

## Motivation of Female Students to Equal Gender Ratio in the Study of Automobile Trade in Nigerian Technical Colleges

**Ohwojero Chamberlain Joseph (Ph.D)**

Delta State University, Abraka, Faculty of Education

Dept. Technical Education

**Abstract:** The motivation of girls in the study of automobile trade in the technical colleges in Nigeria is challenging. The population of boys are more than the number of girls. To improve the population of girls in the study of automobile trade in the technical colleges they have to be motivated; by granting them scholarship and changing their teaching methods, by adopting 3D animation for students to see, feel and touch what they are being taught, to make them understand and comprehend what they are taught in the classroom. One research question was raised to guide the study and one hypothesis was formulated and tested at 0.05 level of significant. All the students studying automobile trade in the two different technical colleges were used in the study from the two different states Edo and Delta. The instrument used was questioner, it was administered to the students and data was collected. The data was analysed using T-test for the research question and analysis of covariance was used to test the hypothesis at 0.05 level of significant to know the difference. Five findings were made by the researcher and four recommendations were given. Conclusions were made and suggestions were given.

**Key words:** Gender Equality among students, Automobile technology in technical colleges, Motivation, Girls education.

### Introduction

The style of school improvement is very vital; because motivation bring about development in learning and understanding among the learners or trainees. Every organization shows a concerned with what should be done to achieve sustainable high levels of performance through its work force. This means close attention to how people can be best motivated through the means of incentives, reward, and leadership, in the organizational context within which they carry out their work (Sobia, 2021). Motivation is concerned with how people behave the way they are behaving; it can be seen as the

direction and persistence of action (Sabiya, 2015). It is considered why people choose an action in preference to others and why they continue with chosen an action often over a long period of time and face difficulties (Reveno, 2016).

Bloisiet *al.*, (2006) saw motivation as the heart of how innovative and productive things get done within an organization. Also Arnold *et al.*, (1991) established factors that arose peoples behave, he established three components of motivation and they are:

- a) Effort of how hard a person is trying.
- b) Direction of what the person is trying to do.
- c) Persistence of how long a person keeps on trying, (Arnold, et al 1991)

Students are at the pick of their learning process, a study of motivation are strategic and factors hindering their learning is imperative as students themselves play pivotal roles in shifting their own learning and acquiring enhanced academic achievement. Pintrich, (2003) acknowledged that research on students' motivation is centred on learning and teaching settings.

Motivation shows the fundamentals of academic improvement. It involves internal and stimulate desired energy in people to continually show interest and committed to jobs, role or subject or to make an effort to achieve a goal. Doruyei, and Csizer (2005) argued that motivation explain how people decided to work, how hard they are going to pursue it, and how long they are going to sustain the activity. In other words, motivation is what gets you going, keeps you going and determines where you are trying to go. (Sullivan and Lewis, 2006).

Alderman, (2013) indicated that those person who have high motivation have an edge over those that have adaptive attitude and strategies, such as maintaining intrinsic interest, goal setting and self-monitoring. Besides, motivational variables interact with cognitive behavioural and contextual factors to upset self-regulations (Hornetra, Mansfied, and Vander. (2015). Motivational beliefs are very essential to the academic achievement of students, because they help to determine the extent to which student will help consider value to put in effort to show interest in the task(Gbollic and Kean, 2017). For example, self-efficiency influences how learners feel, think, motivate themselves, and behave (Bandura, 1991).

### **Gender Equality among Students**

Gender equality is a basic right for all persons, including girls and boys. Equality among the young people is the key for the realization of children's right. Hence, it is difficult to discriminate and promote gender equality in order to advance its vision for the world, where children attain their equal right to survive, protection, development and participation.

Women and girls represent half of the world population; gender equality is the fundamental human right, it is essential to achieve peaceful societies. Urda and Rudolfseu, (2016) stated that education inequalities between girls and boys persist in many parts of the world. The world report of 2012 is focused on gender and development which states explicitly that gender equality is a positive development. Glewwe, kerner and Moulin, (2009) an economist and international development agencies believe that educating girls is beneficial not only due to their own improved vocational opportunities, living conditions and social status but also because it promotes economic growth and social development of the entire nations, not lead to positive influence of educated girls on human capital and health of the children. In the year 2000, the government adopted the six (6) education for all (EFA) with the goal of meeting the needs of the children, youths and adult by 2015, with the hope of meeting five (5) goals of eliminating disparities in primary and secondary education in 2005 by achieving gender equality in education, to ensure girls have full and equal access to an achievement in basic education of good quality (Buchaman, 2008). Despite the educational improvement, there is still gender inequality in education in the developing countries (Buchanan, 2008)

Equality among gender is more likely to be achieved if the state takes on a leading role to close the gender gap. But however some states may be willing to introduce an enabling environment for girls' education, the bureaucratic quality of government to do so can be limited especially the under developed countries (Beller, 2006). Tembo and Fort (2008) stated that systematic education inequality of boys and girls is much wider at the level of secondary education. In many countries, the introduction to free primary education leads to increase in enrolment.

### **Automobile Trade in Technical Colleges**

The study of automobile trade in Nigeria technical colleges is synonymous with boys in terms of population; the study of automobile reflects what has taken place in the past. Nyanwange, (2014) defined automobile to be a wheeled vehicle that carries its own motor and transport passengers, goods, and services. The manufacturing of automobile has changed the outline of development during the twenty first century. Khan *et al.* (2010) stated that automobile workshop workers are class of labourers that is expose to long term that lead to toxicity due to their routine work such as motor vehicle assembly, spray painting, welding, brazing and repairing of radiators. The outfit of an automobile workshop worker serves as a source of lead exposure to their family members, young children particularly the occupational toxicity to a community problem. Keith, et al. (2022) stated that there is a drastic increase in the number of automobile vehicle in the last two decades incremented the exposure of this labour class lead to the exposure of workshop worker to danger. It has been observed that the practical work that is involved

in the study of automobile is stressful and cumbersome in the workshop hence it could be a reason why the girls are not developing interest in the study of automobile in the Nigerian technical colleges.

### **Statement of Problem**

The problem of the study is to find a solution to the study of automobile trade in Nigeria technical colleges, between girls and boys. It is equivocal and challenging, the male students shows more interest in the study of automobile trade more than the female students. This attributed to the strength of man and the physical nature of man, because of the nature of woman, the physical strength of a woman; they cannot be compared to man. Hence the boys are developing more interest in the study of the automobile trade in the technical colleges.

### **Research Questions**

One research question was raised to carry out this study:

- 1) The teaching methods adopted by teachers will increase female students' interest in the study of automobile trade in technical colleges?

### **Hypothesis**

One hypothesis was formulated and tested at 0.05 level of significant to guide the study.

HO<sub>1</sub>: There is no significant difference between teacher teaching methods and female students' studying automobile trade in technical colleges.

## **Methodology**

### **Research Design**

The quasi-experimental research design was used in the study. Two technical colleges were used in the study; they are Benin technical college and Sapele technical college. Both are in different states, Edo and Delta state. Both are subjected to pre-test as the control group, meaning non computer assisted group and post-test as the experimental group 3D computer assisted instruction group after three weeks.

### **Population of the Study**

Intact class group was used for the study; VOC I to VOC III was used as the population of the study.

### Sample and Sampling Technique

All the students offering automobile trade as a subject were used as the sample size of the study. Students were selected from the two schools and were taught for one week in their respective schools, using 3D computer animation, before carrying out the post-test for two weeks.

### Instrument of Data Collection

The instrument used for the study was questionnaire. The instrument consists of two sections, section A that consist of demographic information of the students, section B consist of 12 items that the students will respond to. The questionnaire was designed using the Likert scale the instrument was validated by three experts from the department of measurement and evaluation and the department of industrial technical education in Delta State University Abraka, who gave the instrument face and content validity for criticism to give a good construction, using a person product moment correlation reliability test that gave the instrument a validation of 0.76 to show that the reliability of the instrument was high, making all the items in the instrument reliable.

### Data Analysis

Questionnaire was administered to the students in their various schools in Edo and Delta state through the effort of their subject teachers, together with the researcher. After administering of the instrument, they were retrieved from the students to give a pre-test of the study. After one week, the students were taught with 3D computer animation to post-test the students; the students were highly motivated after the teaching with 3D computer animation package. When post-tested, the female students' response to the items equal with the boys.

### Results

**Research Question one:** The teaching method adopted by teachers will increase female students' interest in the study of automobile trade in technical colleges?

**Table 1: Independent sampled T-test on Motivation and Female Students' Study of Automobile in Technical Colleges**

		N	Mean	SD	F	T	df	Mean Diff	Sig
	Control Group	25	20.40	2.255	1.34	1.725	48	1.120	.716
	Experimental Group	25	19.48	2.377				1.120	

Data in Table 1 shows the information on independent sample T-test conducted to establish if the teaching method employed by teachers increases female students' interest in the study of automobile trade in technical colleges. It was revealed that there is no difference in the mean value for the controlled group (mean 20.40) and the experimental group (mean 19.48). Therefore, it was concluded that teaching method employed by teachers do not increase the interest of female students in the study of automobile in technical colleges.

**Hypothesis one:** There is no significant difference between teacher's teaching method and female students' studying of automobile trade in technical colleges.

**Table 2: Analysis of Covariance (ANCOVA) of the Difference between Teaching Methods and Female Students' Study of Automobile**

Source	Type III sum of square	Df	Mean square	F	Sig
Corrected model	57.672 <sup>a</sup>	2	28.836	5.853	.005
Intercept	5.661	1	5.661	1.149	.289
Experimental	20.692	1	20.692	4.200	.046
Group	48.998	1	48.998	9.946	.003
Error	231.548	47	4.927		
Total	4039.000	50			
Corrected total	57.672 <sup>a</sup>	2			

An analysis of covariance (ANCOVA) was employed to investigate the variance in mean in teaching methods and female students' study of automobile trade in technical colleges. The results yielded an F-value of 9.946 with a significance level of  $p < 0.05$ . Consequently, the null hypothesis is accepted. This implies that there is no significant difference between the teaching method employed by teachers and the studying of automobiles by female students in technical colleges.

From the analysis on table 1 there is no much difference in the mean of the controlled group and the experimental group. Which shows mean of 20.40 and the

experimental group 19.84. The analysis of covariance on table 2 shows the significant difference between the mean of the two groups. It was analysis that there is no significant difference between the teaching method employed by teachers and the studying of automobile trade by female students in technical college.

### Findings and Discussion of the study

The finding of the study shows the following;

1. The mean of the control group is not too different from the experimental group from the values. It shows that the teaching method has little effect on the study. There for the girls performed equally like the boys.
2. The result of the analysis of *covariance* shows there was no significant difference in the teaching method employed by teachers in the study of automobile by female students in the technical colleges.
3. The female students performed equally to the boys who were taught with the new teaching method that was employed. There for the teaching method has effect on the girls.
4. Female students show equal interest with the male students when they were post-tested. Because of the new teaching methods that were employed to teach the female students.
5. Female students are fewer in terms of population compared to the male students. To increase their population the federal government should grant scholarship scheme to the female students in the schools, to motivate the female students.

### Recommendations

The following recommendations were made as observed from the findings.

1. Female students performed equally with their male counterparts in the study of automobile trade in the technical colleges, the female students should be encouraged to increase their number of candidature.
2. Female students should be given scholarship by the Federal government to motivate their interest in the study of automobile trade at the technical college.
3. The female student's shows interest when they were taught with 3D computer animation as teaching methods, therefore the 3D teaching method should be adopted to teach both the male students and the female students in the learning of automobile trade in the technical college.
4. The study of automobile trade should be made compulsory in the school curriculum because it involves practical's skills which will improve the technological development in the countries.



## Conclusions

The motivation of girls in the technical colleges, in the study of automobile trade has become imperative, such that the population of boys at the technical college studying automobile trade is more in number. The studying of automobile trade at the technical college is very significant to the development of man to know how to carry out repairs of automotive machines at the technical college to acquire skills. The use of 3D computer animation to teach students at the technical college has aroused the female student's interest in the technical colleges in Nigeria.

## Suggestions for future Research

The motivation of girls at the technical college is very important to meet up with the boys population, the suggestion for further research is that female students that go in for this study are not encouraged, there is still gap between the population of boys and girls desperate the use of 3D computer animation to teach the trade at the technical college level.

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