

## Impact of Gender Orientation on Achievement Behaviour of Nigerian In-School Adolescents

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### Abstract

*This study investigated the impact of gender orientation on achievement behaviour of in-school adolescents. Two research questions and two null hypotheses guided the study. The design of the study was ex-post facto design. The target population was 22,296 in-school adolescents in Obollo-Afor and Nsukka Education Zones of Enugu State, Nigeria. The sample for this study consisted of 816 masculine and feminine (determined from their scores on the Gender Orientation Scale-(GOS) in-school adolescents randomly drawn through random sampling from 12 public secondary schools in ObolloAfor and Nsukka Education Zones in Enugu State, Nigeria. Two instruments namely: Gender Orientation Scale (GOS) and Achievement Behaviour Questionnaire (ABQ) were developed, validated and used for the study. The internal consistency reliability co-efficient of the instruments obtained through Cronbach alpha method were 0.87 and 0.96 for GOS and ABQ respectively. The instruments were administered to the respondents through direct delivery, by the researcher and 3 research assistants. Mean and Standard Deviation scores were used to answer the research questions. The hypotheses were tested at 0.05 probability level using Analysis of Variance Statistic. Results showed that gender orientation significantly impacts on the achievement behaviour of in-school adolescents. There were no significant interactions of gender orientation and school location on achievement behaviour of in-school adolescents. It was concluded that gender orientation significantly impacts on the achievement behaviour of in-school adolescents. Therefore, gender orientation is a critical factor that shapes the level of achievement, aspiration and goals attained by in-school adolescents. Among the educational implications is included that gender orientation is a major determining factor in the learning process, the in-school adolescents would aspire higher and achieve their full potentials if their gender orientation is definitive. Based on the findings it was recommended that the school authorities, teachers and stakeholders in the education sector should help in increasing the campaign of gender sensitivity in the contemporary learning environments. By so doing, instructional designers and textbook writers might adopt gender sensitive illustrations in pictorial representations in the learning materials to minimize gender stereotyping in learning environments.*

**Keywords: Gender Orientation, Achievement Behaviour, In-School Adolescents**

### Introduction

Much concern is being expressed over the continuous under-representation and under-enrolment of the girl-child, especially in Science and Technology disciplines which are often

perceived as masculine. While women continue to be underrepresented in science degrees irrespective of their comparatively high achievements in secondary education (Nord et al. 2011), analyses of nationally representative longitudinal cohort data from ELS suggest racial/ethnic disparities in STEM, higher education appear primarily a function of academic preparation (Perez-Felkner et al. 2014). For instance, in Nigeria, at the secondary school level, evidences indicate that the enrolment of male students in the West African School Certificate Examinations (WASSCE) for three continuous years (2009-2011) outnumbered those of the females in most of the science and technology based subjects with the widest gap being in Auto-Mechanic. It is only in Health Sciences that marginal differences were observed in favour of the females in the three years under consideration (WAEC, 2009, 2010, 2011). In Colleges of Education and Polytechnics, males outnumbered the females in Science and Technology as their enrolment was 81% and 60% respectively in these programmes (Egunjobi, 2008). According to the Federal Ministry of Education (2005) in the 1999-2000 academic sessions, there were zero enrolments of females in technical courses such as mechanical engineering, plumbing, fabrication and welding in Nigerian universities, they constituted only 27% of those in science programmes in the universities. According to Okeke (2000), the under-representation of females in the science and technology disciplines are historical and have been brought about by several inter-related socio-cultural and interacting school factors which act singly and jointly to depress female interest, enrolment, participation and achievement in science and technology disciplines at various levels of Nigerian education system. Such socio-cultural factors encompass the individual's cognitive variables such as achievement behaviour which is ultimately shaped by gender orientation (Eccles, 1986).

Gender orientation describes an individual's tendency to play peculiar roles ascribed to one of the sexes; the type of aims or interests that a person is inclined to pursue in relation to their sex in a given society and culture (Davies & Lindsay, 2004.). In the view of Mueller and Dato-on (2004), gender orientation is a personal trait or attribute conditioned by a traditional social system in which women are expected to think and behave as women (feminine) and men as men (masculine). Within such a social system, some behaviours, roles, careers are stereotyped as masculine while others are stereotyped as feminine (William & Best, 1996). For instance, certain subjects, such as the sciences, mathematics and other technical disciplines are tagged masculine, while secretarial studies and home economics are tagged feminine, thereby denying both sexes the opportunities to benefit from exposure to all subject areas or a wider choice of subjects.

There seems to exist a universal dichotomy in the adolescent gender orientation. Broadly, gender orientation may be classified into masculinity and femininity. According to Kent and Moses (2004) masculinity describes instrumental behaviour which has a cognitive focus on getting the job done. These instrumental behaviours and attitude that are stereotyped as masculine include assertiveness, competitiveness, independence, and aggressiveness (Davies & Lindsay, 2000). Femininity describes the affective concern for the welfare of others and the harmony of the group. Affective behaviours and attitudes that are stereotyped as feminine include submissiveness, dependence, deference, and cooperation, caring and nurturing (Spence & Helmreich, 2004). Research efforts have found that traditional gender orientation in Nigeria tends to depress females' interests and aspirations (Aja-Okorie, 2002).

Societies may differ greatly in expected gender roles, thus the concept of femininity and masculinity may have other meanings in western societies compared to societies in other part of the world. In this regard, this concept of masculinity and femininity also implies sanctions of

varying degree of severity, that are imposed on individuals who deviate too far from prescribed gender roles (Maccoby, 1997). Although individuals draw upon the shared cultural concepts of what it means to be male or female in society, it is possible for one to be female and see herself as masculine, or to be a male and see himself as feminine (Ngwoke, Ossai, Idoko, Obikwelu, 2017). Femininity and Masculinity are rooted in the social gender rather than the biological sex, and societal members in a particular society decide what being male or female means. For example, in Igboland (South Eastern Nigeria) women are not allowed to climb palm trees. Such a rule may be based upon assumption that women are not capable of climbing palm trees through a physical limitation rather than upon actual achievements. This may serve as an excellent example how some parents and teachers decide what appropriate career for females and males is. This situation might lead to under-representation of women in some well rewarding careers and occupations. In the labour market, women also have limited employment opportunities than men, and tend to be concentrated in low-skilled, low income jobs. According to Nigeria Demographic and Health Survey (NDHS, 1999) about half of women were currently employed and that, of these women, about 70% were self-employed and 17% were employed by relatives. These figures illustrate the fact that women are mainly employed either in family agriculture or in informal sector, especially in trading. These age long stereotype could lead to poor achievement behaviour among the females

Achievement behaviour is a critical factor in human development as it determines the level of aspiration of every individual. In Africa, achievement behaviour is determined and shaped by a number of factors including gender orientation. Achievement behaviour refers to self-determination and move to success in whatever activities one engages in, be it academic work, professional work, sporting events, among others (Tella, 2007). To Sprinthall, Sprinthall and Oja (1994) achievement behaviour is an intrinsic drive to achieve just for the sake of achieving rather than achievement in the service of some other motives. According to the authors, the most important single ingredient in achievement behaviour is a feeling of self-directed competence. In the view of Jacquelyn (1990) one's achievement behaviour is a function of one's desire for success and fear of failure as well as one's perceived probability of success and failure at the particular task and the incentive or pride associated with success at the task and shame associated with failure. In this study, achievement behaviour will be taken to mean an individual's constant drive to improve their level of performance, and to accomplish success in whatever activity they engage in.

Generally, achievement behaviour seems to have some identifiable categories. According to Rehberg and Sinclair (2012) achievement behaviour could be either positive or negative. Individuals with positive achievement behaviour usually act in ways that will enable them to out-perform others, meeting or surpassing some standards of excellence or do something unusual (Schimdt & Frieze, 1997). On the other hand, individuals with negative achievement behaviour often times procrastinate and seldom take steps that lead to immediate positive feedbacks. Socio-cultural factors such as gender orientation also contribute to the variation in achievement behaviour. Gestind (2000) reported that the urge to achieve varies from one individual to another; while the need to achieve is very high in some individuals, it may be very low for others based on gender orientation and learning experiences. A person with positive achievement behaviour is a person whose desire for success is higher than his/her fear of failure. People with low achievement behaviour have the opposite pattern.

While the family has been identified as a significant factor in adolescent gender orientation, it also accounts for the variations inherent in their achievement behaviour. According to Rehberg and Sinclair (2012) family is a source of variation in achievement behaviour and this is a theorem derivable from some of the postulates of behavioural sciences. Study by Giota (2002) revealed that boys have higher immediate achievement behaviour than girls who tend to procrastinate more often. Some adolescents strive to explore different areas of academic disciplines but do not possess the requisite level of achievement behaviour to drive them through in the face of challenges.

Moving into adulthood, women face a series of specific developmental problems, mainly of a social and economic character, deeply rooted in cultural attitudes regarding the respective roles of the genders. Historically, women's self-advancement has been curtailed by the burden of reproduction, particularly heavy in societies like Nigeria with very high fertility rates, as well as by associated cultural views about the basic "role" of the woman being that of child-bearer, child-raiser and home-maker, with little reasons to entertain wider aspirations (Hodges, 2001). The poor representation and under achievement of girls in some academic disciplines and employment areas in recent times has been suggested to have a link to achievement behaviour of the adolescents. In a bid to solve this problem of imbalance, many researchers have investigated the factors that influence the adolescents' choice and school achievement. However, lesser attention has been given to some other cognitive variables that influence adolescents' achievement behaviour and general life aspirations, choices and chances,. It is not clear how gender orientation impact on a critical cognitive variables such as achievement behaviour of in-school adolescents. The main purpose of the study is to ascertain the impact of gender orientation on achievement behaviour of in-school adolescents in Enugu state, Nigeria.

### **Research Questions**

- ❖ What is the impact of gender orientation on the mean achievement behaviour scores of in-school adolescents?
- ❖ What is the impact of gender orientation on the mean achievement behaviour scores of in-school adolescents with school location as a moderating variable?

### **Hypotheses**

- ❖ The impact of gender orientation on the mean achievement behaviour scores of in-school adolescents is not significant.
- ❖ The impact of gender orientation on the mean achievement behaviour scores of in-school adolescents with school location as a moderating variable is not significant.

### **Method**

The study was executed using ex post facto or causal comparative research design. The study was carried out in two education zones of Enugu State, Nigeria. The population of the study comprised all the 22,296 SSII and JSS II in-school adolescents in the 109 public secondary schools in Obollo-Afor Education Zone (with 50 schools) and the Nsukka Education Zone (with 59 schools) of Enugu state, Nigeria. The sample of the study was 816 respondents (440 girls and 380 boys) from the eight schools that will be used for the study. This is about 5% of the JSSII

and SSII in-school adolescents in the study area. The study employed a multi-stage sampling procedure consisting of stratified, simple random, and purposive sampling techniques for the selection of the schools and classes to be used for the study. Twelve schools were randomly sampled from all the 109 government secondary schools in Nsukka and Obollo-Afor education zones of Enugu State, Nigeria. The schools will be stratified according to urban-rural location. Two instruments were used in this study. These are Gender Orientation Scale (GOS), Achievement Behaviour Questionnaire (ABQ). The Gender Orientation Scale (GOS) was developed by the researcher. The items were generated through experience and from literature. This instrument contains 34 items (comprising 17 feminine items, 17 masculine items) which will be used to classify or categorize the subjects into the masculine and feminine groups in gender orientation. The items in the Gender Orientation Scale has 10-points as response options, where zero stands for a situation where the attribute being measured is never found, five represents neutrality. Ten stands for a situation where the attribute is present all of the time. A score below five, the neutral point, means feminine for a masculine item while a score above five means masculine for a masculine item. The reverse is also true. A respondent with scores from 1.00 – 2.49 are interpreted as having negative achievement behaviour while those with scores from 2.50 – 4.00 are interpreted as having positive achievement behaviour. The instruments for data collection were face validated by three experts: two experts in educational psychology and one expert in measurement and evaluation in the faculty of Education, University of Nigeria, Nsukka. To determine the reliability of the instrument, a trial testing was carried out using Cronbach alpha method. An internal consistency reliability estimates were obtained for the instruments. All the instruments were administered by hand delivery and collected at the spot. The data collated were analyzed in line with research questions and hypotheses. Means and standard deviation were used in answering research questions, while analysis of variance (ANOVA) was used to test the null hypotheses at 0.05 level of probability.

## Results

**Table 1: Mean and standard deviation of the impact of gender orientation on achievement behaviour of in-school adolescents.**

<b>Gender Orientation</b>	<b>N</b>	<b>Mean</b>	<b>Std deviation</b>
Masculine	372	3.28	0.32
Feminine	443	3.14	0.28

Table 1 shows the mean and standard deviation of the scores of masculine and feminine in-school adolescents for the impact of gender orientation on their achievement behaviour. The analysis shows that masculine in-school adolescents had mean achievement behaviour score of 3.28 with standard deviation of 0.32 while the feminine in-school adolescents had mean achievement behaviour score of 3.14 with a standard deviation of 0.28. This indicates that masculine in-school adolescents had higher mean achievement behaviour score than the feminine in-school adolescents.

**Table 2: Summary of Analysis of variance of the impact of gender orientation on mean achievement behaviour scores of in-school adolescents.**

	Sum of squares	Df	Mean squares	F	Sig
Between groups	3.686	1	3.686	40.005	.000
Within groups	74.012	813	.92		
Total	78.598	814			

Data analysis in Table 2 shows that the probability associated with the calculated value of F (40.005) for the impact of gender orientation on mean achievement behaviour scores of in-school adolescents is 0.000. Since the probability value of 0.000 is less than the 0.05 level of significance, the null hypothesis was rejected. Thus, there is a significant impact of gender orientation on the mean achievement behaviour scores of in-school adolescents in favour of the masculine in-school adolescents.

**Table 3: Mean and standard deviations of the impact of gender orientation on achievement behaviour scores of in-school adolescents with school location as a moderating variable.**

Gender Orientation	Location	N	Mean	Standard Deviation
Masculine	Urban	243	3.26	0.30
	Rural	129	3.31	0.36
Feminine	Urban	135	3.14	0.30
	Rural	308	3.14	0.26

Data Analysis in Table 7 shows the mean and standard deviations of in-school adolescents for the interaction impact of gender orientation and school location on their achievement behavior. This reveals that urban masculine in-school adolescents had mean achievement behaviour score of 3.26 with a standard deviation of 0.30 while the masculine rural in-school adolescents had mean achievement behaviour score of 3.31 with a standard deviation of 0.36. Similarly, the urban feminine in-school adolescents has mean achievement behaviour score of 3.14 with a standard deviation of 0.30 while the rural feminine in-school adolescents had mean achievement behaviour score of 3.4 with a standard deviation of 0.26. Thus, rural masculine in-school adolescents had higher mean achievement behaviour score than the urban masculine in-school adolescents while both urban and rural feminine in-school adolescents had equal mean achievement behaviour score.

**Table 4: Summary of Analysis of variance of the impact of gender orientation on mean achievement behaviour scores of in-school adolescents with school location as a moderating variable.**

Source	Type III sum of squares	df	Mean square	F	Sig.
Corrected model	3.980	3	1.327	14.421	.000
Intercept	7359.495	1	7359.495	79988	.000

Gender orientation	3.632	1	3.632	39.478	.000
Location	.127	1	.127	1.385	.240
Gender Orientation* location	.182	1	.182	1.982	.160
Error	74.618	811	0.92		
Total	8464.168	815			
Corrected Total	78.598	814			

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**a.R square = 0.51 (Adjusted R Square = 0.47)**

Results presented in Table 8 shows that the probability associated with the calculated value of F (1.982) for the impact of gender orientation on mean achievement behaviour of in-school adolescents with school location as a moderating variables is 0.160. For the fact that the probability value of 0.160 is greater than the 0.05 level of significance, the null hypothesis was accepted. Thus, there is no significant impact of gender orientation on the mean achievement behaviour scores of in-school adolescents with school location as a moderating variable.

### **Discussion of Results**

The result of the study indicated that there is significant impact of gender orientation on the mean achievement behaviour of in-school adolescents in favour of the masculine in-school adolescents. This indicates that masculine in-school adolescents had higher achievement behaviour than the feminine in-school adolescents. This finding agreed with the findings of Mueller and Dato-on (2008) that masculine orientation seems better suited for undertaking entrepreneurial tasks. Contrarily, Nwankwo, Kanu, Marire and Balogun (2012) reported that there is a significant positive correlation between femininity and entrepreneurial intentions. Reeder (2003) reported that gender role-orientation made a significant difference in the proportion of same and cross-sex friendship formation. Masculine women had significantly more cross sex friendship than feminine women. The findings of this study are consistent with the explanation of gender schema theory that children do not categorize themselves as “I am girl” or “ I am boy” an act in accordance with that schema invariantly across situations and activity domains. Rather they vary in their gender conduct depending on a variety of circumstances. This finding will further strengthen the assertion that gender may change while biological sex remains a permanent phenomenon and as such means no physical limitations.

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