

# Effects of Self-concept Transformation Package on Secondary School Students' Attitude in Quantitative aspect of Economics in Central Zone, Plateau State, Nigeria

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## ABSTRACT

This study investigates the effects of self-concept transformation package on secondary school students' attitude toward quantitative aspect of Economics in Northern Senatorial Zone, Plateau State, Nigeria. This study used a quasi-experimental research design the non-equivalent control- group design. The population of the study consisted of all the 9,597 senior secondary two students (SSSII), in the 210 secondary schools in the study area. Multi-Stage Cluster sampling techniques was used for this study. The sample size consisted of 105 economics SS2 students from intact classes of the four sampled schools. The experimental group was made up of 30 males and 20 females while the control group was made up of 29 males and 26 females. Therefore there are 50 and 55 students in the experimental and control group respectively. Multidimensional Self-concept Scales (MSS) and Quantitative Economics Attitude Scale (QEAS) instruments were used for data collection. The t-test of independent sample and Analysis of Covariance (ANCOVA) was used to analysed the data with the aid of statistical package for social sciences (SPSS) version 23 was used for the analysis. The finding indicated that; the pretest mean scores of Experimental group was not statistically significant different from the pre-test attitude mean scores of control group, the post-test mean scores of Experimental group was statistically significant different from the pre-test students' self- concept mean scores of control group and there is significant effect of gender on students' attitude toward quantitative Economics. The study recommended that parents as well as economics teachers should encourage the students to develop positive attitude towards quantitative economics. Economics teachers should direct more attention particularly to female students among other recommendations were made.

**Keywords:** Self-concept, Attitude, Transformation Package, Gender, Quantitative Economics

There is a growing concern about attitude of students to learning today globally (Bassey & Okpechi, 2018). Whereas major developmental exploits and inventions of the past were birthed as a result of conscientious and dedicated attitude to learning, the trend today seemed to have been slowed down and the pace of development greatly reduced because of lukewarm and negative attitude to learning. Ingwu (2003) states that meaningful development in all the spheres of man's life is as a

result of education which represents the concept of deliberate learning. Learning is generally viewed as the process through which knowledge is acquired. It is relatively permanent and persistent change that result from mental processes acting on experiences

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and interactions of the person and the environment that makes possible observable changes in behavior. This problem might be attributed to attitude of students as some students placed more or less value on themselves which may in turn influence their academic success. Academic attainment is an important parameter in measuring success in students. Observation and research reports have shown that success or high academic achievement has become a herculean task to achieve by students in recent times. Poor academic performance were recorded both at secondary and tertiary levels of education in Nigeria, Essien (2012). This poor performance of students at all levels in educational institutions in Nigeria has attracted much criticism from time immemorial. Soyinka (2012) Observed the decline in the academic performance of students in post primary schools and maintain that secondary school system academic standards had fallen drastically and the quality of secondary school graduates being produced is questionable and subject to re-examination.

Attitude is a learned predisposition or tendency of an individual to respond positively or negatively to some object, situation, concept or another person. This positive or negative feeling is of moderate intensity and reasonable stability; sometimes it is especially resistant to change. In the variety of definitions of attitudes towards quantitative Economics proposed in research studies, two main categories can be identified. Using a simple definition, attitude in quantitative Economics is just a positive or negative emotional disposition towards quantitative Economics. Using a multidimensional definition, attitude in quantitative Economics comprises three components: an emotional response to quantitative Economics, positive or negative, a conception about quantitative economics , and a behavioral tendency with regard to quantitative Economics

Attitudes as psychological constructs have been defined in many ways over the years. Triandis (in VanWyk, 2012), offered a description to cover the central ideas used by attitude theorists: "An attitude is an idea charged with emotion which predisposes a class of actions to a particular class of social situations" (p. 2). Attitudes, therefore, consist of three interrelated components: (a) a cognitive component that helps the person categorise the topic

or issue under study; (b) an affective component that includes the emotional or motivational evaluations of the category; and (c) a behavioural component which indicates the tendencies or predisposition to action. The implication of this to the present study is that attitude is not only a cognitive, but it include an affective behavioural component. Thus there is need for economics teacher to observed student attitude toward any topic they are presenting in classroom.

Moreover, Walstad and Rebeck (2001) argued that attitudes combine with facts to produce opinions. These authors mention that attitudes also determine what facts will be selected in forming opinions. Research studies reveal that attitudes are more basic and less cognitive than opinions. The authors believe that students are often aware of their opinions on a topic but not their underlying attitude toward the topic (Breedon & Lephardt 2005; Becker and Watts 2001; Shen & Shen 1993). The researchers' view is that opinions are more transitory than attitudes and often change as facts or available information changes. In summation consequently, opinions are defined as general conclusions that are held, but not with full certainty. Many opinions are related to a given attitude. In this study, students' views on why and how they think about the subject are explored. In line with these views, the study argued that economic attitudes and opinions should be a topic of interest to teachers of Economics, whether they teach it as a separate course or integrate it into the existing curriculum. On the one hand, it is thought that effect may be more important than cognition in determining human behaviour.

Attitudes are an expression of inner feelings that reflect whether an individual is favourably or unfavourably disposed to some 'attitude object'. Likewise, Thurstone (in Semukono & Arinaitwe, 2013) conceptualized an attitude as a combination of an individual's evaluative judgments about a given object. The relationship between attitude and performance is founded the theory of reasoned action. According to the theory when people are favourably disposed to an object or behaviour in question, they are likely taking the object or behaviour. This is supported by Wentzel (1998) who found that interest in activities increases the likelihood that individual will formulate goals relating to that activity and invest time and effort to achieve them. With regard to academic

performance, Fisher (2000) established that attitude towards quantitative Economics affects students achievement. This means that students attitude towards quantitative subjects affect how they approach, persist, and succeed at the subject. Students with positive attitude actually value quantitative subjects, persist and work hard towards getting better grades (Pokay & Blumenfeld, 1990). Negative attitude towards a certain subject makes learning or future – learning difficult (Guzel, 2004). Hence when students are positively inclined towards a subject they tend to do well in that subject.

Developing students' attitude towards quantitative aspect of Economics is the most important purpose of Economics education and apart from students, teachers' attitude towards quantitative Economics and quantitative teaching is also crucial (Guzel, 2004). Yusuf (2012) asserted that the kind of attitude a child has affected his school work and learning in general because, if he has a positive attitude about the teacher and the subject, success is inevitable. It is observed that student's attitudes to economics determines the degree to which they pass Economics and negative attitude towards the subject and teachers will have adverse effects on their academic achievement in the subject (Kemboi, Githua & Changeiywo, 2014). Depaolo and McLaren (2006) also observed and documented that negative attitudes toward Statistics, Mathematics and/or other quantitative courses affect learning. We are living in a complex world which is faced with enormous economic challenges. Understanding this world requires education in basic economic concepts and their application to a multitude of economic issues. As students grow and learn, economic attitudes and opinions take shape and influence thoughts and actions over a lifetime. Consequently, teachers need to know the nature of the relationship between attitudes and opinions in economics learning. Similarly, Padmanaban and Kumar (2014) studied the relationship between students' attitude toward education and self- concept among secondary school students in India. The findings show that there is a significant relationship between student's attitudes and self-concept. The implication of this to the present study is that, student's attitude is very important in teaching and learning of quantitative economics. And also students attitudes are linked to students' self-concept.

Furthermore, Gender plays a significant role in determining students self- concept and academic achievement of students in secondary schools. The results of some studies show positive relationship between the genders with others personality development (Vleioras & Bosma, 2005). The research conducted by Maddux and Brewer (2005) revealed that one of the main differences between two genders is their self-concept. The difference in self-concept can be the cause of different behaviors people have. The research findings showed that gender differences in cognition, motivation, excitement and social behaviors can be explained based on the difference between male and female self-concepts. The research asserts that women and men define themselves in quite different ways. Women define themselves with others in society but men define themselves with themselves (Kemmelmeyer & Oyserman, 2001). In another research, Marcic and Kobal-Grum (2011) showed no significant difference between self-concept and self- esteem among the males and females. As far as self-concept indicators are concerned, there is a positive relationship between groups of males and females, in the fields of social skills, responsibility, citizen responsibilities, honesty and loyalty. The research showed that women are more satisfied with being with others than men, and they are more competent to interact with others, and they are more loyal and honest in comparison with the men. Since all societies help the men and women to obtain self-actualization and flourish their potentialities and talents, the study of the differences between genders is of paramount importance. Kalantarkousheh (2012) opined that gender differences should be taken into consideration in studying many psychological factors.

## Objectives

The aim of this study is to find out the effects of self-concept transformation package on secondary school students' attitude toward quantitative Economics in Central Senatorial Zone, Plateau State, Nigeria. Specifically, The study sought to:

- ❑ Determine the difference in students' attitude towards quantitative Economics before the treatment package in experimental and control group.

- ❑ Find out the difference in students' attitude towards quantitative Economics after the treatment package in experimental and control group.
- ❑ Assess the level of self-concept after the treatment package in experimental and control group.
- ❑ Examine the effect of gender on student attitude toward quantitative economics before and after the treatment package in control and experimental group.

### Research Questions

The following research questions guided this study:

1. What is the difference in the students attitude in experimental and control group towards quantitative economics before the treatment package in the Central Senatorial Zone, Plateau State, Nigeria?
2. What is the difference in the students attitude in experimental and control group towards quantitative economics after the treatment package in the Central Senatorial Zone, Plateau State, Nigeria?
3. What is the difference in the self- concept of students after the treatment package in Central Senatorial Zone, Plateau State, Nigeria?
4. What is the difference in males and females students' attitude towards quantitative economics before and after the treatment package in Central Senatorial Zone, Plateau State, Nigeria?

### Hypothesis

The following null hypotheses were tested at 0.05 level of significance.

1. There is no significant difference between student attitude towards quantitative Economics in pre-test of experimental and control group.
2. There is no significant difference between student attitude towards quantitative Economics in post-test of experimental and control group.

3. There is no significant difference between the mean score of students' self-concept in post-test of experimental and control group.
4. There is no significant main effect of gender on students' attitude toward quantitative Economics before and after the treatment package in experimental and control group.

### Theoretical framework

This study shall be anchored on the Social Learning Theory proposed by Albert Bandura in 1977. The theory believes that direct reinforcement could not account for all types of learning. While the behavioural theories of learning suggest that all learning was the result of associations formed by conditioning, reinforcement, and punishment, Bandura's social learning theory proposed that learning can also occur simply by observing the actions of others. The theory added a social element, arguing that people can learn new information and behaviours by watching other people. Known as observational learning (or modeling), this type of learning can be used to explain a wide variety of behaviors.

Social cognitive theory is applied throughout this study to examine the development of the participants in addition to the social cognitive components related to the influence of self-concept on attitudes. Social cognitive development comprises many aspects of a child's environment, including parental involvement or parent-child interaction, decision-making skills, communications skills, social skills, peer interactions, and other factors that may be included in a child's self-concept developmental process. Changes in the environment may influence the overall stability of the child; thus fluctuations in life circumstances were examined, specifically the children's self-concept which is learned and it is also dynamic

### Empirical Review

Many researchers have studied self-concept and attitude and their studies were reviewed below:

Depaolo and McLaren (2006) examined the relationships between attitudes and performance of undergraduate business students' in both business statistics and calculus in Indiana. Descriptive Survey design was used for the study and 229

students randomly selected participated in the study. Attitudinal questionnaire used were measured on a five-point Likert scale. Students' scores on the calculus exam provided the measure of performance in calculus; performance in statistics was measured by the mean of the scores on two midterm exams covering regression and forecasting. Descriptive statistics (mean, and standard deviation) was used to analyse the research questions while ordinary least square (OLS) multiple regression analysis was used to test the hypothesis. The findings revealed that, attitudes play a significant role in performance. Although self-reported attitudes become more positive over the course of the semester, attitudes toward calculus are less positive than those toward statistics, and negative attitudes are related to lower exam scores. For students with no prior calculus background, this relationship between negative attitudes and poor exam performance appears to be particularly strong.

VanWyk (2012) studied measuring students' attitudes to economics education: A factorial analysis approach in South Africa. A quantitative method was used, using proportional stratified sampling, 128 Post Graduate Certificate in Education (PGCE) and Bachelors of Education (B ED) students teachers were selected. The study explores students' perceptions of economics education by using an exploratory factor analysis (EFA). An attitude towards economics education (ATEE) scale was constructed to collect data. Seven factors were extracted by using a rotated factor matrix, mean, standard deviation and regression analysis. The findings showed that there is no evidence that there is a difference in the perception of male and female students on the four dimensions of attitude towards economics education. Female students outperformed male students pertaining to continuous assessment marks. Final examination results revealed that male students' achievements were significantly higher than female students.

Sarwar, Bashir and Alam (2010) studied attitude and academic achievement at secondary level in Pakistan. Correlational survey design and a stratified random sampling techniques were employed, 1,227 9<sup>th</sup> grade students participated in the study. They compared study attitudes of low and high achievers by using a self-developed study attitude scale (SAS) consisting of 36 items. Academic performance was

measured through marks obtained by the students in the 9<sup>th</sup> grade examination conducted by the external body. Pearson product moments correlation and t-test for independent sample were used to analyse data collected. The analysis revealed that the study attitude of secondary school students was related with their academic achievement. A t-test for independent samples showed that there was a significant difference between the study attitude of male, female, rural and urban students.

However, there was no research that addressed the current issues. Most of the researches were carried out in mathematics, English, Social studies and sciences but none in Economics or Quantitative Economics. The inclusive results in the previous researches and dearth of studies in Plateau state, Nigeria have initiated further investigation on the effects of self-concept and attitude on academic achievement of secondary school students in quantitative Economics. The research design used, the instruments for data collection used and the methods of data analysis employed in the studies reviewed above are gaps that this study will fill. This is because this study will use quasi-experimental research design, three instrument for data collection, and will employed mean, standard deviation, t-test of independents samples, t-test of correlated samples and Analysis of covariance (ANCOVA) for data analysis, which will differ with the one used in the reviewed studies above.

## METHODOLOGY

### Research Design

This study used a quasi-experimental research design the non-equivalent control- group design. The choice of quasi-experimental research design, the non-equivalent control- group design is appropriate for this study because of the difficulty in applying true experimental methods to social science and education research. Secondly, is the high cost of true experimental methods. Lastly is the Development of statistical tools that enable statistical control in quasi-experimental research design

### Populations and sampling techniques

The population of the study consisted of all the 9,597 senior secondary two students (SSSII), in the 210

secondary schools in the study area. The population will cover both private and public secondary schools in the study area. The Central Senatorial Zone of Plateau State comprises of Pankshin, Kanke, Kanam, Mangu and Bokkos Local Government Areas. There are 210 secondary schools in the study areas, made up of 105 public secondary schools and 105 private secondary schools and there are 5,265 male students and 4,332 female students that offer Economics in the study area. There are 5427 SSII students that offer Economics in private schools and 4170SSII students that offer Economics in Public schools.

The sample size consisted of 105 economics SS2 students from intact classes of the four sampled schools. The experimental group was made up of 30 males and 20 females while the control group was made up of 29 males and 26 females. Therefore there are 50 and 55 students in the experimental and control group respectively using multi-Stage Cluster sampling techniques.

**Instruments**

The instrument used for data collection in the pilot study was the Multidimensional Self-concept Scales (MSS) and Quantitative Economics Attitude Scale (QEAS). The validity of MSS and QEAS were established using experts’ judgment, hence it is reliable. Cronbach Alpha method was used to establish reliability for MSS and QEAS and the result were 0.971 and 0.841 respectively. Hence it is reliable.

**Procedure**

Prior to the commencement of the experiment, MSS and QEAS were administered to experimental and control groups as pre-test. Responses of students in the two groups was scored and recorded before the treatment was introduced to only the experimental group. Two days after the pre-test, the experimental group were taught economics using the same conventional method but were exposed to self-concept transformation package (SCTP) and the control group using the same conventional lesson but were not exposed to self-concept transformation package (SCTP). At the end of the six weeks teaching MSS and QEAS were administered immediately to experimental and control groups. The response of students were collected back on the spot and scored by the researcher and research assistants.

**Method of data Analysis**

The method of data analysis was based on the research questions and hypothesis stated. Research questions 1, 2 and 3, were analysed using descriptive statistics, like mean and standard deviation. Inferential statistics was used to test the hypothesis at 0.05 level of significance the t-test of independent sample was used to test hypotheses 1 and 2, while Analysis of Covariance (ANCOVA) was used to test hypothesis 3 respectively. The statistical package for social sciences (SPSS) version 23 was used for the analysis.

**Results Presentations and Discussion of Findings**

**Research Questions**

The four research questions raised in this study earlier were tested below using descriptive statistics mean and the standard deviation.

**Research question one**

What is the difference in the student’s attitude in experimental and control group towards quantitative economics before the treatment package in the Central Senatorial Zone, Plateau State, Nigeria?

**Table 1:** Pre-Test Mean Scores of Students attitude in experimental and control group

Group	N	$\bar{X}$	SD	Mean Difference
Experimental	50	61.62	8.42	1.09
Control	55	62.71	8.45	

*Source: Authors computation 2020.*

Table 1 reveal the pre-test student quantitative economics attitude mean scores of experimental and control groups. The result for experimental group yielded a mean score ( $\bar{X}$  = 61.62, SD = 8.42) and that of the control group yielded a mean score of ( $\bar{X}$  = 62.71, SD = 8.45). The pre-test student practice of solid waste mean scores in both experimental and control groups generally indicated low attitude with a low mean difference (1.09). This could be because both groups were not exposed to treatment.

**Research question two**

What is the difference in the students attitude in

experimental and control group towards quantitative economics after the treatment package in the Central Senatorial Zone, Plateau State, Nigeria?

**Table 2:** Post-Test Mean Scores of Students attitude in experimental and control group

Group	N	$\bar{X}$	SD	Mean Difference
Experimental	50	71.70	8.40	6.25
Control	55	65.45	9.09	

Source: Authors computation 2020.

Table 2 reveal the post- test student quantitative economics attitude mean scores of experimental and control groups. The result for experimental group yielded a mean score ( $\bar{X}$  =71.70, SD = 8.40) and that of the control group yielded a mean score of ( $\bar{X}$  = 65.45, SD = 8.09). The pre-test student quantitative economics attitude mean scores in both experimental and control groups generally indicated high attitude with a high mean difference (6.25). This could be because experimental groups were exposed to treatment.

**Research question three**

What is the difference in the self-concept of students after the treatment package in Central Senatorial Zone, Plateau State, Nigeria?

**Table 3:** Post-Test Mean Scores of Students self-concept in experimental and control group

Group	N	$\bar{X}$	SD	Mean Difference
Experimental	50	74.10	8.14	7.35
Control	55	66.75	8.81	

Source: Authors computation 2020.

Table 3 reveal the post-test student self-concept mean scores of experimental and control groups. The result for experimental group yielded a mean score ( $\bar{X}$  = 74.10, SD = 8.14) and that of the control group yielded a mean score of ( $\bar{X}$  = 66.75, SD = 8.81). The pre-test student quantitative economics attitude mean scores in both experimental and control groups generally indicated high self-concept with a high mean difference (7.35). This could be

because experimental groups were exposed to treatment.

**Research question four**

What is the difference in males and females students' attitude towards quantitative economics before and after the treatment package in Central Senatorial Zone, Plateau State, Nigeria?

**Table 4:** The difference in males and females students' attitude towards quantitative economics before the treatment package

Group	Gender	N	$\bar{X}$	SD	Mean Difference
Experimental	Male	30	62.10	1.57	1.2
	Female	20	60.90	1.86	
Control	Male	29	64.69	1.70	3.76
	Female	26	60.93	1.432	

Source: Authors computation 2020.

The result in table 4 indicated that the quantitative economics attitude mean scores before treatment of male students in experimental group is 62.10 and female students 60.90 with the SD 1.57 and 1.86 respectively. However, the mean scores of male students in control group is 64.69 and female students 60.93 with the SD 1.70 and 1.43 respectively. This results shows that male students had better attitude toward quantitative economics than female students student in both experimental and control group.

**Table 5:** The difference in males and females students' attitude towards quantitative economics after the treatment package

Group	Gender	N	$\bar{X}$	SD	Mean Difference
Experimental	Male	30	72.23	8.57	1.33
	Female	20	70.90	8.30	
Control	Male	29	63.68	1.86	0.58
	Female	26	63.10	1.43	

Source: Authors computation 2020.

The result in table 5 indicated that the quantitative economics attitude mean scores after treatment of male students in experimental group is 72.23

and female students 70.90 with the SD 8.57 and 8.30 respectively. However, the mean scores of male students in control group is 63.68 and female students 63.10 with the SD 1.86 and 1.43 respectively. This results shows that male students had better attitude in quantitative economics than female students student in both experimental and control group. The means scores of the experimental group were higher than the control groups. This could be because the experimental groups were exposed to treatment.

**Hypotheses**

The first two hypothesis set for this studies were tested using t-test of independent sample and other one was tested using ANCOVA with the aids of SPSS version 23 below. The summary of the results were presented below respectively.

**Hypothesis One**

There is no significant difference between the mean score of students’ self- concept in post-test of experimental and control group.

**Table 6:** Results of t-test analysis for difference between post-test students’ self-concept mean scores of Experimental and Control Groups

Group	N	$\bar{X}$	SD	Df	t	p-value
Experimental	50	74.10	8.14	103	2.14	0.03
Control	55	66.75	8.81			

From the table 6, it shows that the post- test mean value for experimental group and control group were ( $\bar{X} = 74.10$ , SD = 8.14) and ( $\bar{X} = 66.75$ , SD = 8.81) respectively. The t statistics was 2.14, since the p-value (0.03) is less than the 0.05 level of significance, the null hypothesis was rejected. It indicated that the post-test mean scores of Experimental group was statistically significant different from the pre-test students’ self- concept mean scores of control group. This difference were because of treatment package used.

**Hypothesis two**

There is no significant difference between student attitude towards quantitative Economics in pre-test of experimental and control group.

**Table 7:** Results of t-test analysis for difference between pre-test attitude towards quantitative Economics mean scores of Experimental and Control Groups

Group	N	$\bar{X}$	SD	Df	T	p-value
Experimental	50	61.62	8.422	103	0.490	0.627
Control	55	62.71	8.454			

Table 7 reveals the t-test for independent sample on pre-test for student attitude towards quantitative Economics mean scores of Experimental and Control Groups. From the table, it shows that the mean value for experimental group and control group were ( $\bar{X} = 61.62$ , SD = 8.422) and ( $\bar{X} = 62.71$ , SD = 8.454) respectively. The t statistics was 0.490, since the p-value (0.627) is greater than the 0.05 level of significance, the null hypothesis was retained. It indicated that the pretest mean scores of Experimental group was not statistically significant different from the pre-test attitude mean scores of control group. The two groups were thus considered to be equivalent before the commencement of treatment.

**Hypothesis Three**

There is no significant difference between student attitude towards quantitative Economics in post-test of experimental and control group.

**Table 8:** Results of t-test analysis for difference between post-test attitude towards quantitative Economics mean scores of Experimental and Control Groups.

Group	N	$\bar{X}$	SD	Df	T	p-value
Experimental	50	71.70	8.40	103	2.55	0.02
Control	55	65.45	9.09			

From table 8, the results shows that the post- test mean value for experimental group and control group were ( $\bar{X} = 71.70$ , SD = 8.40) and ( $\bar{X} = 65.45$ , SD = 9.09) respectively. The t statistics was 2.55, since the p-value (0.02) is less than the 0.05 level of significance, the null hypothesis was rejected. It indicated that the post-test mean scores of Experimental group was statistically significant different from the pre-test attitude mean scores

of control group. This difference were because of treatment package used.

### Hypothesis Four

There is no significant difference in students' attitude toward quantitative Economics base on gender.

**Table 9:** ANCOVA Summary Results of Difference in students' attitude toward quantitative Economics base on gender

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	6608.330 <sup>a</sup>	2	3304.165	444.706	.000
Intercept	3.543	1	3.543	.477	.491
Post QEASALL	6570.577	1	6570.577	884.330	.000
Gender	819.086	1	819.086	110.240	.000
Error	757.861	102	7.430		
Total	413470.000	105			
Corrected Total	7366.190	104			

a. R Squared = .897 (Adjusted R Squared = .895).

The ANCOVA was conducted in table 9 to determine if significant e difference in students' attitude toward quantitative Economics is based on gender. The effect of gender (male and female) yielded mean of ( $\bar{X} = 62.87$ ,  $SD = 8.7786$ ) and ( $\bar{X} = 61.66$ ,  $SD = 7.960$ ) respectively. The result in table 15 further shows that  $F(1,40) = 110.240$ .  $P = 0.000$ . Since, the  $p$  value of 0.0000 is less than 0.05 level of significance, the null hypothesis is rejected, indicating that there is significant effect of gender on students' attitude toward quantitative Economics.

### Discussion of Findings

The findings shows that self-concept transformation package had a positive and significant effects on students' self-concept and also there attitude toward quantitative economics. This findings agreed with the works of Sarwar, Bashir and Alam (2010) and Ayeni and Olasunkanmi (2015) which revealed that the study attitude of secondary school students was related with their academic achievement. The study further revealed that there is significant effect of gender on students' attitude toward quantitative Economics. This findings also agreed with the work of Sarwar, Bashir and Alam (2010) and VanWyk

(2012) which revealed that there was a significant difference between the study attitude of male, female, rural and urban students.

### CONCLUSION

The result of the present study concludes that self-concept transformation package had a positive and significant effects on students' self- concept and also there attitude toward quantitative economics at secondary school level. Further this study also concluded that there is significant effect of gender on students' attitude toward quantitative Economics. There was difference between the academic attitude and self-concept of male and female students at secondary school level.

### Recommendation

Bases on the findings, the following recommendations were made:

- ❑ Economics Teachers should build up an excellent rapport with students as creates the classroom attractive and enjoyable platform for learning quantitative Economics.
- ❑ Parents should provide equal learning opportunities to their children and should not discourage the girls from studying economics.
- ❑ School management need to design an orientation exercise in form of paper presentation, seminar, or symposium using self-concept transformation package in order to sensitize and enlighten the fresh students This will no doubt change their attitude toward learning.
- ❑ Economics teachers should direct more attention particularly to female students to make them improve on their attitude toward quantitative aspect of economics.

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