
**ENSURING EQUAL OPPORTUNITIES IN SCIENCE AND
TECHNOLOGY LITERACY: FOCUS ON GENDER DISPARITY IN
SCIENCE CLASSROOM**

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Abstract

The study is a qualitative research. It is intended to sensitize our educational system on the need to create equal learning opportunities for male and female students in the classroom. A total of 240 subjects were selected randomly among junior secondary school year three students out of nine secondary schools in Ikere local government area of Ekiti State. Three groups, A, B and C were involved in the study, group A that comprised of male and female students. B comprised of male student only and C comprised of female students only. The instrument used was Integrated Science concept test (ISCT) which was administered on the population after three weeks intensive coaching. The results of pre test and post test were subjected to mean, standard deviations and analyses of covariance. The two hypotheses were rejected at 0.05 alpha level of significance. It was therefore concluded that there was a significant difference between the post test mean scores of integrated science concept test (ISCT) of male and female students in the same classroom and those in different classrooms.

INTRODUCTION

Science and technological literacy is important aspect of educational practice: however, it is far from being reached under the present circumstance bewildering science and technology education in Africa, with particular reference to Nigeria. Scientific literacy is to provide the young and old, black and white, men and women, boys and girls, able and disabled with ample and equal opportunities to acquire the necessary skills, knowledge, understanding and attitudes which would enable them to behave as functioning adults and responsible member of the society not necessarily making every one a scientist or technologist.

In the 21st century, virtually every nation would be increasingly affected by science and its applications in technology. In nearly all African countries, both formal and informal, science education through remedial or adult education programme, science museum, library and achieves and out of school science activities have been mounted for the development of scientific literacy among the populace. All these will give greater prominence to science and technology among the populace. All these will give greater prominence to science and technology in African countries. No one disputes the claim that scientific knowledge and technological education are not uniformly available to all across the country. In particular, it is generally recognized that girls and women have less interest in scientific and technological education than is the case for boys and men. (Duyilemi, 1996) the issue of under representation and under achievement of girls and women in science is being recognized. Nevertheless, there has been considerable interest in the curl-clued education Eshiwani (1987).

In a survey conducted among over five hundred, first year Australian university students, Harrison (1986) found that most students, especially those who had attended co-educational schools are preferable and led the development of more natural attitude towards the opposite sex. While Harrison (1986) admitted that the single sex schools were generally smaller, more urban and more selective than the educational schools, making comparisons difficult to interpret, she concluded that co-educational schools, at least for this selective sample, may have some advantages in fostering interactions with the opposite sex.

It has also been asserted by Gilligan (1982), Spender (1982) that boys typically attract more of teachers' attention than girls in co-educational classrooms. The issue of gender inequality in education has been identified and documented for decades, yet we find that the problem continues regardless of the many theories and

action plans that have been suggested in the past.

Curriculum education should be because our society can no longer afford to use half the potential of its population, Peitz (1990). Many models have been reported on the relationship between gender and science in schools by many researchers. Riley (1993) reported a model based on behaviours, attitude, beliefs, experience, socio-cultural and educational context of teacher and students. Also, Murphy (1996) pointed out that gender difference in science is in favour of boys and have been attributed to factors such as interaction frequently between teacher and students, time of exposure to science-related activities, curriculum contents and the exposure to science related activities, curriculum contents and the process of socialization. Although science courses are for all people who live in the modern society, gender differences still exist in science classroom. Science educators have evidence in gender difference in science, with factors such as achievement, attitude, motivation, interest, and performance behaviours.

This study is, therefore a qualitative research that intends to sensitize our need to create equal learning environments for boys and girls in science classroom.

Purpose of the study

The study is aimed at creating equal learning environment for boys and girls in science classroom.

Research Hypotheses

H₀, There is no significant difference between the post-test mean scores in integrated science concept test (ISCT) of male and female students in a separate classroom.

H₀, There is no significant difference between the post-test mean scores in integrated science concept test (ISCT) of male and female in the same classroom.

Research methods

This study is a quasi-experimental design which adopted a non randomized control group pre-test, post test design as described by Campbell and Stanley (1966). The subject for the study was 240 junior secondary school III integrated science students of three schools in Ikere local government area of Ekiti State, during the 2004/2005 session. Three groups A, B, and C were involved in this study with Group A consisting of male and female from a coeducational school taught together in a

