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SHORT COMMUNICATION

PROFICIENCY LEVEL OF MALE AND FEMALE SECONDARY SCHOOL MATHEMATICS TEACHERS TOWARDS TEACHING.

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ABSTRACT

*The study examined proficiency level of male and female mathematics teachers in teaching. A Twenty (20) multiple choice items of Mathematics Achievement Test **(MAT)** was constructed and validated with **0.87** reliability coefficient. A sample of one hundred and twenty (120) (55 males and 65 females), Secondary School Mathematics teachers were randomly selected from thirty (30) Secondary Schools in Cross Rivers State for the study. One research question and one hypothesis were formulated to facilitate this study. The hypothesis was tested using independent t-test at 0.05 significant levels. The result revealed that, there was significant difference between the proficiency level of male and female mathematics teachers toward teaching. Suggestions and recommendations were made base on the finding.*

KEYWORDS: *proficiency level, male and female mathematics teachers, mathematics achievement test,* independent t-test.

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INTRODUCTION

Countries of the world recognized the role of education as potential instrument for cultural, social, political, scientific and technological development of any nation or society. (Odeyemi (1991) in Eniayeju and Azuka (2010) opined that, among all the subjects studied at our schools, mathematics has distinctly contributed more to the objectives of general education of man than any other subject. It is in the realization of this fact, that almost all Nations of the world make mathematics

a compulsory subject of study. The use of mathematics could be said to have started with the creation of man and it is universal activities. It is not only considered important in its own right as a field of study and research but also essentially to almost every field of intellectual endeavour (Yusuf, 2009 and Ekwueme, 2013).

It has been observed that no nation can develop without mathematics; this is because mathematics enhances the study of sciences which is the springboard for technological and overall national development (Ezeilo, 1981; Umoinyang, 1997; Azuka, 2000) in Eniayeju and Azuka (2010). Observation made on the gap between the advanced world and the developing countries (Nigeria) is simply the gap in the study of mathematics. This prompted Ukeje (1997) in Eniayeju and Azuka (2010) to put it that "without mathematics there is no science; without science there is no technology; and without technology there is no modern society".

Despite mathematics relevance to any nation, the study of the subject in our schools is bedeviled by poor performance. This is as a result of poor performance of students in the subject. For instance, the statistics published by West African Examination Council (WAEC) revealed that for the past ten years (1999-2009) less than 40% of Nigerian students obtained credit passes each of the years in the senior Secondary Examinations.

Furthermore, the result released by National Examination Council (NECO) in 2010 indicated that over 92.8% of students who took the Senior Secondary Certificate Examination (SSCE) in 2009 could obtain the minimum qualification for entry into the Tertiary Institutions. This unfortunate situation was as a result of poor performance in Mathematics and low proficiency level of some teachers in teaching the subject.

In the classroom, just as most students find mathematics very difficult to understand the concepts being taught, most teachers equally find mathematics concepts difficult to impart effectively on the students (Azuka, 2009). Oyedeji (1992) in Eniayeju and Azuka (2010) also added that the teaching of mathematics as a practiced in schools is said to be ineffective; this is as a result of poor and low competence (proficiency) of mathematics teachers.

From 2002 to 2010 most of the teachers who attended National Mathematical Centre workshop lacked the knowledge of the subject matter and the artistry for effective teaching.

Moore (2002) in Binda (2005) opines that proficiency in the mathematical subset of English Language is essential for success in mathematics. In other words, students' ability to interpret mathematical expressions given them, depends to a greater extent on proficiency of the teacher who is teaching them .Therefore , if a teacher does not understand what he/she is teaching, there is no how he/she can teach his/her students well. (Cameron, 1923, Piret, 1965; Weiner, 1980; Obioma and Ohuche, 1980; Kaiser – Messnir, 1993; Abiam and Akwa, 2004).

The research literature indicates that females generally exhibit a poorer attitude and proficiency of achievement in mathematics than their counterparts.

According to Okebukola (1999) and Anyakoha (2003), the type of engagement male involve themselves in (making bows and arrows, rolling tyres, flying kites, constructing vehicles among other activities) accords them the opportunity to explore nature and acquire better understanding of the world around them. The educational implication of this is that, males end up gaining an early lead in science and mathematics. This can be shown in their ability to associate the events the teacher describes either in science or mathematics class of those activities they (male) had undertaken in the home. This put the female at the disadvantage in the proficiency level of mathematics and science.

Lassa (1984) reports that males were somewhat superior to the females in mathematical reasoning and female were superior in mathematical fundamentals; WozenCraft (1963) in Lassa (1984) reported that females were superior to males in both reasoning and fundamentals in primary mathematics.

A qualified mathematics teacher has a good knowledge of his subject, (Leome, 1974) in Odok (2001) opines that Mathematics by virtue of its extensive practical applications and the aesthetics appeal of its method and results has a held a prominent place in education and only require those qualified to do justice to the art of teaching.

Majority of mathematics teachers in secondary school system lack the basic skills of the subject requires i.e they lack the proficiency of teaching the subject.

Qualification must have a major place in any analysis of a profession, since it guarantees competence and reliable performance, (Musgrave, 1978) in Odok (2001). Most of our teachers are deficient in some teaching methods and are not subjected to seminars to improve their teaching skills. Such teachers, force un-refined materials down the throat of the helpless students who suffer from academic indigestion until examination failure comes to send them home as school drop-out (Denga, 19991).

Ntukidem (1985) in Odok (2001) reveals that inadequate qualified teachers are one of the factor affecting performances of student at school. In teaching theoretical and practical topic in mathematics; whatever qualified instructional material a teacher uses in his/her classroom, will not be adequately presented where he/she has low proficiency of the subject. This means that, the quality of education in any society cannot rise above the quality of its teachers (Combs, 1968) (FRN, 2004).

Okpu (2002) in Offen (2005) opined that male teachers are likely to perform better than the female in any subject that involves calculation. He also postulates that some female teachers are afraid of calculation and they do not like stress.

Jackson (1998) in Amba (2003) asserted that female teachers, although some of them are scared of figure but they will make necessary effort to teach any subject that involve figures so that they will become used to it.

The purpose of this study therefore is to examine the proficiency level of male and female teachers towards teaching mathematics.

Research Question

1. Is there any gender difference in proficiency level of teaching mathematics in secondary?

Hypothesis

One hypothesis was tested in this study. There is no significant difference between proficiency level of males and females mathematics teachers towards teaching.

Research Methodology

For this survey, one hundred and twenty (120) (55 males and 65 females) mathematics teachers, were randomly sampled from 30 secondary schools in Cross River State. The only instrument employed for data collection was a Mathematics Achievement Test **(MAT)** constructed and validated by the researcher. The instrument was made up of 20 multiple choice items. The instrument was validated by three experienced lecturers of mathematics and two experts in test and measurements. Their suggestions were useful in modifying the instrument before it was administered. A Kuder-Richardson reliability estimate **0.87** obtained was considered high enough to guarantee the use of the MAT for the study.

Data Analysis

The data collected were analyzed using independent t-test.

RESULTS

Independent t-test analysis of proficiency level of male and female teachers toward mathematics teaching.

TABLE 1

VARIABLE	N	$\bar{X}$ $\bar{Y}$	S.D	t-OBS	t-cri	DF	P	Remark
Proficiency of male teachers (X)	55	48.85	17.16	3.12	1.98	118	≤0.05	significant
Proficiency of female teachers (Y)	65	40.03	12.44					

From Table 1, the calculated t-value is greater than the critical-value at 0.05 level of significant. Hence, there is significant difference in the proficiency level of male and female teachers toward mathematics teaching. Therefore, the null hypothesis is rejected and the alternative upheld.

DISCUSSION

The result of the study revealed that, there is a significant difference between the proficiency level of male and female mathematics teachers toward teaching.

In support of this, Okpu (2002) in Offen (2005) asserted that, male teachers are likely to perform better than their female counterparts in any subject that involve calculations. He also opined that females teacher are scared of calculations and they don't like stress. Also in support, Cameron, 1923, Piret, 1965; Weiner, 1980; Obioma and Ohuche, 1980; Kaiser – Messnir, 1993; Abiam and Akwa, 2004 and other research literatures indicated that females generally exhibit a poorer attitude and proficiency of achievement in mathematics than their counterparts.

CONCLUSIONS AND RECOMMENDATIONS

From the finding, male teachers have high level of proficiency in teaching mathematics than their female's counterparts. Therefore, the following recommendations are made:

Teachers (female) should be re-trained in workshops and seminars to ameliorate on their proficiency in mathematics.

In addition, they should consult more competent authorities or colleagues both in lesson planning, methods and evaluation to improve on their proficiencies in teaching.

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