PERCEPTION AND ENROLMENT OF FEMALES IN TECHNICAL EDUCATION: THE STATE OF ART IN ENUGU STATE.

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Abstract

The major focus of this paper was to discus the status and causes of low perception and participation of females in technical education. Sex roles and stereotypes, parental roles and exceptions, socialization, teachers' attitudes and peer groups were identified and discussed as having great influence on females' low enrolment into technical education. Among the recommendations were that females with strong potentials in technical education should be encouraged and mandated to implement technical, industrial and technological policies. Parents should be advised not to discourage their female children from engaging in spatial courses. Regular career talks, where professional females' technical educators, technicians, technologies, engineers etc should form the core of resource persons as role models be organized to campaign for more females enrolment into technical education.

Introduction

The development of technical education is closely related to the development of man (male and female) for greater control, understanding and utilization of man's environment. Neither man nor environment will exist without the other. Technical education involves the study of technologies, sciences and acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life (FRN, 2004). Technical education is aimed at providing trained manpower in applied sciences and technologies, technical skills necessary for economic development, training and imparting necessary skills to individuals who will be self-reliant economically as a means of alleviating poverty and effective participation in the world of work.

Several years after Beijin Conference, Nigeria women are yet to rise up to the challenges that locked them out of technical education. Could this be one of the factors responsible for the crumbling of industries in Nigeria? This paper was focused on females in technical education, causes of low perception and enrolment of females in technical education, a sex roles and stereotypes, parental roles and expectations, effects of socialization teachers attitudes and influence of peer groups.

Females in Technical Education

Low females' perception and enrolment in technical education is of great concern to technical education practitioners, researchers and authors. Nuhu (2000) observed a low female enrolment in science at secondary school level. Ekuri and Windapo (2000) also reported a low enrolment of females in science and mathematics when compared to the male counterparts. Since they could observe this in general science, one wonders, what the situation looks like in technical subjects such as building/woodwork courses (block laying, concreting, carpentry, joinery, furniture /cabinet making, machine woodwork, painting and decoration); electrical/electronics courses (electrical installation and maintenance, air-condition and refrigeration, radio and television); mechanical courses (metal work, mechanical, fabrication

and welding, motor vehicle mechanic, foundry and forging, plumbing and pipe fitting); technical drawing among others.

Further worth noting is the very low representation of females as technical teachers in both secondary schools and tertiary institutions in Nigeria. An instance is that of Enugu State College of Education (Technical), Enugu, where out of fifteen (15) lecturers in the School of Technical Education, only one is a female and the rest are males. Majority of the females usually chose to cluster in the service sector of the economy than productive sector; a trend that must be put on check. The table below presents the enrolment of male and female students into various technical courses in the School of Technical Education, Enugu State College of Education (Technical), Enugu from 2006/2007 to 2009/2010 academic sessions (four years).

Table 1:
Students Enrolment into School of Technical Education, Enugu State College of Education (Technical), Enugu from 2006/2007 to 2009/2010

Year	Admitted	Male	%	Female	%
2006/2007	134	127	94.80	07	05.20
2007/2008	94	86	91.50	08	08.50
2008/2009	55	50	90.50	05	09.50
2009/2010	38	33	86.84	05	13.16
Total	321	296	90.91	25	09.09

Source: ***STE, ESCET, Enugu***

The above table speaks for its self. The assumption is that the trend is same in almost all the higher institutions that offer technical education in Nigeria. Should this trend be allowed to continue? Something needs to be done as quickly as possible to nip this situation in the bud.

Causes of Low Perception and Enrolment of Females in Technical Education

A number of factors could be responsible for low perception and enrolment of females in technical education. Some of these are discussed below:

Sex Roles and Stereotypes

Opinions on sex differences in subjects' selection and participation are inconclusive. Majority favour more male participation while others are in support of females participation. Very few did not see sex role as a factor. Ibeme (1975) observed that sex role has great influence in students' academic performances. In areas of reading, verbal ability (linguistic ability), memory, speed and accuracy, females are found more superior to males while males are supervisor to females in mathematics reasoning, science, tests measuring spatial ability, retention of certain information in certain subjects, abstracts, mechanical abilities etc (Clark, 1978; Coleman, 1977; Anastasi, 1974 and Howarth and Gillham 1981).

Roussean and Luther cited in Mount (1973) and Bruton (1979) expressed the relative academic inferiority of females to males in science and technical related courses. She asserted the inability of females to think logically. She further observed that from Aristotle through Renaissance, tradition held that the province of males is mind and that of the females is matter. Mount (1973) held same view when he observed that females were unfit because of the feebleness of their brain for research into abstract and speculative truth or principles of axioms of science.

Evidences from research studies showed that sex role has significant influence on students' choice of career especially those involving technical subjects. There is evidence of very low representation of females in technical education when compared to their male counterparts (see the above table). In support of this assertion, Enyokwu (1977) postulated that

females do not offer technical education as much as males probably because, they think that technical education are for males. He further offered some reasons which he thought prevents females from offering technical education. These according to him include:

i. Many females do not perform excellently in mathematics, (technical) and science courses which are needed in technical education;
ii. Females felt that the course (technical education) is difficult;
iii. Females display reluctance to tackle courses which they feel will not be useful to them and further study of it will handicap their marriage.

Enyokwu's observation was supported by the study on women's perception in industrial technical education as a career by Okoro (1983) as cited in Okeke (1988). Okoro noted that very few women are in the programme and this deters the interest of the younger women from enrolling in the programme.

Parental Roles and Expectations

Parents have great influence in the choice of career or course of study of their children. Some researchers have blamed the male superiority in spatial courses on the encouragement they received from their parents and teachers. Parents tend to encourage and give more spatial oriented tasks to males than females. Lewish, Aikan and Oregan (1961) confirmed this thus; males are aggressive or better in mathematics than their females counterparts. Albery (1961) observed that right from infant, females are encouraged to play with dolls, told folk stories while males are revealed to books of adventures and science fiction. Parents were accused of inculcating in their young females that certain courses are for males especially those ones involving laborious laboratory and workshop activities. Females who study them appears masculine in appearance and may not get suitors(husbands).The implication is that these young females even when they have good flay and abilities for such courses, conceal them and display reluctance.

Effects of Socialization and Teacher's Attitudes

School is one of the agents of socialization. In schools, males and females are socialized differently and each learn to play their sex roles. This arouse differences in motivation and style of study among learners, leading to differences in achievements. Male and female learners have different learning styles. They respond differently to various teaching strategies and types of teacher's behaviour. Teaching both sexes can be more difficult operation than teaching of the either sex alone. In co-educational class, the teacher may unwillingly adopt practices which encourage the males while reinforcing the females believing that physical or applied sciences are males preserve. It may not be an over statement if one advocates that one sex schools be encouraged to bring in healthy competition in schools especially in technical courses as each female will be struggling on her own to accomplish a task, skill or experiment given to her with out the help of males as would be the case in co-education schools. In line with this view, Anambra State Government recently announced the establishment of thirteen (13) one sex schools in primary and secondary schools across the state. Okwubunka (1996) asserted that in one sex school, females are encouraged to study and embrace science and technical courses.

Influence of Peer Groups

When the learner is of school age, he/she starts to disengage from home and begin to form peer group with whom he/she interacts. Here they exchange ideas, skills, abilities and attitudes different from their various homes that are controlled by their parents. At adolescent stage they have formed a unique pattern of behaviour. Different categories of individuals begin

to emerge as star, clique, neglected, rejected, isolated and who exhibit different achievement traits in school subjects.

Educational Implications

Low females in technical education has considerable educational implications. Some 28 years ego, a national and wide's based prevocational education (Introductory Technology) was introduced aimed at providing training and acquisition of basic technical skills. This suggests that females as well as males are supposed to have received enough encouragement to enroll in technical courses at senior secondary school. Expectation also was that at post secondary schools, they have been well motivated to choose courses in technical education which would have helped raise a generation of youths in engineering, technical education, science and technology that would have been of immense benefit to educational institutions; industries and Nigeria society at large.

The implication being that some of females even when they have superior ability or aptitude than males in certain technical areas may deliberately conceal them and move over to what they felt is more exiting and less laborious courses to display feminine interest. This waste of potential should be discouraged. To stem the tide, females with special aptitudes or talents in technical skills need to be motivated to avoid diversion of these abilities. This enables such females contribute to future educational and industrial development of the country in particular and world at large.

Conclusion

The last Nigerian population census of 2003 assigned greater numerical strength to females yet technical education is still witnessing very low females enrolment. Efforts should be geared towards reducing Nigeria's dependence on distributive economy rather than productive and manufacturing economy by encouraging technical education.

Teachers, parents and guidance counsellors are needed to show encouragement, motivation and rewards to females who show interest in spatial courses. Acquisition of technical skills by females needed to be encouraged from primary through secondary schools to tertiary institution. This will increase females perception and enrolment into technical.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Government at all levels should launch necessary campaign that will direct the nation's focus on females' acquisition of technical training and knowledge that will propel the nation into economic recovery through industrial growth.
2. Females with strong technical potentials should be given the encouragement to implement technical; industrial and technological education policies.
3. Education counsellors and career officers should be made to propel young girls to take up career opportunities in technical education to cancel the notion that technical education or spatial courses are for males irrespective of their ability and interest.
4. Teachers should sort for females with special aptitudes and abilities in technical courses, motivate and encourage them for proper development. Teachers should avoid the use of derogatory language to discourage the females' interest in technical courses.
5. Parents should be advised on the implications of interfering in the selection of careers for their children especially the females.
6. More girls technical colleges should be established to encourage females participate in acquisition of technical knowledge and skills and state of art workshops and materials should be provided in such schools and

7. Regular organisation of workshops, seminars and competitions with encouraging prizes to motivate the females into technical education should be organized. Successful professional female technical educators, technicians, technologist, and engineers as role models to young females should form the core resource persons in such workshops, seminars and competitions.

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