PROMOTING SECONDARY SCHOOL STUDENTS' ACHIEVEMENT IN HOME ECONOMICS USING THINK-PAIR SHARE STRATEGY IN POST COVID -19 ERA IN JOS NORTH PLATEAU STATE, NIGERIA

Barnabas, Esther S.
&
Keswet, Larai A.
Department of Science and Technology Education
University of Jos, Plateau State, Nigeria.

Abstract
This study looked into promoting secondary school student's achievement in Home Economics using think-pair share strategy in post covid-19 era in Jos North Plateau State. The population for the study comprises of all the secondary schools in Jos north Local Government area making a total of 94 schools. 1,200 Home Economics senior secondary two students in Jos North Local Government area were used. The sample of the study constitutes four secondary school randomly selected from the 1,200 population of students from the 94 secondary schools within the area of study. Two schools were assigned to each group (experimental and control). The sample of the students consist of 130 Home Economics students found in the four sample schools and 64 students in two schools were assign to experimental group while 66 students in the two schools were assigned to control group. The schools were both public and private schools. The instrument used for data collection was Home Economics Achievement Test. (HEAT). The study employed the quasi-experimental design. The Home Economics achievement test scores of the students used in the study were collected from the pre-test and post-test of experimental and control group. The study was guided by two research questions and two hypotheses. The research questions were answered using frequency counts mean and standard deviation. The hypotheses were tested at 0.05 alpha level of significance using the T-test statistics and Analysis of covariance (ANCOVA) The result of the study revealed that a significant difference exist between the pre-test and the post-test of student's achievement mean scores of experimental groups as (18.99). The result also shows that Think-pair share instructional strategy has a significant difference from the conventional method in terms of improvement in student's achievement. The use of and think-pair-share strategies, is capable of promoting learning through discovery, which eventually leads to the development of higher quality

cognitive skills, which in effect enhances problem-solving skills in students especially in the class of housing and interior decoration. Based on the findings of this study the following recommendations were made: teachers should make think-pair-share strategies fundamental parts of their instructional strategies, more efforts should be geared toward popularizing the strategies for use among students of the Capacity building opportunities and exposure of teachers to challenging tasks for updating their teaching skills and techniques.

Keywords: *Promoting, Secondary school students, Achievement, Home Economics, Think- pair share, Strategy, Post Covid-19 era.*

Introduction

Home economics is the study of all that relate to home and family. It is considered as the education for living. The subject provides the necessary knowledge guiding and assisting human being to be able to attain a more self-reliance and fulfilled life. (Neequaye, Darkwa, & Amu, 2014). Home economics deals with all aspects of family living, drawing knowledge from many disciplines such as Biology, Physics, Social Science, Humanities and Arts, and unifying the knowledge drawn to teach people how to do the followings: Determine the needs of individuals and families and become responsible and effective members of the family and community through effective home making and gainful employment (Anyakoha, 2015).

In the words of Eze (2001) Home Economics is capable of preparing youths and adults for entry into various areas in Home Economics occupations. This shows that as a vocational subject, Home Economics contributes to manpower development by equipping individuals with reliable and sealable occupational skills, which lead to self-reliance. According to Ajayi, & Buessing, (2013). Home Economics can also help individuals to acquire basic skills needed for gainful employment and family living. Home Economics is a very important subject in the secondary school Curriculum.

In Nigeria, Home Economics is taught as a compulsory subject for all primary pupils and junior secondary students Home Economics is one of the most popular optional subjects. More recently, home economics has been introduced at the elementary school level and is taught in some general upper-secondary schools (Venäläinen, 2015). At the secondary-school level, home economics is taught mainly in vocational upper-secondary schools that have home economics-related training programmes in catering, hospitality services

and domestic services. In universities, home economics science can be studied as a major at the bachelor's, master's and doctoral levels.

In basic education, the main objective of home economics education is to develop pupils' skills in cooperation, information acquisition and the practical work necessary to manage daily living. Topics taught include family and living together, housing and interior decoration, nutrition and food culture, the consumer and changing society and the home and the environment. (Adinkrah, 2012). The aim of the subject is to teach general life skills for personal growth and development (Finnish National Board of Education, 2004).

Since COVID-19 is a menace that has bedeviled and ravaged the world in many ways. It has retarded the economy, ravaged health system, destroyed hospitality business, and disrupted socio-political interaction and now, inducing an unannounced shift away from the traditional classroom settings in the educational sector. Sequel to the rising concerns about the spread of COVID-19 and the need to contain the virus, a growing number of tertiary institutions have shut down in regards to conventional classroom delivery (Dalton, Rapa, & Stein, 2020). This is courtesy of the fact that a major strategy in the containment of coronavirus was through imposition of lockdowns which automatically retrained people from partaking in social activities.

This situation has particularly been of a great challenge to the education system across the world. Globally, educational sector has never witnessed such disruption in a colossal manner before (UNESCO, 2020). COVID-19 posed serious consequences for students by depriving them of their fundamental rights to education and exposing them to risk of child labour, early marriage, exploitation, and poor academic achievement. (Gouedard, Pont, Viennet, 2020).

Since Home Economics as a practically oriented subject, the advent of covid - 19 pandemic made it very difficult for the subject to be taught practically. Usually, students depend on the teacher to demonstrate some aspect of the topic before engaging them to practical activity. Since it was not possible to do that at the era of covid 19 hence the quest for a strategy at the post covid 19 era to cushion the learning process of student so that they can independently think and share ideas.

Think-Pair-Share teaching strategy is described as a co-operative learning strategy which encourages individual students to engage in critical thinking

and co-operates with others in the process of knowledge construction (Sampsel, 2013; Bamiro, 2015). Think-Pair-Share as the name implies, provide an opportunity for the individual student to think (reflect) on a question or problem asked by the teacher, then pair up with other students in a cooperative manner to brainstorm on a possible answer. The learning process is concluded by allowing the student to share their discoveries, answers, and solutions with the whole class Think-pair-share method is also designed to differentiate instruction by providing students time and structure for thinking on a given topic, enabling them to formulate individual ideas and share these ideas with a peer. (Odediji, 2013). This teaching method promotes classroom participation by encouraging a high degree of student response, rather than using a basic recitation method in which a teacher poses a question and one student offers a response (Utama, Marhaeni, & Putra, 2013). Think-pair-share is a cooperative learning strategy that includes three components, namely, time for thinking, time for sharing with a partner, and time to share among pairs to a larger group. The use of the strategy unites the cognitive and social aspects of learning, promoting the development of thinking and the construction of knowledge. (Perveen, 2010).

The need to look into promoting secondary school student's achievement in Home Economics using Think-Pair-Share strategy after Covid-19. Most of the teaching and learning activities in most school subjects in Nigeria is still being guided by the traditional (lecture or demonstration) method of the teaching through verbal presentation, of facts information and ideas thereby giving little space and time for students to actively participate in the lesson. Thus, it becomes crucial for an investigation (through a quasi-experimental design) to be conducted on this learning strategy about students' achievement with specific reference to Home Economics.

Academic performance is the outcome of education, the extent to which students, teachers or institutions have achieved their educational goals. In general terms academic performance refers to what students achieve in their studies and how they cope with or accomplish different learning experiences given to them by their teachers. Also, the formal education system in Nigeria just like other countries of the world is characterized by an evaluation system that determines the success or failure viz-a-viz placement of learners according to their performance or achievement levels. Thus, one primary criterion that has been adopted over the years by the school system is the level of achievement each student may earn for a particular subject area. That means that students' achievement determines to a large extent, the reward or

promotion to be given to such a student/learner that might have higher scores or marks. (Betaineh, 2015).

More importantly, standing at the centre of an effective, efficient and result-oriented education is the teacher. The teacher's actions and inactions, skills, knowledge and the medium by the teacher can ensure an effective learning. The point should be made here and quickly too that, effective learning translates to better achievement or learning outcome on the part of learners in all school subjects.

Home Economics is a discipline of study, regardless of gender, one should have some knowledge of it. It is unfortunate to observe that, a significant number of students cannot cope with the challenges of skills and technicalities in the subject. This tends to affect students‟ interest in Home Economics, especially housing and interior decoration. Education is more examination oriented than of life's practical value, which thereby results in poor performance of students in examinations, it has also been observed that the learning of Home Economies depends on the teaching of the subjects and available resources. The persistent increase in poor performance of secondary school students in Housing and interior decoration needs to be addressed. One way to do this is to employ an effective teaching and learning methods. This study was therefore aimed to promoting secondary student achievement in Home Economics using Think-pair in teaching Housing and interior decoration.

The purpose of this study is to investigate the effects of Think-pair-share teaching strategy on student s' achievement in Home Economics. Specifically, the study seeks:

1. To determine the achievement mean score of Home Economics students exposed to Thing-pair share teaching strategy and those exposed to conventional lecture method using Home Economics achievement test (HEAT) method to SS two Home Economics students in Housing and interior decoration.

2. To compare the pre-test and post-test Home Economics achievement mean scores of students taught using Think-pair share instructional strategy and those taught using demonstration method.

Two research questions are posed:

1. What is the difference between the pre-test Home Economics achievements mean score of students in the control and experimental groups of SS two Home Economics students in Housing and interior decoration?

2. What is the difference between the post-test Home Economics achievement mean scores of students in the control and experimental groups.

Based on the research questions, the following null hypotheses are formulated:

HO1. There is no significant difference between the pre-test Home Economics achievement mean scores of students in the control and experimental groups.

HO2. There is no significance difference between the post-test Home Economics achievement mean scores of students in the control and experimental groups.

Method

The researcher employed quasi-experimental design; this is because the study utilized a pretest/posttest non-equivalent control group design. (Lambert, 2019). Quasi-experimental design is a design in which participants are not randomly assigned to the groups.

The population for the study comprised all the secondary schools in Jos North Local Government Area making a total of 94 schools. 1,200 Home Economics senior secondary two students in Jos North Local Government area were used. The sample of the study constituted four secondary schools randomly sampled from the 94 secondary schools within the area of study. Purposive sampling technique was also used to sample two schools, each from public and private schools. Two schools were assigned to each group (experimental and control). The sample of the students consisted 130 Home Economics students found in the four sampled schools; and 64 students in two schools were assigned to experimental group while 66 students in the two schools were assigned to control group. The choice of SSII class was based on the fact that the topic on housing and interior decoration is in the SS II curriculum.

The instrument used for data collection was Home Economics Achievement Test (HEAT). The HEAT was developed by the researchers in relation to the content and objectives of housing and interior decorations. The instrument had two sections A and B. A contains 30 multiple choice items on housing and interior decoration. The face validity of the HEAT was established by subjecting it to experts' scrutiny; two from Home Economics Education and one from Measurement and Evaluation in the University of Jos. The suggestion and corrections guided the production of the final copy of the instrument. The reliability coefficient of the instrument was estimated using Cronbach Alpha method and the coefficient stood at 0.89. The treatment lasted for four weeks during regular school lessons for both the experimental and control groups. Home Economics teachers served as research assistants. The test was administered to both experimental and control groups at the end of the treatment.

A pre-test was administered to both experimental and control groups before the treatment while the post-test was administered after the treatment. The data obtained from the administration of the test were analyzed using mean, t-test, of independent samples and Analysis of Co-variance (ANCOVA). The results of the analysis are presented in Tables 1-4. The Think-pair-share teaching strategy was used for teaching the students in the experimental group while demonstration and discussion methods were used in the teaching the control group students the same topic.

Results

Table 1: Summary of The Pre-Test Achievement Mean Scores of Students in Control and Experimental Groups on HEAT

Group	N	X	SD	Mean Dff.
Control	66	4.15	1.89	
Experimental	64	5.20	1.93	1.05

Table1 reveals that the pre-test achievement mean scores of the students in experimental group was higher than that of the control group with a mean difference of (x=1.5). This implies that there was difference in the cognitive ability of two groups in favour of the experimental group. The imbalance in the student's cognitive ability of the two group as manifested in the pre-test mean scores could be due to non-randomization of the subjects.

The data verifying research question two are presented in table two.

Table 2: Summary of The Post-Test Achievement Mean Scores of Students in Control and Experimental Group in The HEAT

Group	N	X	SD	Mean Dff.
Control	66	9.20	2.67	
Experimental	64	12.00	2.67	2.80

Table two reveals that the post-test achievement mean scores of the students in the experimental group was higher than that of the control group within the mean difference of (x=2.80). This indicates that the use of Think-pair share teaching strategy enhanced students achievement in housing and interior decoration.

Table 3: The Result of The Difference Between the Post-Test and Pre-Test Achievement Mean Scores of the Experimental Group

Group	N	X	SD	Mean Diff.
Post-test	64	12.00	1.93	
Pre-test	64	5.20	2.06	2.80

A t-test for dependent samples was used to determine whether any significant differences exist between the pre-test and post-test Home Economics achievement test mean scores of the experimental group. The result reveals that a significant difference exist between the pre-test and post-test of student's achievement mean score of the experimental group as (18.99) = 0.000, $p<0.05$ indicating that some gain scores recorded in the post-test(x=12.00), that the pre-test(x=5.20). Since the p value of 0.000 is less than the alpha level 0.05, the null hypothesis is rejected because the data did not provide sufficient evidence for it to be retained.

Table 4: Summary of ANCOVA Result of Difference in Post-Test (HEAT) Achievement Mean Scores of Experimental and Control Group When Pre-Test Effects are Controlled.

Source	Type 111 SS	Df	Ms	F	Sig.
Corrected model	255.3599	2	127.679	22.20	.000
Intercept	1855.605	1	1855.605	322.659	.000
Pre-test HEAT scores	.066	1	.066	.011	.915
Group	248.812	1	284.812	43.264	.000

Table 5: Result of Sidak Post Hoc Comparison of Difference Between Experimental and Control Group

I	J	Mean Diff.		
Experimental	**Control**	**(I-J)**	**Std Error**	**Sign.**
12.00	9.20	2.8	425	.000

Analysis of covariance (ANCOVA) was carried out to determine if a significant difference exist in the post-test achievement mean scores of experimental and control groups after pre-test effect is controlled in HEAT.

Table 4 reveals that think-pair share teaching strategy did significantly affected student's achievement mean scores in HEAT after controlling for the effect of pre-test mean scores, F (1,127) 43.26, $p<0.05$. It has been revealed that having being exposed to think-pair share teaching strategy, student's achievement in Home Economics was increased compared to the conventional methods. The sidak post hoc test in Tables 5 confirms that the corrected difference between experimental and control groups was significant (i-j) = 2.8. It implies that think-pair share teaching strategy did help increase student's achievement mean scores in Home Economics.

Discussion

The findings of this study proved that, the mean scores for posttest experimental and control groups were found to be 18.99. The result of the study revealed an existing difference in the learning outcomes of students before and after exposure to treatment. There was students' improvement in the performance score in housing and interior decoration. (Utama, Marhaeni, & Putra, 2013). This shows that the use of think-pair share strategy in teaching of Home Economics made the difference. The use of think-pair share in the teaching of Home Economics are accountable for the improved differences in the performance scores as agreed by (Bamiro,2015). The control group did not show any improvement in the students' performance scores as supported by Betaineh, (2015), while the think-pair share used for teaching in the experimental group aroused students' attention and interest, thereby improving the performance scores. This is in support of Sampsel, (2013) submission that the use of think-pair share strategy to teach has positive effects on students' learning outcomes while the conventional strategy of teaching does not have an improvement on students' learning outcomes. Similarly, the result of this research showed that the use of think-pair-share strategies, is capable of promoting learning through discovery, which eventually leads to

the development of higher quality cognitive skills, which in effect enhances problem-solving skills in students especially in the class of housing and interior decoration this is supported by (Odediji, 2013). The results also showed that there was difference in the cognitive ability of both experimental and control group, more so, students in the experimental group had higher achievement mean score to those in the control group which can be explained that the think-pair share teaching strategy has improved Home Economics students' performance.

Conclusion

The use of think-pair-share strategies, is capable of promoting learning through discovery, which eventually leads to the development of higher quality cognitive skills, which in effect enhances problem-solving skills in students especially in the class of housing and interior decoration. Students here are exposed to acquire more skills as they engaged in individualistic practice of the subject matter which gives them the confidence to do it on their own and the ability to tutor others by sharing ideas.

Recommendations

Based on the findings of this study the following recommendations were made:

1. Teachers should make think-pair-share strategies fundamental parts of their instructional strategies.
2. More efforts should be geared toward popularizing the strategies for use among students of the Capacity building opportunities and exposure of teachers to challenging tasks for updating their teaching skills and techniques.
3. Further research on these strategies could be carried out in various other classes in schools.
4. Home Economics teachers should endeavour to make use of Think-Pair-Share instructional strategy in teaching and learning activities in secondary schools instead of the continuous use of traditional (lecture) method. This is because Think-Pair-Share strategy promotes inter-dependency, cooperation, critical thinking, higher order thinking and problem-solving skills as well as social-inquiry research skills among students who have been exposed to them.

5. Curriculum planners should consider the think-pair-share methods as effective methods for teaching housing and interior decoration when designing a curriculum for Home Economics Education.

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