



Performance of Female Students in Mathematics Education: Issues and prospects

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ABSTRACT

This paper attempted to find the factors that led to the low performance of female students in the study of Mathematics in Shehu Shagari College of Education Sokoto. Questionnaire was developed by the researchers and validated by measurement and evaluation experts. The result of the research showed that the factors inhibiting the high performance of female students in Mathematics ranged from psychological problems, parental, cultural background, sex of the lecturers, financial problems, sex separation and poor usage of teaching methods by lecturers. The paper conducted by proffering recommendations on how the low performance of female students' Mathematics could be enhanced. Government should further device and improve on campaign strategies on female participation in Science, Technology and Mathematics.

Keywords: Female students, Education, Sciences, Performance and College of Education.

INTRODUCTION

In spite of policy formulation on equal and accessible education to both male and female sexes of the human being a wide disparity exists between the two sexes in the Nigerian education sector. For instance the literacy rate of female sex in Nigeria was 39.5% in 1990 as compared to 62.35% in 1990 it is worth nothing that illiteracy in science it's a powerful index of scientific under developers (UNESCO, 2003; WAEC, 2002; UN, 2000).

Mathematics education is to a nation what protein is to a young human organism. As a vital tool for the understanding and application of science and technology, the discipline plays the vital role of a precursor and harbinger to the much needed technological and of course national development, which has become an imperative in the developing nations of the world.

Science education deals with importing knowledge of scientific skills by teachers to learners through the teaching learning process. The government in Nigeria in an attempt to improve the participation of woman in the development of the nation, set up women education unit in the federal ministry of education so many states established female science and technical college for improvement of Science, Technology and Mathematics (STM) in women (UNESCO, 2003; Asim *et al.*, 2007). Despite all these effect women are found wanting in the field of science. According to Howes (2002) the poor enrolment of the female students in science and technical based subjects in our institution over the years has become alarming. Ezeameyi (2002) had earlier pointed out that the performance of students, especially female drop year by year. They attributed this to the nature of teacher students interaction, the personality of the teacher of which the gender to a significant dimension.

Hopkins, (2004) opined that the low performance of female students especially in science in schools over the years could be attributed to cultural background of the students and the attitude of the parents towards female participation in science and technology education. Howes, (2002) inferred that women's learning problem emanates from the economic status of their parents, students from low economic status less interest in studies and perform poorly than students from influential family. This paper therefore, x- rays the problem female students have that laid to their low performance in science and how their performance in science education in Nigeria can be enhanced, the focus of this paper is to use a higher educational institution that has a fair representation of student from the six geopolitical regions of Nigeria. Hence the choice of Shehu Shagari College of Education Sokoto State by the researchers

METHODOLOGY

The population for the study comprised of all female students in the school in Shehu Shagari College of Education, Sokoto State. 20 items questionnaire was developed by the researchers and validated by measurement and evaluation experts. The students were required to among other questions; list the factors that cause their low performance in the sciences. The questionnaire was administered with confidentiality, filled by the sample and was retrieved by the researchers themselves so as to give necessary guide and ensure high return of instrument.

RESULT AND DISCUSSION

Answering to the question on performance in science in the administered questionnaire and 51.0% and 51.0% of the sample rated themselves as being of average and poor performance respectively. The remaining sample claimed they were performing highly.

The table below shows the analysis of the factors that cause poor performance in science of female students as obtained from the responses of the sample on the questionnaire.

Perceived Factors causing poor performance

FACTORS	PERCENTAGE %
Psychological problems	47.5
Parental cultural background	63.5
Sex preparation	63.5
Financial problems	71.0
Teaching methodology	42.3
Sex of lecturers	21.5

The percentage statistics was employed in analyzing the responses of the student. The percentage of the total of each responded factors was obtained.

From the finding of the research, it is vivid that there are factors that contribute to the low performance of female students in sciences

They are discussed below:-

Psychological Problem

The study showed that 57.5% of the respondents were attached by psychological problems which included inferiority complex in their performance in science. A view commonly held by most female sex is that they are inferior to the male sex. This view could lead to poor the male performance as the female student that holds the view was already mentally defeated. The inferiority complex explains why 66.7% of the sample admitted to feeling shy when it comes to speaking in class (Abiam *et al.*, 2006). Asim (2007) viewed inferiority complex as a psychological disorder that can mostly be found in women due to lack of self esteem, self confidence.

Parental Cultural Background

Most parents in Nigeria so not bother about or think little of female education as they attribute female education to waste of money and resources. From the analysis 3.5% of the female students stated that their parents' lukewarm attitude is responsible for their low performance in science. Some parents are of the belief that the educated girl will not contribute to the development of her parental home but will help her matrimonial home.

Sex Preparation

Most teachers and the Nigerian society create sex- stereotyping among the students, 63.0% of the respondents mentioned that men are usually differentiated from home by way of role separation and career choices. Our society has found the study of engineering hard, science courses such as physics and chemistry and the like more appropriate for men than women. This societal in affect the performance of the female student who have dared into studying science

Financial Problem

Many parents cannot afford to send their children to school due to financial constrains as attestors to by 71.0% of the sample students. The few parents that are willing to educate their female children are incapacitated.

Teaching Methodology

The teaching of science concepts require that the teachers to be vastly knowledgeable in course content and methodology. Teachers should be able to bring about the most desirable learning in their student and have high skill- proficiency necessary to achieve stated objectives. 42.3% of the students sampled complained about the methods of teaching used by their teachers.

Sex of Lecturer

When asked for their future career after graduating from Shehu Shagari College of Education Sokoto, 55.8% of the respondents opted for the teaching profession 21.5% stated that they enjoyed science lecturers taught by female teachers. However, the factors that are militating against the education of the women in Nigeria have led to the low number of female teaching staff in our institutions. At the moment only 25% of the lecturers in the school of science in Shehu Shagari College of Education are women.

CONCLUSION

In view of the fact the study of science leads to scientific and technological development, female students who are potential leaders should be encourage to take up science and related courses so as to bridge the gap existing between the two sexes.

RECOMMENDATION

The researchers wish to proffer the following recommendation so as to enhance female performance in science

- i. Government should further device and improve on campaign strategies on female participation in science technology and mathematics and related courses.
- ii. Any history that places female child in subordinate role of the family at the society level should be reviewed and discourage.
- iii. Lecturers in higher institutions of learning shows intensity efforts o gender seminars and workshops from female teachers at the primary and secondary schools.
- iv. Textbooks that present girls and women positively should be developed. The influence of school materials on the ideals and attitudes of both boys and girl could be an important factor on the next generation of female participation in education.
- v. Scholarship for girls to attend secondary schools should be aided.
- vi. Teaching should be professionalized

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