

# **INFLUENCE OF TEACHING METHODS ON STUDENTS' ATTITUDE TOWARDS MATHEMATICS IN OSUN STATE, NIGERIA**

**Omirin, M. S.**

*Faculty of Education  
University of Ado-Ekiti, Ekiti State, Nigeria*

**Oladosu, C. T.**

*School of Education  
Osun State College of Education, Ila-Orangun, Osun State, Nigeria  
E-mail: oladosu@yahoo.com*

## **ABSTRACT**

*This study investigated the influence of teaching methods on students' attitude towards mathematics. The descriptive research of survey design was adopted. The sample consisted of 120 students selected from three public and three private secondary schools in Ila Local Government Area of Osun State. Self constructed questionnaire on attitude was the instrument used to collect data. The data collected were analyzed using t-test and ANOVA. All the hypotheses were tested at 0.05 levels of significance. The findings showed that students were not influenced by the methods of teaching mathematics. It was therefore recommended that other factors that can influence students' attitude such as teachers' attitude should be considered, and investigated.*

*Keywords: Teaching methods, influence, students' attitude, mathematics*

## **INTRODUCTION**

Mathematical thinking is indispensable for all in this computer age, as a habit of mind for its application in science and technology. As a vital tool for the understanding and application of science and technology, mathematics plays vital role of a precursor and harbinger to the much needed technological and national development (Bassey, Joshua and Asim, 2010). According to Steen (1989), we learn to make sense of things around us, through mathematics. It is used in business and finance; and also for personal decision making. Also, Arnold (2003) explains that problems which need mathematics for their solution also arise throughout industry. Steen expressed further that as technology has mathematicized the workplace, and statistics has permeated the arena of public policy debate, the mathematical sciences have moved from being a requirement only for future scientists to being an essential ingredient in the education of all. Therefore, the teachers' methods of teaching mathematics and students' attitudes towards a discipline that plays vital roles on the society in different forms and in different ways cannot be overemphasized.

According to Yara (2009), attitude of the teacher and his method of teaching can influence students' attitude. The conceptions, attitudes, and expectations of the students on mathematics and its teaching have been considered to be very significant factors underlying their school experience and achievement Boresi, 1990 in Ponte, 2010.

This is because attitude is keys to success as people used to say. Fanseca (2010) opined that one of the factors affecting students' learning performances is the way they face the knowledge, namely their attitudes to the subject. Such attitude as profound feelings, relatively stable are derived from positive or negative experiences across time, on learning the subject (Estrad, 2002 in Fonseca, 2010). This experience include teachers' methods of teaching. Attitude is a construct that play an important role n mathematical education (Zan and Martino 2007). Mathematics tends to be a subject that is often disliked by many students therefore this study was to find how the methods employed by teachers in teaching the subject can influence attitude of students towards mathematics. Goodykoonz (2009) cited Pophama (2005), opined that in education research suggests that students attitudes toward a subject lead to academic success.

Also, this study examined if there is any difference between public and private school attitude towards mathematics. The purpose of this study was to examine the influence of teaching methods on students' attitude towards mathematics. Also, to find out if the methods of teaching mathematics employed by the teacher has any influence on students' attitudes towards mathematics in private and public secondary schools. The following null hypotheses were formulated and tested at 0.05 level of significance.

**Ho<sub>1</sub>:** There is no significant difference in the attitude of public and private school students towards methods of teaching mathematics.

**Ho<sub>2</sub>:** There is no significant difference between attitudes of different public school students towards methods of teaching mathematics.

**Ho<sub>3</sub>:** There is no significant difference between the attitudes of different private schools students towards methods of teaching mathematics.

## METHODOLOGY

The design of the study was survey of descriptive research. The population for the study consists of all secondary school students in Ila Local Government Area of Osun State. The sample for the study comprised of 120 students. Multistage sampling technique was adopted. At the first stage, purposive random sampling technique was used to select three public secondary schools and three private secondary schools. At the second stage, random sampling technique was adopted to select twenty (20) students from each school selected. The instrument used for the data was a self constructed questionnaire on attitude. The questionnaire consists of two sections. Section A dealt with bio-data of the students while, section B consists of twenty items that focused on attitude of students on methods of teaching mathematics. The instrument was validated by the exerts. A Crobach Alpha reliability method was adopted to test for the reliability of the instrument. Cronbach Alpha coefficient for the instrument was 0.88 which was considered good enough for the instrument to be sued. The data was analyzed using t-test and ANOVA. Specifically, t-test was used to test the null hypothesis 1, while ANOVA was used to test the null hypotheses 2 and 3 because the number of private and public schools used were 3 and 3 respectively. All the hypotheses were tested at 0.05 level of significance.

## RESULTS AND DISCUSSION

**HO<sub>1</sub>:** There is no significance difference in the attitude of public and private school students towards methods of teaching mathematics.

**Table 1:** t-test analysis of influence of methods on students' attitude towards mathematics in private and public secondary schools.

Schools	N	X	S.D	DF	t-cal	t-table	Results
Private	60	60.80	10.89	118	1.695	1.98	No sign.
Public	60	63.5	7.95				

Source: Survey 2010

Table 1 shows that t-calculated (1.695) is less than t-table (1.98) at 0.05 level of significant therefore, the null hypothesis is accepted, thus there is no significant difference between attitudes of private and public secondary school students towards methods of teaching mathematics.

**Table 2:** One-way analysis of variance (ANOVA) on public secondary schools students' attitudes towards methods of teaching mathematics.

Sources	Sum of squares	DF	Mean squares	F-cal	t-table	Results
Between group	320.433	2	160.217	2.774	3.15	No significant
Public	3291.750	57				

Source: Survey 2010

Table 2 shows that Fc (2.774) is less than Ft (3.15). Thus, null hypothesis is accepted at 0.05 level of significant. Therefore, there is no statistically significant difference on the attitude of students' n public schools towards methods of teaching mathematics in secondary schools.

**HO<sub>3</sub>:** There is no significant difference between the attitudes of different private schools students towards methods of teaching mathematics

**Table 3:** One-way Analysis of Variance (ANOVA) of private secondary schools students' attitude towards methods of teaching mathematics.

Sources	Sum of squares	DF	MS	F-cal	t-table	Results
Between group	94.900	2	47.450	0.646	3.15	No significant
Writhing group	41	4186.350	57	73.445		
Total	4281.250	59				

Source: Survey 2010

Table 3 shows that Fc (0.646) is less than Ft (3.15) at 0.05 level of significance. Therefore, the null hypothesis that stated that there is no significant difference statistically between the attitudes of private schools students towards methods of teaching mathematics is accepted. The findings in this study revealed that a method of teaching employs by teachers is teaching mathematic does not influence students' attitude towards mathematics. This may be as a result of notion posed by students about mathematics as a subject and teachers teaching it. Falenade (1981) in kolawole (1998) observed that there is, generally a wave of differences and unparallel hatred bordering on total neglect of mathematics among students. In the light of this, students may not be easily moved or influence by methods employs by the teacher.

Also, in a mathematics quiz conducted by kolawole (1985) in kolawole (1998), one student defined mathematics teachers' as a mad people that teaches a

subject which could not be easily understood by a normal person. Some of them were told by their elderly ones since when they were in kindergarten class that mathematics is a difficult subject. Therefore, it may be difficult to influence them because of that notion planted in them by their elderly ones. It was also discovered that both private and public secondary school students' attitude were not influenced by the methods of teaching mathematics. That shows that students in both private and public schools think alike and they were influenced with the same background towards knowledge of mathematics, though their schools are difference.

#### Conclusion and recommendations

It was concluded from the finding of this study that secondary school students in Ila Local Government Area of Osun State were not influenced by the methods employed by the teachers in teaching mathematics. Therefore, if methods of teaching cannot influence students' attitude towards mathematics, it was recommended that some other factors such as teachers' attitude and characteristic that can influence students' attitude should be considered. Also, teachers' should teach mathematics in such a way that will influence students' attitude positively. Teachers should employ methods that will have positive significant influence on students' attitude towards mathematics.

### REFERENCES

- Amold, D.** (2003). Doing the Math and Making an impact. <http://www.ima.umn.edu/newsitres/updates/summer03>.
- Bassey S. W., Joshua M. T. and Asim A. E.** (2010). Gender Differences and Mathematics Achievement of Rural Senior Secondary Students in Cross River State, Nigeria.
- Fonseca, J. R. S.** (2010). Can we Reduce Students Negative attitude towards Math? Proceedings of the 2007 informing science and IT Education joint conference. <http://proceedings.Informing Science.org/in SITE 2007/in SITE 07/057-064 FONS 315.Pdf>.
- Goodykoontz, E.** (2009). Factors that affect College Students attitude towards Mathematics. <http://sigma.maa.org/rume/crume2009/goodkoontz-long.pdf>
- Kolawole, E. B.** (1998). Evaluation of Mathematics Teacher's Preparation to the Teaching of Senior Secondary School Further Mathematics. *Journal of Educational Research and Evaluation, Journal of the institute of Education, Ondo State University, Ado-Ekiti.* 2(1), 65-71
- Phonte, J. P.** (2010). Students Views and Attitude towards Mathematics teaching and learning. A case study of a Curriculum Experience. [www.educ.fc.al.pt/docents/.92%20ponta%20etc%20\(PME\) doc](http://www.educ.fc.al.pt/docents/.92%20ponta%20etc%20(PME) doc).
- Steen, L. A.** (1989). Teaching Mathematics for Tomorrow's world. <http://www.stolat.edu/people/steen/paper/edu.html>.
- Yara, P. O.** (2009). Students attitude towards Mathematics and academic Achievement in some selected secondary schools in southwester Nigeria. *European Journal of Scientific Research* 36(3) PP.336-341 <http://www.eurojournals.com/ejsr.htm>.
- Zan, R. and Martins, P. D.** (2007). Attitude towards Mathematics, overcoming the Positive/Negative Dichotomy. <http://www.math.umt.edu/tmme/monograph3 /Zan, Monograph 3-pp 157-168pd>.