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Co-operative Learning Strategy and Students' Academic Achievement in Home Economics

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Abstract

This study focused on co-operative learning strategy and student's academic achievement in Home Economics. The research was a quasi – experimental design. A simple random technique (table of random numbers) was utilized to select a total of 169 students for the study. The instrument used was the Home Economics Achievement Test (HEAT). Data collected from the pre-test and post-test were analyzed using mean, standard deviation and t-test at 0.05 level of significance. Findings from the study showed that the experimental group had a mean score of (57.5) with a standard deviation (SD) of 3.7. The control group had a mean score of (42.3) with a standard deviation (SD) of 3.1. A comparism of the mean scores on the post test showed that the students in the experimental group produced a higher level of achievement in Home Economics than those in the control group.t-test revealed that the t-calculated value of 4.21 is greater than the t-critical table of value of 1.96 at $P < 0.05$ level. Hence the null hypotheses is rejected. There is a difference between scores of students taught with co-operative learning strategy and scores of those taught with lecture method. It was therefore recommended among others that Home Economics teachers should spice up their methods of teaching by incorporating the co-operative strategy in their lesson delivery to enhance achievement.

Keywords: Strategy, Academic Achievement, Home Ecomics.

Introduction

Home Economics was the major pathway for women into public education in the late 19th and 20th century, by providing a wide variety of careers' into business, healthcare and government in America. In Africa also Home Economics has recorded a phenomenal achievement in the various countries of the region, it features prominently at various levels of education namely primary, secondary and tertiary, despite all the strides, Home Economics is still plagued by enormous challenges in Nigeria.

One of the major challenges is the criticisms leveled against the subject teachers; that they teach the subject without bringing out its potentials, Ogubiyi (1985); Badmus (1993); Mba (2003), that they employ obsolete technique for solving emerging challenges and problems, (Taylor, 1996; Ojo, 2004). Finally, that they have poor mastery of the subject which have resulted to poor method of teaching and poor achievement in the subject among students (Ifeayi-Uche & Ejabukwa, 2013). The unscientific method utilized by the teachers have discouraged many intelligent students and have also made them to lose interest in the

subject, hence in recent times Home Economics have recorded low enrolment in the tertiary institutions across the nation Akuzuilo (1993). However, Igboegwu (2012) asserted that there is no best method of teaching but that effective teaching method should be activity oriented rather than lecture dominated methods which seem to characterize the Nigerian schools.

Strategy is the procedure or method by which goal is reached, a purpose accomplished or a result is achieved. It can otherwise be referred to as teaching technique. Verner's (1962) defined teaching technique as the relationship established by the educator to facilitate learning among a particular group of students in a specific situation. In a simpler language, it is what the teacher does to help students learn. Spitze (1972) as outlined in Salami and Ukoh (2003), in an attempt to create a better learning environment for the learner, gave a list of teaching principles as follows:

- If learning situation is a part of 'real life' or seems to be real to the student, he will perceive the relevance and be more eager to learn.
- If the learner is an active participant, his interest is likely to be greater and achievement more rapid
- If the learner is mentally and emotionally involved in learning situation, motivation and learning are increased
- If the student finds pleasure in the learning situation, he is more likely to continue to learn.
- If the student develop skills for independent learning, he can continue to learn when no teacher is available to direct him.
- If the student sees usefulness in his learning activities motivation will be increased
- If the learner discovers an intellectual relationship, he has greater joy in learning and greater interest in continue learning than when he is told the relationship.

The application of these principles make learning more certain to involve learners, less abstract, less tedious and less threatening which clearly support the principle of learner centered technique. Several methods may have these qualities but co-operative learning strategy was ranked first in teaching approaches that promote greater wonder thinking, problem solving and achievement (Joyce et al., 1987).

Co-operative learning strategy is a method of teaching in which students work together in small heterogeneous group to complete a problem, project or any other instructional goal, while teachers act as a guide or facilitator. This method is characterized by the following:

Learners positively depend on each other, engage in face to face interaction, assessed individually and held accountable for equally haring and contributing to the mastery of learning goals, develop appropriate collaborative and interpersonal skills to teach and encourage each other to learn and reflect and assess the effectiveness of growing, for future learning (Johnson and Johnson, 1999; Kagan, 1994). This method is different from the traditional group method where the student have low independence, in co-operative learning students take responsibility only for themselves. The co-operative learning strategy is primarily a pedagogical method developed as a means to reduce competition in America schools which Colman (1959) identified as a negative component of the educational system. The discovery that students can get information from sources other than the teacher is able to expand the resources of the learner. Therefore the problem in the teaching of Home Economics where the teacher is the only source of information since they use only traditional methods of instruction such as lecture and note taking instead of using methods where active learning take place.

Statement of Problem

Home Economics is one of the courses which attract lowest enrolment of students in secondary and tertiary levels of education (Akuzuilo, 1993; Azikiwe, 1990; Olaitan, 1986). The low enrolment call for much concern and researchers have attributed this to the problems relating to the teaching and learning of the subject. Particularly Uwadie (1990) stated that one of the most complaints about teaching of Home Economics is lack of dedication on the part of teachers. The reason for this is not farfetched from the continuous use of the traditional lecture method. Instructional methods and the learning environment influence students learning and students perception of the quality of the subject (Olaitan, 1986). The main problem of this study posed as a question is "which of the two teaching methods co-operative and lecture methods) better elicits better achievement in Home Economics?"

Research Question

The question to be answered by this study was

1. Do students exposed to co-operative method of teaching show better academic achievement than those exposed to the traditional lecture method?

Hypothesis

Ho_1: There is no significance difference between the academic achievement of students taught home economics using co-operative strategy and that of those taught using lecture method based on their mean percentage scores in Home Economics test.

Review of Literature

Co-operative Learning and Academic Achievement of Students

Literature abounds on the effectiveness of co-operative learning strategy on the academic of students. Studies such as Pudan (2004) investigated the effect of co-operative assisted learning method on students achievement. Result showed that students on the co-operative assisted instruction group showed remarkable post test mean differences over their counterpart who learned the same Biology through traditional method. In addition Moore (2005) showed that after a classroom lecture by teachers, students were only able to retain 5% of the information presented and after a classroom demonstration by the teacher students were only able to retain 30% of the information both after 24 hours, but when co-operative learning was used students were able to retain 75% to 90% of the material after 24 hrs.

Furthermore, Keramati (2010) investigated the effect of co-operative learning on academic achievement of students in Physics and result shared a clear significant difference in mean scores in favour of the experimental group, indicating that success of co-operative learning. Similarly, Van Dart Tran (2014) also investigated the effect of co-operative learning on the achievement and knowledge retention of 110 first grade primary education students in Psychology. After eight weeks of instruction, result showed that those who were instructed using co-operative strategy achieved significantly higher scores in the achievement and knowledge retention than those who were instructed with lecture based teaching. In a study conducted by Adbullah (2010), who identified the effect of cooperative learning on academic achievement of students and retention mathematics also revealed a significant difference between the mean performance of the experimental and control group for the benefit of the experimental group (co-operative learning strategy).

A study by Christian (2012) assessed the effect of co-operative and individualized learning strategies of students achievement in Chemistry, revealed that there was a significant difference in mean scores in favour of the co operative learning strategy. Also Slavin (1991) conducted 67 studies and found that co-operative strategies significantly improved achievement than the traditional group and positive effects were found in major subjects in the area of achievement. In support to these studies such as Abdul Ralin and Shakel (2005), Atencio (2004), and Lui (2005) All revealed that co-operative learning significantly improve achievement of students in various school subjects.

Procedure

A quasi-experimental design was employed in this study. The population consisted of all the Junior Secondary School (11) students in Oredo Local Government of Edo State total 21,688. Of the 42 public junior secondary schools (JSS) in Oredo local Government Area.2 schools were randomly selected using the table of random numbers. From each school 2 intact classes were randomly selected from the JSS (II) classes, which served as one experimental, one control group. The two experimental classes total=co operative strategy (83), While the Control = Lecture method(86) For the experimental, the students were randomly assigned through the balloting technique into their co operative grouping.

The instrument utilized for this study was the Home Economics Achievement Test (HEAT) which was utilized for data collection. The researcher constructed the fifty multiple-choice objective test items based on six topics of the study period. A table of specification was constructed to ensure that the item covered the six levels of Bloom's taxonomy of educational objectives. The reliability of the instrument (HEAT) was determined using test-retest technique. In this type of test, the same instrument (HEAT) was administered to a group of ten students from the population, that were not part of the main study on two different occasions, with an interval of two weeks between the first and second administration of the test. The pair of scores generated was correlated using Pearson product moment correlation. A reliability of 0.86 was obtained.

Administration of Instrument

The administration of the instrument (HEAT) was done by the home economics teachers that were trained. The teachers were experienced B.SC(Ed) graduate of home economics education, with at least five years as a teacher. To determine the entry behavior of the students, the HEAT was administered as pre-test to both experimental and control groups in the two selected schools two days before the experimental session.

The selected content areas in home economics was used for teaching the students for the six weeks by the teachers fully trained on the use of co operative learning strategy which serve as the experimental group. The same topics were also used for teaching the control group using lecture method for the same six weeks. A total of four classes were utilized. 2 control 2 experimental. At the end of the six weeks, the teachers administered a post test to reflect the units taught for both study group. The researcher then utilized the test scores from the experimental and the control groups to determine the mean, to find out whether one group achieve significantly better than the other. The data collected from the pre-test and post test were analysed using mean, standard deviation and t-test at 0.05 level of significance.

Results

The results of the study are presented in the table as shown:

Research Question I: Do students exposed to co-operative learning strategy show better academic achievement in Home Economics than those exposed to lecture method?

Ho: There is no significance difference between students taught with co-operative strategy and those taught with lecture method in home economics.

Table I

Post-test Scores of students Home Economics Achievement test

	No. of Subjects	$\bar{x}$	SD	T-cal	T.crit	DF	Mean diff
Co-operative learning strategy	83	57.5	3.7	4.2	1.96	11.8	1.45
Lecture method	86	42.3	3.1				

Table I shows that the experimental group has a mean score of 57.5 with a standard deviation (SD) of 3.7. The control group has a mean score of 42.3 with a standard deviation (SD) of 3.1. A comparism of the mean scores on the post test shows that the students in the experimental group produced a higher level of achievement in Home Economics than those in the control group.

T-test was used to test for any significant difference between post test score obtained using the two techniques. Data on table I reveal that the t-calculated value of 4.21 is greater than the t-critical table of value of 1.96 at $P < 0.05$ level. Hence the null hypotheses is rejected. There is a difference between scores of students taught with co-operative learning strategy and scores of those taught with lecture method.

Discussion

The research finding was that the use of co-operative learning strategy had significant effect on students achievement on Home Economics. In other words the students exposed to co-operative learning strategy had better scores than those exposed to lecture method. The result of the t-test analysis of data showed that there is a significant difference in the achievement of Home Economics between students exposed to co-operative learning strategy and lecture method. This implies that co-operative learning strategy is more effective than lecture method in the teaching and learning of Home Economics. This findings confirms Joyce Shumer and Rocher (1987) assertion that co-operative learning strategy was ranked first in teaching approaches that promote greater higher-order thinking and achievement. Supporting this was Moore (2000) who showed that after a classroom lecture by the teacher, students were only able to retain 5% of the information presented, and after co-operative learning they were able to retain 75% to 90% of the material after 24 hours. This finding is not saying that teachers should abandon lecture method, rather co-operative strategy should be used to complement other in structural model to enhance students interest.

Conclusion

This study investigated the effect of co-operative learning strategy on the achievement of students in Home Economics. Based on the finding of the study, it is therefore concluded that co-operative learning strategy enhances achievement by helping students comprehend

properly, since they are given the roam to learn independently. It should be used in the teaching and learning of Home Economics.

Recommendations

Based on the finding, the following recommendations were made

1. Home Economics teachers should spice up their method of teaching by using the co-operative method of teaching in their lesson delivery.
2. In-service training should be implemented in secondary schools so that the Home Economics teachers can be trained and retrained.
3. Ring lesson delivery.

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