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ENHANCING FEMALE PERFORMANCE IN SCIENCE EDUCATION IN NIGERIA: A CASE STUDY OF FEDERAL COLLEGE OF EDUCATION, PANKSHIN

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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 science in Federal College of Education, Pankshin Plateau State. The result of the research showed that the factors inhibiting the high performance of female students in sciences ranged from psychological problems, parental cultural background, sex of lecturers, financial problem, sex separation and poor usage of teaching methods by teachers. The paper concluded by proffering recommendations on how the low performance of female students in science could be enhanced.

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 62.3% for males (Lassa, 1990). It is worth noting that illiteracy in science is a powerful index of scientific underdevelopment.

Science education deals with imparting 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 women 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 colleges for improvement of science, technology and mathematics (STM) in women. Despite all these efforts, women are found wanting in the field of science. According to Akubudike (2000) the poor enrolment of the female students in science and technical based subjects in our institutions over the years has become alarming. Mbah, et al (1999) had earlier pointed out that the performance of students, especially female students, drop year by year. They attributed this to the nature of teacher-student interaction, the personality of the teacher of which the gender is a significant dimension.

Blair, et al (1975) opined that the low performance of female students especially in sciences in schools over the years could be attributed to cultural background of the students and the attitude of the parents toward female education in his assessment of the obstacles to female participation in science and technology education. Okafor (2000) inferred that women's learning problem emanates from the economic status of their parents. Students from low economic status exhibits less interest in studies and perform poorly than student from affluent homes.

This paper, therefore ,x-rays the problems female students have that lead to their low performance in sciences 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 students from the six geopolitical regions of Nigeria. Hence, the choice of Federal College of Education Pankshin in Plateau State by the researchers.

Methodology

The population for the study comprised of all the female students in the school of science in Federal College of Education, Pankshin in Plateau State. A sample of 100 subjects was drawn from the population.

A 20-item 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 questionnaires were administered with confidentiality, filled by the sample and were retrieved by the researchers themselves so as to give necessary guide and ensure high return of instrument.

Data Analysis

Answering to the question on performance in science in the administered questionnaire 25.0% 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 sciences of female students as obtained from the responses of the sample on the questionnaire.

Perceived Factors Causing Poor Performance

FACTOR	%
Psychological problems	57.5
Parental cultural background	63.5
Sex- separation	63.0
Financial problem	71.0
Teaching methodology	42.3
Sex of Lecturer	21.5

The percentage statistics was employed in analysing the responses of the students. The percentage of the total of each responded factor was obtained.

Discussion

From the finding of the research it is vivid that there are factors that contribute to the low performance of female students in science. These are discussed below

Psychological Problem

The study showed that 57.5% of the samples were affected 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 performance as the female student that holds the view were already mentally defeated. The inferiority complex explains why 66.7% of the sample admitted to feeling shy when it comes to speaking in class. Ezeh (1999) viewed inferiority complex as a psychological disorder that can mostly be found in women due to lack of self-esteem, self-worth, self-confidence.

Parental Cultural Background

Most parents in Nigeria do not bother about or think little of female education as they attribute female education to waste of money and resources. From the analysis 63.5% 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- Separation

Most teachers and the Nigerian society create sex stereotyping among students.63.0% of the sample mentioned that men are usually differentiated from women 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 ill affects 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 constrain as attested to by 71.0% of the sampled students. The few parents that are willing to educate their female children are incapacitated.

Teaching Methodology

The teachings of science concepts require the teacher to be vastly knowledgeable in course content and methodology. Teachers should be able to bring about the most desirable learning in their students and have a 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 leaving F.C.E Pankshin 58.8%of the sample opted for the teaching profession.21.5% stated that they enjoyed science lectures taught by female teachers. However, the factors that are militating against the education of the women in Nigeria has 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 F.C.E Pankshin are women.

Recommendation

The researchers wish to profer the following recommendations so as to enhance female performance in science:

1. Government should further device and improve on campaign strategies on female participation in science technology and mathematics and related courses.
2. Any history of society that places female child in subordinate role of the family at the society level should be reviewed and discouraged.
3. Lecturers in higher institutions of learning should intensify efforts on gender seminars and workshops for female teachers at the primary and secondary schools.
4. Textbooks that present girls and women positively should be developed. The influence of school materials on the ideas and attitudes of both boys and girls could be an important factor on the next generation of female children participation in education.
5. Scholarship for girls to attend secondary schools should be aided.
6. Teaching should be professionalized.

Conclusion

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

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