOVA) was used in testing the hypothesis.

Results

The results of data generated are presented in the table below:

Research Question one

What are the differences in the mean scores of low achieving students taught using STAD and those taught using non-cooperative method of instruction?

Table 1: Mean Scores of Low Achieving Students on their Achievement in Reading Comprehension

Treatment groups		Pre- test	Post-test
Experimental Group	Mean	10.55	20.73
	N	11	11
	SD	2.252	2.970
Control Group	Mean	9.70	14.90
	N	10	10
	SD	2.627	3.604

Table 1 above indicates that, low achieving students in the experimental group had a pre-treatment test score of 10.55, and a post-treatment score of 20.73. The same group recorded a mean gain score of 10.18. By contrast, the pre-test score of low achieving students in the control group was 9.70, while their post-test score was 14.90. Their mean gain stood at 5.20. The result therefore reveals that students in the experimental group performed better than their counterparts in the control group.

Hypothesis one

The achievement mean scores in reading comprehension of low achieving students taught using STAD will not significantly differ from those taught using non-cooperative method of instruction.

Table 2: ANCOVA Test on Students' Pre-test and Post-test Scores in Reading Comprehension

Source	Sum of Squares	df	Mean(\bar{x}) square	F	Sig.	Partial Eta Squared
Corrected Model	194.768 ^a	2	97.384	9.315	.002	.509
Intercept	494.013	1	494.013	47.253	.000	.724
Pre-test	16.898	1	16.898	1.616	.220	.082
Group	192.033	1	192.033	18.368	.000	.505
Error	188.184	18	10.455			
Total	7151.000	21				
Corrected Total	382.952	20				

Table 2 above reveals the F-value to be 18.368 as a result of treatment and significant at .000. Therefore the null hypothesis which states that, the achievement mean scores in reading comprehension of low achieving taught using STAD will not significantly differ from those taught using non-cooperative method of instruction, is rejected. Thus, low achieving students taught using STAD significantly outperformed those taught using non-cooperative method of instruction.

Discussion of Findings

The study revealed that, low achieving students taught reading comprehension using STAD performed significantly better the students in the control group taught using no-cooperative method of instruction. This finding is in tandem with other findings (Tohamba, 2017; Iqbal et al, 2007) who found STAD more efficacious than non-cooperative/conventional method of instruction. It is, however, the researchers' contention that, for optimum results to be realized from the use of STAD, the virtues of team work, accountability and interdependence, amongst other vital components of cooperative learning, must first be instilled in students.

Conclusion

The paper investigated the effect of STAD on achievement in reading comprehension of low achieving students in Benue State. The study adopted the non-equivalent control group pretest-posttest quasi- experimental design using intact classes. The study found that students in the experimental class who were exposed to treatment using STAD performed significantly better than those in the control class who were taught using non-cooperative or traditional method of instruction. Consequently, it is recommended that teachers, students and school proprietors should be sensitized on the need to adopt regular and correct use of STAD in teaching and learning.

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