EFFECTS OF USING DISCUSSION SUPPLEMENTED WITH MUSIC ON INTEREST AND PERFORMANCE OF HOME ECONOMICS PUPILS IN PRIMARY SCHOOLS

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Abstract

The study investigated the effects of using discussion supplemented with music on the interest and academic achievement of Home Economics pupils in Primary Schools in Abia State. The study was guided by two research questions and two null hypotheses formulated and tested for the study. The design of the study was a quasi-experimental research design. A sample size of eighty (80) which consist of 38 pupils (17 males and 21 females) that was assigned to the experimental group and 42 pupils (20 males and 22 females) that was assigned to the control group of primary five drawn from the population involving two intact classes using purposive sampling technique. The instruments used for data collection were Home Economics Achievement Test (HEAT) and Measure of Home Economics Interest Scale (MHEIS), determined using Pearson’s Product Moment Correlation Coefficient (PPMCC) statistic and Analysis of Covariance (ANCOVA). The study revealed that Pupils taught with discussion supplemented with music had more interest in Home Economics than the pupils in control groups. This is evident in the table 1 were both of the experimental and control groups had the mean gain score for experimental group I as 11.400 while that for control group was 0.750. Music teaching method has relative effect on Pupils achievement in Home Economics in terms of interest. Based on the findings, the study recommended among others that teachers should be encouraged to make use of the supplementation of music in teaching for better interest and academic achievements in Home Economics.

Keywords: Music, Interest, performance, Home Economics, Pupils

Introduction

Home Economics is an applied science subject that draws knowledge from many other subjects such as Biology, Chemistry, Physics, Mathematics, Economics, Sociology, History, Geography, Psychology, Agriculture, Fine and Applied Arts which unifies the knowledge drawn and uses it to form its own body of knowledge (Anyakoha, 2019). It is a field of study that is concerned with improving family life. It does this by finding out the needs of individuals and families, finding ways of meeting these needs, improving the goods and services which families use, preparing people for employment and family life. International Federation for Home Economics (IFHE, 2018) suggests that Home Economics is a field of study that draws knowledge from a range of disciplines to achieve optimal and sustainable living for individuals, families and communities. They also stated that the subject is addressing the practical, problems of everyday life in socially responsible ways. This importance gave rise to the objectives of Home Economics as stipulated in the primary school Home Economics Curriculum to include, to educate youth for family living, educate youth for the role of future Home-makers, intelligent consumers and producers of goods and services, prepare young people for living a full well-rounded life in the Home, community and nation, improve
the services and goods used by the families, construct research to discover and meet the changing needs of individuals and families, to advance the community, national and world condition. The extent of achievement of the objectives of the Home Economics is reflected in the interest and academic achievement of the students in the subject.

Interest is also a quality that attracts attention, a power, quality or aspect of something that attracts attention, concern, or curiosity. Interest has to do with learners’ predisposition to react positively in certain ways towards certain aspects of the environment and interest is usually developed in relation to and remained allied to more basic motives. Interest reaction to any situation depends on the situation’s potential or actual fulfillment of personal needs and goals. According to the researcher, once interest is aroused in studies, games, literature and good conduct, the child will consider no sacrifice and effort too great to attain proficiency thereby enhancing his/her academic achievement. Thus, interest can be the cause of activity and the result of participation in activity. Margaret (2015) observed that interest is the key factor and driving force that help us in paying attention as well as remaining engaged in attending to activities. It is a great motivating force and reservoir of one’s inner potential, capable of molding and shaping one’s behavior and personality make-up in a particular field. Interests are not permanent and fixed, they change as a result of maturation, learning and other internal as well as environmental conditions and factors.

Interest is described as the things that one likes, the tendencies to like, to seek and to engage in certain kinds of activities (Telia, Adika & Toyoba, 2018). Interest opens gateways to the mind and usually makes a person more receptive and eager to learn, which will enhance their academic achievement. Interest helps to establish channels of communication with others towards effective learning. Based on this, interest of pupils in Home Economics has not really helped to increase pupils’ academic achievement as it has been declining (Telia, Adika & Toyoba, 2018). Recently it has been observed that the interest of pupils in prevocational courses especially Home Economics have been declining as pupils no longer show interest in the learning of prevocational course like Home Economics (Ndubuka, 2021). Findings from Nnubia (2013) show that pupil’s interest in studying prevocational courses especially Home Economics are on the decline and this has affected the academic achievement of the pupils in Home Economics. Based on this, interest of pupils in a particular subject is a strong determinant of their level of academic achievement.

Academic performance could be referred to as the display of knowledge attained or skills acquired by pupils in a subject usually reflected by the scores of the pupils in an examination or test under the supervision of a teacher (Insert reference). The scores in examinations and the passing notes in class usually determine the achievements of the students about the course (Ojukwu, 2016). Adeyemo (2015) viewed academic achievement as the exhibition of knowledge attained or skills developed by students in the school subject usually designed by test scores or by marks assigned by teachers which can be low or high. Academic performance is a term used to reflect how students are performing in their studies and classes (Sharma 2012). Academic performance is a quantitative outcome such as a learner's score in a test or examination. It is the display of knowledge attained or skills developed in the school subject (Wanjohi, 2015).

The level of success attended by students may depend on the teaching methods adopted by the classroom teachers. Teaching method are the instructional strategies or techniques that a teacher can adopt to meet the various learning objectives. According to Awotua-Efebo in Ogbo (2021), teaching method as the technique used by a teacher to deliver content of the subject matter to the learner based on predetermined instructional objectives in order to impart change on the learner behaviour. Westwood in Ogbo (2021) sees teaching method to include the principles and methods used by teachers to enable students learn. It has additionally been noted that the traditional method is the most commonly used method utilized as a part of a senior auxiliary school in Nigerian schools and the system has been discovered not to be so effective on the grounds that students are not given the chance to communicate with the nature's domain and their scholarly abilities are not maximally developed. Most of these are in use and each of them provides something useful and
worthwhile to a capable and enthusiastic teacher. None of these methods are error-proof because they have limitations. These methods include: discussion method, project method, inquiry method, discussion method, simulation method, fieldtrip method, laboratory activity method, and animation method. Based on these teaching methods, the present study will explore the discussions supplemented with music.

Music can be an essential and effective tool to achieve active learners’ participation in chemistry when used appropriately in the classroom (Demorest & Morrison, 2010). Music not only engages students, but it also moves their brains and the part of the brain that processes sound has frequency-specific neurons that turn on and turn off based upon what sound the person is experiencing. Eventually these frequency neurons form groups of similar cells, resulting in a sound map in the brain (Demorest & Morrison, 2010). Music also could increase spatial reasoning and stimulate thought processes, which are both necessary components for academic achievement (Demorest & Morrison, 2010). McCammon (2018) agrees and further suggests that teachers should talk less to students and have them sing more. McCammon postulates that having students sing promotes active involvement and engagement in the curriculum. According to McCammon (2018), students are involved in the world of music outside the classroom. This is because most students grow up with music as a large part of their cultural identities. In the classroom, this process consists of teachers implementing music-centered lessons where songs are used to teach content and students interact with the music in the classroom in several ways. The method requires the teacher to do more than the students listening to the music but does not require any musical skill, as the method is not dependent on music training. The teacher either composes or downloads the music from the internet; and gives the students the pre-recorded music to listen to before or during the lesson. However, the discussion supplemented with music has yielded a significant effect on the interest and academic achievement of the students, as findings from Akpoghol, Ezeudu, Adzapeand Otor (2016) revealed that students taught using the music method had higher achievement scores than those taught with other methods. Thus, on this bases, the present study sought to explore the effect of the discussion supplemented with music method on the interest and academic achievement of the pupils in Home Economics.

**Objective of the Study**

The main objective of the study examined the effects of using discussion supplemented with music on the interest and academic achievement of Home Economics pupils in Primary Schools in Abia State. Specifically, the study sought to:

1. Find out the interest mean scores of pupils in Home Economics when taught using discussions supplemented with music teaching method and those taught with the discussions method only.
2. Determine the academic achievement of pupils in Home Economics when taught using discussions supplemented with music teaching and those taught with discussions method only.

**Hypotheses**

The following null hypotheses were tested at 0.05 level of significance.

**Ho1:** There is no significant difference between the mean interest scores of pupils in Home Economics when taught using discussions supplemented with music teaching method and those taught with discussions method only.

**Ho2:** There is no significant difference between the academic achievements of pupils in Home Economics when taught using discussions supplemented with music teaching method and those taught with discussions method only.

**Methodology**

This chapter discussed the design of the study, area of the study, population of the study, sample and sampling techniques, instrument for data collection, validation of the instrument, reliability of the instrument, method of data collection and method of data analysis.

**Design of the study:** This study adopted quasi-experimental design. The purpose of the design was to determine the effect, which involves an intervention controlled by experiments (Mcmillan & Schumachar, 2010). This study used pre-test post-test non-equal control group design that involved intact classes.
Area of the study: The area of the study was Abia State, Nigeria. Abia State was carved out of the former Imo State on 27th August, 1991. Abia is a State in the South East part of Nigeria which occupies about 5,834 square kilometres.

Population of the study: The population of the study comprised ten thousand and forty-five (10,045) Primary five (5) Pupils in all the Government-owned Primary schools in Abia State. The choice of Primary 5 pupils was because they were not in examination class and were mature enough for the study.

Sample and sampling technique for the study: A sample size of eighty-two (82) which consisted of 40 pupils (19 males and 22 females) that were assigned to the experimental group and 42 pupils (20 males and 22 females) that were assigned to the control group. The sampling was drawn using purposive sampling technique.

Purposive sampling was used to select one education zone (Umuaha) from the three education zones in Abia State. Purposive sampling technique was also used to select two schools which are co-educational public secondary school since the study compared such variables such as gender of the students. The classes was purposively assigned to groups (treatment and control),

Instrument for data collection: The instrument used for this study was the Home Economics Achievement Test (HEAT) and Measure of Home Economics Interest Scale (MHEIS). The instruments were subjected to face and content validation by three experts; two specialists from Home Economics and one from Measurement and Evaluation all from Michael Okpara University of Agriculture Umudike. The reliability of HEAT was determined using Kuder-Richardson 20, which yielded a correlation coefficient of 0.79 while the Measure of Home Economics Interest Scale (MHEIS) had a reliability coefficient of 0.78 which was determined using Pearson’s Product Moment Correlation Coefficient (PPMCC) statistic.

Method of Data Collection: The researcher carried out this study in three phases thus; Pre-treatment phase, Treatment Phase and Post treatment/Retention phase. The researcher briefed the regular Home Economics teachers in the two schools used in the experimental study for a period of one week using the instructional guide on the appropriate way to administer the Home Economics Achievement Test (HEAT) and Measure of Home Economics Interest Scale (MHEIS). During the second week the HEAT 1 was administered by their regular Home Economics teacher and was observed by the researcher (experimental and control groups) as pre-test. At the end of the test, the scores were recorded and kept. Thereafter, the treatment was then administered for a period of four weeks. The experimental group in each school were taught the selected topics using discussion supplemented with music while the control group were taught the same topics using discussion method. After four weeks of treatment, the HEAT II was re-arranged and administered to all the students as post-test.

Data Analysis: The data collected through the administration of the instruments were analyzed using mean and standard deviation to answer research questions and Analysis of Covariance (ANCOVA) was used to test the null hypotheses at .05 level of significance

Results

The results of the study were presented in tables and according to objectives and research questions.

Research Question 1: What are the interest mean scores of pupils in Home Economics when taught using discussion supplemented with music teaching method and discussions method?

Table 1 Mean Interest Scores of Pupils in Home Economics when taught with Music Teaching Method and Discussions Method

<table>
<thead>
<tr>
<th>Groups Method</th>
<th>N</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean SD</td>
<td>Mean SD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>Mean</td>
</tr>
</tbody>
</table>

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Table 1 indicated that the pre-test interest mean scores for experimental and control groups were 41.550 and 41.100 with standard deviations 5.446 and 5.411 respectively, indicating that both of the experimental and control groups had relatively equal interest in Home Economics before treatment. However, the post-test of the Experimental group and control groups mean interest scores were 52.950 and 41.850 respectively with standard deviation of 6.277 and 5.469 respectively. The mean gain score for experimental group I was 11.400 while that for control group was 0.750 indicating that Pupils in experimental groups had more interest in Home Economics than the pupils in control groups.

**Hypothesis 1:** There is no significant difference between the mean interest scores of pupils in Home Economics when taught using discussion supplemented with music teaching methods and discussion methods.

**Table 2 Analysis of Covariance (ANCOVA) for the Mean Interest Scores of Pupils in Home Economics when taught with Music Teaching Methods and Discussions Method**

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>p-value</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>1589.714</td>
<td>2</td>
<td>794.857</td>
<td>30.691</td>
<td>.000</td>
<td>S</td>
</tr>
<tr>
<td>Intercept</td>
<td>5847.633</td>
<td>1</td>
<td>5847.633</td>
<td>225.786</td>
<td>.000</td>
<td>S</td>
</tr>
<tr>
<td>Groups</td>
<td>380.993</td>
<td>1</td>
<td>380.993</td>
<td>14.711</td>
<td>.015</td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>1016.757</td>
<td>1</td>
<td>912.674</td>
<td>35.240</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>1994.223</td>
<td>77</td>
<td>25.899</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18479.212</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>9239.606</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Result of data analysis in Table 2 shows that F calculated value (35.240). Since this p-value (0.000) is less than the 0.05 alpha when tested at 0.05 level of significance, the null hypothesis which states that there is no significant difference between the mean interest scores of pupils in Home Economics when taught using discussion supplemented with music teaching methods and discussions method is therefore rejected. Since, there was a significant difference between the mean interest scores of pupils in Home Economics when taught using discussion supplemented with music teaching method and discussion method.

**Research Question 2:** What is the academic achievement of pupils in Home Economics when taught using discussion supplemented with the Music Teaching and Discussions Methods?
Table 3 Mean Academic Achievement of Pupils in Home Economics when Taught with Music Teaching and Discussions Methods

<table>
<thead>
<tr>
<th>Teaching Method</th>
<th>N</th>
<th>Pre-test Mean</th>
<th>SD</th>
<th>Post-test Mean</th>
<th>SD</th>
<th>Mean Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>38</td>
<td>42.240</td>
<td>5.499</td>
<td>73.362</td>
<td>7.565</td>
<td>31.122</td>
</tr>
<tr>
<td>Control</td>
<td>42</td>
<td>43.740</td>
<td>5.614</td>
<td>48.347</td>
<td>5.953</td>
<td>4.607</td>
</tr>
<tr>
<td>Mean difference</td>
<td></td>
<td>-1.5</td>
<td></td>
<td>25.015</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Survey 2021

Result in Table 3 indicated that the pre-test mean achievement score for experimental group 1 and the control group were 42.240 and 43.740 with a standard deviation of 5.499 and 5.614 respectively and a mean difference of -1.5 at the pre-test. This indicated that both experimental and control groups were relatively at the same achievement before treatment. However, the post-test achievement mean scores for the Experimental and control groups were 73.362 and 48.347 respectively with a standard deviation of 7.565 and 5.953 respectively with a mean difference of 25.015. The higher mean gain achievement score of the experimental group of (31.122) over the control group of (6.64) indicated that the Music teaching method has a relative effect on Pupil's achievement in Home Economics.

Hypothesis 2: There is no significant difference between the academic achievements of pupils in Home Economics when taught using discussion supplemented with music teaching method and discussion method.

Table 4: Analysis of Covariance (ANCOVA) for the Mean Achievement Score of pupils in Home Economics when taught with music teaching and discussions methods

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>p-value.</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>10959.803a</td>
<td>2</td>
<td>5479.902</td>
<td>45.871</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>9519.316</td>
<td>1</td>
<td>9519.316</td>
<td>79.684</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>PRETEST</td>
<td>2967.443</td>
<td>1</td>
<td>2967.443</td>
<td>27.943</td>
<td>.000</td>
<td>S</td>
</tr>
<tr>
<td>GROUP</td>
<td>9984.920</td>
<td>1</td>
<td>9734.204</td>
<td>81.483</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>9198.651</td>
<td>77</td>
<td>119.463</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>63340.660</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>31670.33</td>
<td>79</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. R Squared = .782 (Adjusted R Squared = .612), S = Significant

Source: Field Survey 2021

Result of data analysis in Table 4.4 shows that the probability value associated with the calculated value of F (83.48) for the mean achievement scores of two groups of pupils taught Home Economics using music teaching method and discussion methods is 0.000. Since this value (0.000) is less than the 0.05 alpha when tested at 0.05 level of significance, the null hypothesis is rejected. Hence, there was a significant difference between the academic achievements of pupils in Home Economics when taught using discussion supplemented with music teaching method and discussion methods. This result indicated that music teaching method is superior to discussion method in enhancing pupils’ achievement in Home Economics.

Discussion of Findings

The study revealed that the pre-test interest mean scores for experimental and control groups were 41.550 and 41.100 with standard deviation 5.446 and 5.411 respectively, indicating that both of the experimental and control groups have relatively equal interests in Home Economics before treatment. However, the post-test of experimental group I and control groups mean interest scores were 52.950 and 41.850 respectively with standard deviation 6.277 and 5.469 respectively. The mean gain score for experimental group I was 11.400 while that for control group was 0.750 indicating that Pupils in experimental groups had more
interest in Home Economics than the pupils in control groups. The corresponding hypothesis affirmed there was a significant difference between the mean interest scores of pupils in Home Economics when taught using discussion supplemented with music teaching methods and discussions methods. This finding is in line with the finding of Olutola, Iliyas and Abdulsalam (2017) who affirmed that there is a significant effect of discussion with music teaching method on senior secondary school students’ interest and performance in the English language based on gender. In addition, a significant interactive effect of gender and discussion teaching methods on senior secondary school students’ performance in the English language was discovered.

The study accepted that the pre-test mean achievement score for experimental group I and the control group were 42.240 and 43.740 with standard deviation of 5.499 and 5.614 respectively and a mean difference of -1.5 at the pre-test. This indicated that both experimental and control groups were relatively at the same achievement before treatment. However, the post-test achievement mean scores for experimental and control groups were 73.362 and 48.347 respectively with standard deviation of 7.565 and 5.953 respectively with a mean difference of 25.015. The higher mean gain achievement score of the experimental group of (31.122) over the control group of (6.64) indicated that Music teaching method has a relative effect on Pupils’ achievement in Home Economics. The corresponding hypothesis affirmed that there was a significant difference between the academic achievements of pupils in Home Economics when taught using discussion supplemented with music teaching method and discussion methods. This result indicated that the music teaching method is superior to the discussion method in enhancing pupils’ achievement in Home Economics. This result indicated that music teaching method is superior to the discussion methods in enhancing pupils’ achievement in Home Economics. The finding agrees with the finding of McCammon (2018) who pointed out that teachers should talk less to students and have them sing more. The finding is also in line with the finding of Akpoghoh, Ezeudu, Adzape and Otor (2016) who revealed that students taught using the music method had higher achievement scores than those taught with other methods.

**Conclusion**

Music teaching method has a relative effect on Pupils' achievement in Home Economics. This implies that the music teaching method is superior to the discussion method in enhancing pupils' achievement in Home Economics. Pupils in experimental groups had more interest in Home Economics than the pupils in control groups and there was a significant difference between the mean interest scores of pupils in Home Economics when taught with discussion supplemented with music teaching methods and discussions method.

**Recommendations**

Based on the findings and conclusions of the study, the following recommendations were made.
1. Teachers should be encouraged to make use of the supplementation of music in teaching for better interest and academic achievements in Home Economics.
2. School administration should create adequate lesson period in the school time table for the teachers that may wish to use them to teach Home Economics since the use of those methods are generally time-consuming.
3. Future research should be carried out to discover other methods that could effectively improve pupils’ interest and academic achievement in Home Economics.

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