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A Comparative Study of Attitude of Urban and Rural Dwellers Towards Vagrant Sufferers of Mental Illness (Schizophrenia) in Delta State of Nigeria.

EFFECTS OF DISCOVERY METHOD AND DEMONSTRATION COMBINED WITH ADVANCE ORGANIZERS AS A STRATEGY ON STUDENTS' PERFORMANCE IN HEALTH EDUCATION

AWUJA-ADEMU, S.

ABSTRACT

This study was carried out to ascertain the effects of the discovery method and demonstration combined with advance organizers as a strategy on JSS III students' performance in Health Education in Idah L.G.A. of Kogi State. Two null hypotheses guided the study while the was to determine the effects of the two methods of this study purpose on students' achievement. The study adopted a quasi-experimental design and it was a pretest post-test intact control group. The target population was 2,700 while the sample consisted of 90 respondents. The study has two independent variables and one dependent variable. Health Education Achievement Test (HEAT) was the instrument used while testretest reliability method was employed to establish the reliability (r) which was found to be 0.54 Analysis of covariance was the method used to analyse the data collected. After this, a post hoc analysis was done using the Duncan-Multiple-Range test to identify which variable caused differences. The analyzed data indicated the main effects of methods employed to teach, and demonstration combined with advance organizers as a strategy became the best method. The F-observed value was 11.158 while the F critical value was 3.11. Hence, certain conclusions were drawn and useful recommendations were put forward for curriculum planners, instructional designers, teachers and the ministry of education were encouraged to incorporate the findings.

INTRODUCTION

The method of teaching a specific subject is capable of affecting students' academic performance either positively or negatively. This is one of the numerous reasons why a teacher's method of teaching is a key factor that has implications for students' level of cognitive achievement in school subjects (Oviawe. 2007). The students' performances in both Junior and Senior Secondary Certificate Examination have not been encouraging in recent times due to low achievement. The curriculum experts recommend those who offer Health Education Junior Secondary Schools to have had adequate relevant previous knowledge of Primary Science to enable them to cope with scientific studies. Scientific literacy has become a critical issue for Nigerian students because, Science and Technology are becoming so significant in the modern world that one's ability to understand and apply scientific methods to solve a given problem spell out the distinctions between prosperity and poverty (Ali, 1998; Ovri, 2006; Awuja-Ademu, 2008).

The philosophy behind the introduction of Health Education is to teach students how medical scientists work and to create burning desires for the learners to become scientists too. Science Education is an instrument par excellence for effecting national development which in turn promotes efficiency, effectiveness, self-reliance and overall well being of the individual citizenry in all spheres of life. science has the privilege function of exerting a dominant if not decisive influence on the developmental efforts of any nation world over (FRN, 2004: Ogunkola, 2003). This explains some important reasons why students should be aware of the basis for exploring and exercising some degree of control over their environment through the use of sense. The curriculum of Health Education entails intellectual

activities involving scientific methods and strategies for teaching how students can interact with natural phenomena on daily basis.

Unfortunately, it is worrisome to note that the student's performance in Junior Schools Certificate Examination (JSCE) tends to be very low over the years. This incidence of low academic performance in standardized examinations has been traced to poor instructional methods used by teachers, a shortage of qualified and dedicated teachers, insufficient and wrong application of instructional materials (Yakubu, 2002; Ororho and Ezekwue, 2007). Also, it has been observed that a lot of teachers at Junior Secondary School levels employ a conventional methods of teaching which result in low scientific achievement. Apart from these problems mentioned above, some teachers teach Health Education without focusing attention on any recognized methods. According to them, teachers are just teaching the subject matter to provide the students with mere knowledge and this kind of method may be classified as 'informative teaching'. Infact, they hardly prepare their lesson notes based on any known teaching method (Anya, 1998; Gbamanja, 2002).

This situation has generated many pertinent questions; Could it be that teachers do not know the appropriate instructional method to use or they could not apply it effectively? These questions prompted the researcher to an investigation of effects of the discovery method and demonstration combined with advance organizers as a strategy on student performance in Health Education in the Idah Local Government Area of Kogi State.

Theoretical Framework: The study is anchored on the theory of Discovery learning by Burner (1966), and the subsumption theory of meaningful verbal learning advocated by Ausubel (1960) in the case of Demonstration combined with advance as a strategy.

Bruner (1960) believed learning involves the full active processing of information organized and constructed uniquely by each individual. Factual information is acquired and stored in the form of active experiences rather than positive associations and much learning occurs through discovery. The teacher is expected to place emphasis on the most important ideas and relates them with the subject to enable students to generate new ideas, concepts and principles. In a way, the teacher becomes a coordinator and a facilitator in the teaching-learning process instead of explaining how such problems are solved. The teacher deliberately asks questions capable of leading students to discover a solution to the problems. The Discovery method develops the mental ability, a sense of intellectual self-satisfaction, excitement and motivation. Ideas or knowledge discovered by oneself tends to be retained for a longer time but it is time-consuming, difficult to carry out with a large number of students in a class and not much of the syllabus is covered. Students may be frustrated and discouraged if they cannot discover anything because it is student-centred method.

The use of the demonstration method of teaching allows the teacher to show students how to do something systematically so that students emulate or imitate their teacher in acquiring the new skills. It is mostly employed-by teachers especially when the materials are in short supply or poisonous in nature or too delicate for students to handle alone. As a result, the topic is solely demonstrated by the teacher in the class or with the aid of a few selected students. The demonstration method is teacher-centred (Onyeagwu, 2005; Awuja-Ademu, 2008).

An advance organizer is a body of information about a topic presented ahead of time to serve as an anchor and a template between incoming information and existing knowledge (Ausbel, 1960). It was used by Ausubel (1960) as an adaptive strategy to enhance the expository method and in this study, the advance organizer is employed to help improve the demonstration method to provide a connection between the new knowledge and previous ones. Advance organizers as a strategy combined together with part demonstration method form an integrative framework which generates interest on the part of students and makes them become actively involved more than when a demonstration experiment is used alone. Advance organizers are introduced to students as a device by the teacher before the actual teaching-learning encounter and it is also presented at a higher level of abstraction during a demonstration to make the lesson simple and explicit (Awuja-Ademu, 2008)

Effective utilization of a combination of demonstration method together with advance organizers as a device bridge the 'gap' of 'inactive' participation by the students particularly when the demonstration method is used alone. The integrative framework of teaching effects in figure 1.1. below illustrates the application of the combination of the demonstration method with advance organizers as a strategy.



Modified Interactive Framework for Teaching Effect by Awuja-Ademu (2008).

The first phase illustrated the application of advance organizers as a strategy before an upcoming lessons to facilitate meaningful learning via its anchorage to new knowledge to facilitate full active students' participation while using the demonstration method during an actual lessons by the teacher. The second phase showed how advance organizers as a strategy anchors, fuse and connect previous knowledge to new knowledge to facilitate full active students' participation while using the demonstration method during the actual lesson by the teacher. The third phase pointed to interaction effects between the demonstration method and advance organizers to bridge the existing 'gap which usually militates against students 'active' participation. Theoretically, this novel device encourages the transfer of previously acquired knowledge. The very aim of acquiring health knowledge is to practice personal cleanliness at home/school, prevention of accidents at home/school, periodic medical check-up, manners, values and health habits through practical table food demonstration during a lesson. Water safety and highway codes are also taught in schools.

Inspites of these numerous benefits of health education, students' Junior School Certificate (JSCE) examination results still appeared very poor on yearly basis and this incident of mass failure has been traced to poor instructional methods used by most health teachers across the state over the years. In short, many health educators do not practice

healthy habits and the knowledge acquired is not well taught in schools. Health is mostly taught theoretically these days in schools; a situation whereby available facilities and equipment are either abandoned completely or inappropriately employed to teach. This situation had led to students' poor performance in the JSCE (Adeoye and Haruna 2000). It should be realized that appropriate utilization of enhanced teaching methods facilitates students' performance and this is one of the objectives of teaching health education in schools which remained unattained in Kogi State. Then, what is the problem?

Statement of the Problem

The issue of poor or inappropriate use of instructional methods and strategies among Junior Secondary School Health Education teachers has become a major problem responsible for students' under-achievement in Idah Local Government Area of Kogi State. The question may be which one of these instructional methods (discovery method or a combination of demonstration with advance organizers as a strategy) can be used to improve students' achievement in Health Education.

Consequently, the problem this study seeks to solve is to investigate the effects of the discovery method and demonstration combined together with advance organizers as a device on students' achievement scores in Health Education.

Hypotheses

- Ho1: There is no significant main effect between the mean achievement score of students in the discovery method and demonstration combined with advance organizers as a strategy.
- Ho2: There is no significant difference among the mean achievement scores for discovery, demonstration method combined with advance organizers as a strategy and control group in Health Education.

Purpose: The study was aimed at determining the main effect of discovery, and demonstration combined with advance organizers as a device in Health Education. It is designed to fill in the 'gap' which prompted the researcher to an investigation.

Significance of the Study: The findings of the study shall benefit curriculum planners, curriculum developers, instructional designers, classroom teachers, educational policy makers, school heads, ministry of education officials and future researchers. More importantly, it would enhance the quality of teaching on students' achievement.

Design of the Study: The study adopted a quasi-experimental design and it used pre-test-post lest intact control group.

Population of the Study: The target population of the study consisted of 2,700 JSS III students in Idah L.G.A. of Kogi State during the 2008/2009 academic year. There were 7 public secondary schools in Idah L.G.A. according to records available in the planning, research and statistics unit of the Local Government Education Authority at the time of this research.

Sample: The sample consisted of 90 students randomly selected from JSS III classes. The breakdown of the sample indicates 32 subjects from Government Technical College Idah; 30 subjects from Government Day Secondary School Idah and 28 respondents from Idah Secondary Commercial College.

Research Instrument: The study adopted an instrument entitled health Education Achievement Test (HEAT) personally constructed by the researcher and validated by two curriculum experts; two Health Educators and two measurement and evaluation experts. Their suggestions and corrections help to reorganize the contents of the objective items.

The test items cover 6 topics taught during experimental treatment. It is divided into two sections. Section 'A' sought to elicit demographic information while section 'B' consisted of 20 objective items.

Reliability of the Instrument: The instrument (HEAT) was administered, the same instrument was re-administered to the same group of respondents. The two collated data were correlated using the Pearson Product Moment Correlation Coefficient Statistical method. The 'r' after test-retest reliability was 0.54. This index of 0.54 showed that the instrument (HEAT) was reliable.

Method of Data Analysis: Analysis of Covariance (ANCOVA) was adopted to analyse the data collected. It was used to compare pre test post test scores to be able to find out differences between the two sets of scores. Duncan Multiple Range Test (DMRT) was used for pair-wise comparison.

RESULTS

Hypothesis 1: There is no significant main effect on the mean achievement score of students in the discovery method and demonstration combined with advance organizers as a strategy.

Table 1: Comparison of the mean of pre-test post-test achievement scores of students taught using the discovery method and demonstration method with advance organizers as a strategy.

| Source of variation covariates | Type III Sum of | Df | Mean Square | F | Signi- ficant |
|--------------------------------|--------------------|----|----------------|--------|------------------|
| | square | | | | |
| Corrected model | 607.793 | 12 | 50.646 | 3.483 | .00 |
| Intercept | 1435.719 | 1 | 1435.719 | 98.719 | .00 |
| Pre | 20.839 | 1 | 20.839 | 1.344 | .235 |
| Group | 324.557 | 2 | 162.278 | 11.158 | .000 |
| Sex | 7.425 | 1 | 7.425 | .511 | .477 |
| Ability | 2.396 | 1 | 2.396 | .165 | .686 |
| Group*Sex*Ability | 7.223 | 2 | 3.612 | .248 | .281 |
| Error | 1119.863 | 77 | 14.544 | | |
| Corrected Total | 1227.656 | 89 | | | |

*P<.05; a. R square -.352 (Adjusted R square =.2551)

Table 1 revealed the main effect of instructional methods on Health Education students' mean achievement scores. The F observed value was 11.158 while the F critical value was 3.11. The difference between the Pre-test Post-test mean achievement scores of the two methods is statistically significant because the F. observed value of 11.158 <3.11 F critical value at 0.05 level of significance. Hence, hypothesis one was rejected. The implication was that there was a significant main effect in the achievement of students taught using a discovery method and those taught using demonstration combined with advance organizers as a strategy.

Hypothesis 2: There is no significant difference among the mean achievement score of Health Education students for the discovery method, demonstration method with advance organizers as a strategy and control groups.

Table 2: comparison of post-test Health Education students' achievement taught using discovery method; demonstration combined with advance organizers as a strategy and control groups. Post Hoc Tests

Homogeneous subsets

Duncan post-test

| Group | Subset for alpha= 0.5 | | | | |
|---------------------------------|-----------------------|-------|----------|--------|--|
| | Ν | 1 | 2 | 3 | |
| Control Group | 20 | 9.533 | | | |
| Discovery method | 20 | | 12.40000 | | |
| Demonstration combined with | 20 | | | 15.333 | |
| advance organizer as a strategy | | | | | |

The post hoc analysis using Duncan Multiple Range Test was conducted via instructional methods (independent variables) and (dependent variable). The result showed that the mean achievement scores for demonstration combined with advance organizers, discovery method and control were as follows: 15.33, 12.40 and 9.53 respectively.

Discussion of Findings of the Study

Table one above revealed significant main effects of the method of teaching Health Education on students' achievement while table two indicated variations among methods employed. The best one was the demonstration method combined together with advance organizers as a strategy after post hoc analysis with DMRT. This was followed by the discovery method and lastly, the control group.

The relative efficacy of various methods particularly the demonstration method with advance organizers. The findings agreed with that of Ausubel (1960) Ojeifo, 2000; Awuja-Ademu, (2008) who used advance organizers as an adaptive device to improve the expository and demonstration method of teaching so that the body of information presented ahead of time could serve as an anchor and a template between upcoming lesson and previous knowledge.

Conclusion and Recommendation

The educational findings in this study revealed a positive main effect of methods used on students' achievement in Health Education, particularly in JSS III. The result of this study also showed variation in the mean scores for demonstration combined with advance organizers as a strategy, discovery method and control group to be 15.33; 12. 40 and 9.53 in descending order of significance. Hence, curriculum planners, developers, instructional designers, educational policymakers and ministry of education officials are encouraged to incorporate the findings in future curriculum planning and instructional design. Workshops, seminars and conferences for serving Health teachers have been recommended so that the findings in this study can be properly introduced for implementation. State Ministry of education in conjunction with Local Government Education Authority need to provide adequate funds to acquire instructional materials used as advance organizers". There is a need to carry out a similar studies to cover wider geographical locations or use other methods as well as strategies to permit wider acceptable generalization.

REFERENCES

- Adeoye, B.A. and Haruna, Y. (1993) Physical and Health Education for Schools, Ekiti; Standard Press & Bookshops.
- Alberto, PL.A. (1986) Applied Behaviour & Analysis for Teachers (2nd Ed) Columbus OH. Merrill.
- Ali. A. (1998). Strategic and Trends in Science Education in Africa, Onitsha: Cape Publishing International Ltd.
- Anya. A. (1998). Re-educating Nigerians for the 21st Century; A Public Address of the 40th Anniversary Lecture of Inner Circles of the University of Ibadan.
- Awuja-Ademu, S. (2008). Effects of Demonstration combined with Advance Organizers as a Strategy and Guided Discovery Method on Pupils' Achievement in Primary Science. A Seminar Paper Presented in the Department of Science Education, Faculty of Education, Delta State University, Abraka.
- Ausubel, D.P. (1960). The Use of Advance Organizers in Learning and Retention of Meaningful Verbal Materials. Journal of Educational Psychology, 51(5), 2676-272.
- Bruner, J. (1966). Toward a Theory of Instruction; Cambridge: Harvard University Press.
- Federal Republic of Nigeria (2004). National Policy on Education-Theory and Practice: Ado-Ekiti: Hamaz Global Publishing Company.

Ogunkola, B.J. (2003). Combined and Relative Effects of Teachers' Understanding of Biology Curriculum Content, Self-confidence and Job Satisfaction on Students in Social Studies (Unpublished PhD Thesis of Delta State University, Abraka).

- Ororho, E, and Ezekweue, E.R. (2007). Towards Effective Teaching of English Language in Nigerian Primary Schools; Journal of Academics in ANA; 2(3) PP. 14-15.
- Oviawe, J.I. (2007). Effects of Teaching on Achievement of Students in Introductory Technology: In Journal of Academics 2(3) p. 176-186.
- Yakubu, N.J. (2002). Refocusing Technical Education in Nigeria, In Oriaifo, S.O.; Nwaokolo, P.O.E. and Igborrbor, G.C. (Eds.) Refocusing Education in Nigeria. Benin Dan-Sylva Influence.