



Effect of Teachers' Continuous Professional Development on Senior Secondary School Students' Achievement in Economics in Bauchi State

Umar, Jalam Mohammed
Department of Vocational Education,
School of Vocational and Technical Education,
Abubakar Tatari Ali Polytechnic, Bauchi

ABSTRACT

This study was aimed at determining the effect of Teachers' Continuous Professional Development on Senior Secondary Schools Students' Achievement in Economics in Bauchi State. Four research questions and four research hypotheses were formulated to guide the study. The study used quasi experimental research design using intact class. The area of the study was Bauchi State and the population comprised of 22,556 SSII secondary school students that offer economics. A purposive sampling technique was used in selecting two teachers from the two selected secondary schools. Also, random sampling technique was used to assign experimental and control groups; the treatment, was a teacher with continuous professional development experience. The research instrument was Economic Achievement Test (EAT) which was adopted from previous NECO and WAEC pass question papers; the questionnaire reliability coefficient (r) of 0.86 was obtained: The data for the study was collected after administering the test to the groups at pre-test and post-test; the scores of the students were used as data. The data collected were analyzed using Mean and Standard Deviation and the null hypotheses were tested using t-test. The result showed that, the experimental group performed higher than the control group in the post-test after the treatment, the difference between the achievement of means was statistically significant ($P < 0.05$). Finally, the researcher recommended that Bauchi State Ministry of Education should encourage its teachers and sponsor them to participate in continuous professional development training.

ARTICLE INFO

Article History

Received: March, 2020

Received in revised form: April, 2020

Accepted: June, 2020

Published online: August, 2020

KEYWORDS

Teachers' continuous professional practice, senior secondary schools, Achievement and Economics

INTRODUCTION

The quality of education of any nation is determined by the quality of its teacher (Wiki, 2007). A country can only develop significantly and attain greater heights in the committee of nations through comprehensive teacher continuous

professional development programs (Ololube 2007). Teachers' continuous professional development should assume a more active social role in producing research, in debates and in teaching as this will promote the development and general appreciation of the teaching profession. All



teachers' continuous professional developments and training must include content that help the teacher to interpret and influence current phenomena in society, the economy, culture and working life. Teachers continuous professional development must also give an awareness of the ethical responsibility intrinsic to the teaching profession not only theory but also through experience.

Ezewu (2007) noted that there are several reasons why many people take teaching as a career, some take teaching because they have no alternative jobs, and others because they expect some material gains, and those that take teaching to pursue some intrinsic values. Those who pursue intrinsic values in teaching are more successful as teachers, an analysis of the teaching action shows that teaching has to have pre-determined goals and properly selected means from a pool of alternatives. George (2008) attributed poor achievement of students in economics to teachers that do not participate in continuous professional development, inadequacy of materials as well as administrative factors. Furthermore, realizing from the onset the importance of education, Lawal (2008) pointed out that "educational professional development is a powerful instrument of social progress without which no individual can attain continuous professional knowledge." It then follows that the best way to enhance instruction is through teacher continuous professional development programs; which are the key to understanding both teaching and learning. Such programs are meant to help individual teachers grow and develop as teachers, acquire skill and professional abilities that help motivate student to learn and to assist them in acquiring the right understanding of the concepts, value, and attitudes needed, and not to only manage classroom instruction but also to contribute

to the society in which they are born, grow, and live.

Thus, teachers' continuous professional development is designed to produce a highly motivated, sensitive, conscientious, and successful classroom teacher who will handle students' learning effectively and professionally for better educational achievement. For this reason, teacher continuous professional development is a part of the education process or training that deals with the art of acquiring teaching skills. It is an essential exercise that enhances the skills of learning and teaching. The models assimilated during teacher continuous professional development constitute a crucial basis for future work. Arguing the need for an effective teacher continuous professional development program, Lawal (2008) indicated that skillful and effective teaching and learning are expected from professionally trained teachers. They are expected to employ the use of teaching aids to supplement their methods, manage and control their classes for effective learning. Again, Lawal (2008) argued that adequate training is the best possible way teachers in the nation can move forward in meeting the challenges of the 21st century.

Akinyemi, (2009) said that "If Nigerian teachers are to cope adequately with the monumental task that lies ahead of them, they have to be well trained for the job they perform. The teachers must be willing to enter into the spirit of new age, willing to share new information and skills with their fellow colleagues, seek more knowledge in their own initiative and above all, be flexible and willing to experiment and not afraid of failure. The teachers envisage must have flexibility built into their total professional development and academic make-up, and should be helped through regular in-service training to keep abreast of new techniques, skills and research in their field. Effective



teacher continuous professional development programs are necessary and prerequisite for a reliable educational system. These lead to increased confidence in both teachers and students as they coordinate learning effectively and professionally, and rectify problems inherent in the teachers' continuous professional development.

Teaching as a knowledge-rich profession with teachers as professionals in their field, teachers can be expected to process and evaluate new knowledge relevant to their core professional practice and to regularly update their knowledge base to improve their practice and to meet new teaching demands (Caldhead, 2011).

In teaching economics, Adesina and Olawale (2011) opined that, with an exception of teacher continuous professional development in economics many other teachers would be confronted with problem of teaching secondary schools

economics syllabus effectively. In fact, the main motive for investigating teachers' continuous professional development is to improve student outcomes. On the other hand in order to improve on teacher quality, it is crucial to understand what teacher professionalism involved. Teacher continuous professional development is certainly a component of teacher professionalism; professional competence involves more than just knowledge, skills, attitudes, and motivational variables but also contribute to the mastery teaching and learning of teacher (Blomeke and Delaney, 2012).

The most important factor that improves students' achievement in economics is by employing seasoned teachers with continuous professional development in economics in all schools (Abe and Adu, 2013). Teacher quality itself is an important factor in determining student achievement, (Umar, 2014).

Table 1: Summary for trend of students' achievement in Economics in (SSCE) WAEC and NECO for the year 2010 – 2014 in secondary schools in Bauchi state

Year	Type of exams	A1 – C6	D7 – E8	F9	Total registered students
2010	WAEC	1,412 (16%)	4,944 (56%)	2,472 (28%)	8,828 (100%)
	NECO	1,586 (17%)	5,410(58%)	2,332 (25%)	9,328 (100%)
2011	WAEC	1,531 (14%)	6,454 (59%)	2,954 (27%)	10,939 (100%)
	NECO	1,797 (16%)	7,188 (64%)	2,246 (20%)	11,231 (100%)
2012	WAEC	646 (9%)	4,376 (61%)	2,152 (30%)	7,174 (100%)
	NECO	1,948 (11%)	10,627 (60%)	5,136 (29%)	17,711 (100%)
2013	WAEC	1,827 (10%)	10,777 (59%)	5,663 (31%)	18,267 (100%)
	NECO	2,040 (11%)	11,496 (62%)	5,006 (27%)	18,542 (100%)
2014	WAEC	2,550 (9%)	17,849 (63%)	7,933(28%)	28,332 (100%)
	NECO	3,705 (13%)	18,527 (65%)	6,271 (22%)	28,503 (100%)
GRAND	TOTAL	19,042(12%)	97,648(61%)	42,165(27%)	158,855(100%)

Source: Education Management Information System (EMIS) Bauchi state Ministry of Education (MOE) (2014)

Table 1: Displays the number of students who sat for WAEC and NECO Examination in Bauchi State from 2010 – 2014. The comparison of students' scores in

economics achievement test based on teachers' continuous professional development, that is conferences, seminars and workshops in their areas of



specialization becomes necessary in order to know if teachers continuous professional development has any significant effect on students' achievement in economics or not and expected to reduce the high failure of students in economics.

Several reports revealed a continuous and massive students' failure in senior secondary schools economics examination (Ministry of Education, Bauchi, MOE, 2011). This has manifested in both National Examination Council (NECO) and West African Examination Council (WAEC) results in Bauchi State. Educational Researchers for example Ahtee and Solonen, (2011), Yusuf and Ibrahim, (2012) have attributed success in O'level subjects to numerous factors that include but not limited to teaching methods, students attitude towards a subject, learning environment, availability of professional trained teachers that participated in subject matter related conferences, seminars, and workshops numerous to mentioned but few. Economics' teachers' continuous professional development in particular is one of the essential ingredients to senior secondary school student's achievement in economics subject (Ayodele, 2013).

According to William (2013) a professional teacher should have good knowledge of the content of the subject area and with effective approaches in his methodology. It is an indisputable fact that an adequate supply of competent economics teacher is an essential ingredient for good economic teaching. Of all the problems affecting the teaching and poor achievement in economics in Nigeria, the problem of short supply of professional qualified teachers in schools have been the most serious. According to Abdulfata (2014) he said that, those who cannot make good elsewhere but because they have the minimum qualification decided to joined

the teaching profession from necessity rather than choice.

Hence, to the best knowledge of the researcher there is no known empirical study that was conducted to determine the effects of teachers' continuous professional development on students' achievement at the senior secondary school level in Bauchi State. Therefore this study was conducted to explore this research gap.

Purpose of the Study

The main purpose of this study was to determine the effect of teachers' continuous professional development on senior secondary school students' achievement in economics in Bauchi State. Specifically, the study was intended to:

1. Determine the pre-test mean achievement of students in the experimental and control group in economics in senior secondary schools in Bauchi State.
2. Assess the difference between the pre-test and post-test mean achievement of students in the experimental group in economics in senior secondary schools in Bauchi State.
3. Assess the difference between the pre-test and post-test mean achievement of students in the control group in economics in senior secondary schools in Bauchi State.
4. Determine the difference between the post-test mean achievement of students in the experimental and control group in economics in senior secondary schools in Bauchi State.

Research Questions

In order to examine the effect of Teachers' continuous professional development on senior secondary school students' achievement in economics in



Bauchi State, this study provided answer to the following research questions:

1. What is the pretest mean achievement of students in the experimental and control group in economics in senior secondary schools in Bauchi State?
2. What is the difference between the pre-test and post-test mean achievement of students in the experimental group in economics in senior secondary schools in Bauchi State?
3. What is the difference between the pre-test and post-test mean achievement of students in the control group in economics in senior secondary schools in Bauchi State?
4. What is the difference between the post-test mean achievement of students in the experimental and control group in economics in senior secondary schools in Bauchi State?

Research Hypotheses

The following null hypotheses were formulated in order to guide the study:

Ho₁. There was no significant difference between the pretest mean achievements of students in the experimental and control group in economics in senior secondary schools in Bauchi State.

Ho₂. There was no significant difference between the pre-test and post-test mean achievement of students in the experimental group in economics in senior secondary schools in Bauchi State.

Ho₃. There was no significant difference between the pre-test and post-test mean achievement of students in the control group in economics in senior secondary schools in Bauchi State.

Ho₄. There was no significant difference between the post-test mean achievements of students in the experimental and

control group in economics in senior secondary schools in Bauchi State.

METHODOLOGY

The research design for this study was quasi-experimental pretest-posttest non-equivalent control group design. This design was used because of lack of fully controlled laboratory. Intact classes of SSII students were used in order to avoid disruption of normal classroom setting and also to increase the chances of generalization. According to Sambo (2005), very few school authorities would allow a researcher to disrupt the normal school setting for creating true experimental. Thus, the design is symbolically presented below.

G1: Y11 X Y12
G2: Y21 Y22

Where:

G1: experimental group

G2: control group

Y11: pretest for experimental group

Y21: pretest for control group

X: treatment

Y12: posttest of the experiment group

Y22: posttest of the control group

The experimental group (G1) and the control group (G2) were pretested to determine their initial achievement in both groups. The experimental groups (G1) were taught using the treatment (X) that is, the teacher with continuous professional development. The control group (G2) on the other hand were taught without the treatment that is, teacher without continuous professional development. The experimental group was exposed to the treatment for four weeks (two weeks per topic) and was post-tested immediately.

The area of the study was Bauchi State which is located in the North- Eastern sub-region of Nigeria. Bauchi State has twenty (20) Local Government Areas with the estimated population of about four million six hundred and seventy six



thousand four hundred and sixty five (4, 676,465 NPC, 2006 p. 78) and also has boundary with Plateau, Kaduna, Yobe, Jigawa, Taraba, Kano and Gombe States.

The population of the study comprised of all 22,556 SSII Economics Students in Bauchi State Senior Secondary Schools, for the year 2015/2016 academic session. A purposive sampling technique was used in selecting the two teachers that participated in this study. A purposive sampling (also known as judgmental, selective or subjective sampling) is a sampling technique in which researcher relies on his or her own judgment when choosing members of population to participate in the study, (Saunders, Lewis,

and Thornhill, 2012). A pilot survey for economics teachers' questionnaire (see appendix J) was distributed to 56 teachers that incited for extent of teachers continuous professional development (CPD) training; this includes: attendance to conferences, seminars and workshops. A teacher with continuous track record of involvement in continuous professional development was selected to teach the experimental group, while a teacher with very limited involvement in professional development was selected to teach the control group. Table 2 present the characteristics of the two teachers that participated in this study.

Table 2: Characteristics of the Teachers that Participated in this Study

Teacher	Gender	Yrs of Teaching Experience	Qualification	No. of CPD Attended			Groups
				Conf.	Sem.	W/shop	
Teacher A	Male	7	NCE,Bsc (Edu)Econs	STAN (2005)	NTI/MDG (2009)	SUBEB (2011)	Exp.
				MAN 2010	UNICEF 2010	SUBED 2012	
				PAN 2012	MOE/MDG 2010	SUBED 2013	
				ICSS 2015	FME/ICE 2013	SUBEB 2014	
Teacher B	Male	10	B.Sc. (Edu) Econs.	Nil	Nil	Nil	Cont.

Source: field work 2016

A Teacher with continuous professional development taught the experimental group for four weeks, while a teacher without continuous professional development taught the control group; the treatment was applied after the pretest; the two selected topics in economics which are: nature of economics/ money and Production was taught in both experimental and control groups. After the treatment, both the experimental group and control group were post-tested using the

Economics Achievement Test (EAT), the same question but with modifications of questions setting arrangement was used in both pretest and posttest. The researcher with the help of trained research assistant guided the experiment.

The instrument for data collection in this study was Economics Achievement Test (EAT) used at pretest which was adopted by the researcher from NECO and WAEC passed question papers related to the topic taught and changed the questions numbers



during posttest, just to avoid direct understanding of the questions by the student.

The Economics Achievement Test (EAT) was administered to the students before the treatment, as pretest. The purpose of this test was to investigate the students' achievement in both groups from the initial stage of the experiment. The test questions were (45) multiple choice questions, each questions carry one (1) mark, was also administered to both the two groups as posttest after the treatment.

The instrument was subjected to pilot testing at Government Comprehensive Day Secondary School, Gombe which is located outside the study area. The students under pilot test have similar characteristics with the population under study. According to Akanbi (2002), reliability refers to the consistency of scores obtained from some persons when administered with the same tool on the different occasions, or with the different sets of variable examining conditions. Therefore, it was also subjected to test- re-tests method to establish of the instrument reliability, using the Pearson Product Movement Correlation Co-efficient, (PPMC). The r coefficient of 0.86 was obtained and the value confirmed that the EAT was reliable and valid.

The instrument was administered to the students in both the groups by the researcher and his assistance at pretest and posttest. Their scores were used as data.

The data collected were analyzed using mean and standard deviation to answer research questions, while the null hypotheses was tested using t-test all at 0.05 level of significance using Statistical Package for Social Science (SPSS). The t-test was used because of the two sets of variables. According to Uzoagulu (2012) the t-test statistic is useful when testing hypotheses about difference between means of two groups. The decision for accepting or rejecting hypothesis is when p value is less than the confidence level ($p < 0.05$) such hypothesis was rejected. Where p value is greater than confidence level ($p > 0.05$) such hypothesis was accepted.

RESULT

Research Questions One: What is the pretest mean achievement of students in the experimental and control group in economics test in secondary school in Bauchi State?

Table 3 Provided an answer to research question one. The result shows that, the means scores of students during the pre-test in economics achievement test (EAT) of the experimental group was 49.22 with standard deviation of 7.17, while the control group has 49.09 and with standard deviation of 6.97. This revealed that the two groups performed relatively same at the pre-test.

Table 3: Mean and Standard Deviation of the Pre-test scores for experimental and control group.

Group	n	\bar{x}	SD
Exp	48	49.22	7.17
Control	45	49.09	6.97

Source: field work (2016)

Research Question Two: What is the difference between the pretest and post test mean achievement of students in the

experimental group in economics in secondary school in Bauchi State?



Table 4 provided answer to research question two. The means score of student's achievement in (EAT) by the experimental group at pre-test 49.22 with standard deviation of 7.17, while Mean of

the experimental group at posttest was 69.17, with standard deviation of 11.16. Therefore, the experimental group performed better in the posttest than in the pretest.

Table 4: Mean and Standard Deviation of the Pre-test and Post-test scores for the students taught in experimental using teacher with continuous professional development.

Variables	n	\bar{x}	SD
Pretest Exp	48	49.22	7.17
Posttest Exp	48	69.21	11.16

Source: field work (2016)

Research Question Three: What is the difference between the pretest and posttest mean achievement of students in the control group in economics in secondary school in Bauchi State?

pre-test in the control group has the mean of 49.09 with a standard deviation of 7.17, while post-test score had a mean of 49.73 with a standard deviation of 7.17. The post test score of the students remains to be same with that of the pre-test scores

Table 5 presented answer to question three. The score of students at

Table 5: Mean and Standard Deviation of the pre-test and post-test scores for the students in the control group

Variables	n	\bar{x}	SD
Control pretest	45	49.09	6.97
Control posttest	45	49.73	7.17

Source: field work (2016)

Research Question Four: What is the difference between the posttest achievement of students in the experimental and control group in economics in secondary school in Bauchi State?

obtained a mean of 69.17 with the standard deviation of 11.16 for the experimental group, whereas, control obtained mean of 49.73 with standard deviation of 7.17. Therefore, the result shows that, experimental group, performed better than control group. ($p < 0.05$)

Table 6 presented answer to research question four. Experimental

Table 6: Mean and Standard Deviation of the post-test scores students in the experimental and control group.

Group	n	\bar{x}	SD
Exp	48	69.17	11.16
Control	45	49.73	7.17

Source: field work (2016)



Hypothesis One

Ho1: There was no significant difference between the pretest mean achievement of students in the experimental and control group in economics in secondary school in Bauchi State.

Table 7 presented result of the analysis of hypothesis one. The mean achievement of students in the experimental group was 49.22 with

standard deviation of 7.17, while, it was 49.09 with standard deviation of 6.97 in the control group. The table also reveals that, there was no significant difference between the mean achievement of students in the experimental and control group before the treatment, since the p value is greater than the confidence level ($p > 0.05$). For that, the null hypothesis was accepted.

Table 7: t-test result of the pre-test score for experimental and control group.

Group	n	\bar{x}	SD	df	t	P	Decision
Exp	48	49.22	4.51	91	0.135	.821	Accepted
Control	45	49.09	6.97				

Source: field work (2016)

Hypothesis Two

Ho2: There was no significant difference between the pretest and posttest mean achievement of students in the experimental group in economics in secondary school in Bauchi State.

Table 8 presented result of analysis of hypothesis two. The mean achievement of the students taught by professional trained teacher (experimental group) was

69.17 and standard deviation 11.16 while, (experimental group) at pretest had mean achievement of 49.22 and a standard deviation of 7.17, The table also reveals that, the difference of means was statistically significant ($P < 0.05$). For that, the null hypothesis was rejected; this indicated that, there was a significant difference between the achievements of the experimental group.

Table 8: t-test result of the pre-test and post-test score for experimental

Variables	n	\bar{x}	SD	df	t	P	Decision
Exp pretest	48	49.22	7.17	47	-13.41	0.00	Rejected
Exp posttest	48	69.17	11.16				

Source: field work (2016)

Hypothesis Three

Ho3: There was no significant difference between the pre-test and post-test mean achievement of students in the control in economics in secondary school in Bauchi State.

Table 9 presented result of analysis of hypothesis three. The mean achievement

of the students taught with non professional trained teacher in the pre-test was 49.09 and standard deviation of 6.97, while their post-test mean was 49.73 and a standard deviation of 7.17. The table also reveals that, the difference of means was statistically significant ($P < 0.05$). For that, the null standard hypothesis was rejected:

Corresponding author: Umar, J. M. ✉ dadsjalam@gmail.com ✉ Department of Vocational Education, School of Vocational and Technical Education, ATAP, Bauchi. © 2019 Faculty of Tech. Education, ATBU Bauchi. All rights reserved



this indicated that, there was no significant difference between the achievements of the pre-test students and in the post-test in

the economics achievement test of control group.

Table 9: t-test result of the pre-test and post-test score of the control group students

Variables	n	\bar{x}	SD	df	t	P	Decision
Pre-test	45	49.09	6.97	44	-4.73	0.00	Rejected
Pre-post	45	49.73	7.17				

Source: field work (2016)

Hypothesis Four

H₀₄: There was no significant difference between the posttest mean achievement of students in the experimental and control group in economics in secondary school in Bauchi State.

Table 10 presented result of analysis of hypothesis four. The mean achievement of experimental group was 69.17 with standard deviation 11.16: while,

the control mean achievements were 49.73 with standard deviation of 7.17. The table also reveals that, the P value is less than the confidence level ($P < 0.05$). The null hypothesis was rejected. This indicates that there was a significant difference between the achievements of students taught economics in the experimental group and that of students taught in the control group in the posttest.

Table 10: t-test result of the post-test scores for students in the experimental and control group

Group	n	\bar{x}	SD	df	t	P	Decision
Exp.	48	69.17	11.16	91	9.92	0.00	Rejected
Control.	45	49.73	7.17				

Source: field work (2016)

MAJOR FINDINGS

1. The experimental group performed relatively the same with the control group at pre-test before the treatment. Therefore, there was no significant difference in the pre-test mean scores of students' achievement in economics in secondary schools in the experimental group and control group.
2. The experimental group achieved higher in the post-test than in the pre-test after the treatment. Therefore, significant difference existed between the pre-test mean scores and post-test mean scores

3. The post-test mean scores of the control group are relatively the same with their pre-test mean score. Therefore, there was no significance difference between the pre-test and post-test achievement of the students in the control group.
4. The experimental group achieved higher than control group at posttest. Therefore, there was a significance difference between the post-test achievements of



students in the experimental and control groups.

DISCUSSIONS OF FINDINGS

Hypothesis 1 shows that the null hypothesis was accepted. This means that the difference in the pre-test mean achievement score of students in economics in secondary school both experimental and control groups was statistically insignificant which invariably means both groups have equal entry behaviours before the treatment was applied. The findings of this study are in line with the finding of Shah (2013) who found no difference between the achievement of students in the experimental group and control group at the pre-test level.

Hypothesis 2 shows that the null hypothesis was rejected. This means that the difference in the pre-test and post-test mean achievement score of students in economics in secondary school in the experimental group was statistically significant that is, the mean score in the post-test was higher than the pre-test mean score which variably means that the students' achievement was better after the treatment teacher with (CPD) was applied. The findings in respect of the hypothesis agreed with the findings of Treagust (2008) who reported that, students taught biology using in-service trained teacher strategies, performed better than their counterparts taught with untrained teachers. It also supported the finding of Ukeja (2012), who posited that, the achievement of the experimental group subjects is better than that of the control group. The better achievement may be as a result of using (continuous professional development) on the experimental group. Similarly, the finding is consistent with the findings of Yusuf (2012) in a study which revealed that: the experimental group students have

higher mean scores than that of their counterparts in the control group.

The findings also revealed that, the post-test mean scores of the experimental group are higher than their pre-test mean scores. The subjects performed better in the post-test of economics achievement test than in the pre-test. The finding is in harmony with that of Yeager (2010), who reported that, in teaching using the teacher with continuous professional development as a treatment, the learner performed better at the post-test than their pre-test during the experiment. This is quite in harmony with the implication of the studies Hussan (2014), stated that, within the group that were taught using teacher with professional development indicated better achievement at post-test compared to the pre-test score. It also supported by Bossan (2015), who indicated that there was improvement in terms of post-test-pre-test in the examinations result, as a result of using new teaching styles (continuous professional development), which have more clear effect on the students.

Hypothesis 3 shows that the null hypothesis was rejected. This means that there was no significant difference in the pre-test and post-test mean achievement score of students in economics in secondary school in the control group. The study of Wise and Okey, (2010) reveals that, there was no significant difference between the achievements of the students in the effect of pre-test and post-test of the control group. Therefore, for that reason, the null hypothesis was rejected. This finding is supported by Blomeke (2011), in a study on the effect of Computer Augmented Geometry on Students' performance. The study had two groups (experimental and control), the result of the study indicated that there was no significant difference between the mean achievement of the subjects at pre-test and



post-test of control group. It is consistent with that of the Kanert (2009), they reported that, there was no significant difference in the achievement of students in both pretest and posttest of control group.

Hypothesis 4 shows that the null hypothesis was rejected. This means that the difference in the post-test mean achievement scores of students in economics in secondary school in the experimental group and control group was statistically significant that is, the post-test mean score of experimental group was higher than the post-test mean score of the control group which invariably means that the students in the experimental group achieved better than the students in the control group after the treatment (teacher with CPD) was applied. The findings in regard to this hypothesis agreed with the finding of Wilson (2008) that was encouraged by their students' achievement on the effect of professional teacher development in computer supported education on the students' success. The implication of the study confirmed that, the subjects in the experimental group exposed to computer supported lesson progressed significantly than the control group subjects. It is supported by Van Driel and Lerloop, (2009), who reported that, there was a significant difference among students' achievement in favour of the experimental groups against control group. The finding also revealed that, there was a significant difference between post-test achievements of the students in the experimental group. The null hypothesis was rejected. This shows that, there was a significant difference between post-test achievements of the students taught economics using professionalism. The implication confirmed that, the achievement of students in post-test differ significantly when compared to the post-test. The finding is supported by Marissa

(2008), who observed that, there is significant difference between the achievements of students who receive similar treatment pre-tested before the treatment. The finding revealed that, the experiment group students after the treatment achievements significantly better, than before the treatment. It disagrees with that of Harlen (2007), who examines location as a factor that influences student's failure in basic science. The finding explained that, there was no significant difference between the achievement of students in the pre-test and post-test in the experimental group.

CONCLUSION

Impacting knowledge (teaching) by a teacher with continuous professional development in teaching economics subject is effective, because the teacher who undergoes certain professional development courses produce a significant effect on student achievement in the economics subject. More so professional development is associated with teacher motivation.

RECOMMENDATIONS

The following recommendations were made based on the conclusions.

1. Using teachers with continuous professional development CPD would made students to show positive interest in the study of economics to enhance effective achievement in the teaching and learning.
2. Ministry of Education should encourage their teachers and sponsored them to participated in CPD and attend conferences, seminars and workshops in order to update their knowledge.
3. School authority should organize in house workshops / seminars so that teachers can be abreast with current



- challenges of teaching and learning activities.
4. Teachers of economics should try and attend conferences on their own even if there is no government sponsored since learning is dynamic.
- REFERENCES**
- Abdulfata, J., D. (2014). Pedagogical Context Knowledge: Toward a fuller Understanding of what good Science Teachers know. *Science Education*, 8(5) 426 – 453.
- Abe T. O. and Adu, E. I. (2013). Influence of Qualification on Development and Assessment of Computer Programmed Instructional Package on Energy Concept in Upper Basic Technology in Ekiti state, April J. *Secondary Technology*. 61- 68.
- Adesina, S. and Olawale, F. A. (2011). *Planning and Educational Development in Nigeria*. Ibadan: Board Publication Limited. 81-90
- Ahtee, M. and Salonen, M. (2011). The Implementation of a New Science-Based Curriculum and its Effects on the School Community in a Finish Primary School. In Hamalainen, K; Oldroyd, D. and Haapanen, E. (Eds). *Making School Improvement Happen*. Helsinki: Department of Teacher Education, Vantaa Institute for continuing Education, University of Helsinki. 88 – 96
- Akanbi, A. A. (2002). *Research Methods for Business Students*. Kano: Bolade Publisher. 93 - 115
- Akinyemi, A. B. (2009). The History of Education in Nigeria. Ibadan: NPS Educational Publishers. 41 - 58
- Ayodele, O. (2013). Teacher Quality and Student Achievement: A Review of State Policy. *Journal of Evidence Education Policy Analysis Achieves*. 9 (5) 33 - 44.
- Baumert, J. and Kunter, M. (2006). Stichwort: Professionelle Kompetenz Von Lehrkräften [Keyword: Professional Competencies of Teachers]. *Zeitschrift fur Erziehungswissenschaft* 469 – 520.
- Baumert, J., Kunter, M., Blum, W., Voss, T. and Jordan, A. (2010). Teachers Mathematical Knowledge, Cognitive Activation in the Classroom and Student Progress. *American Educational Research Journal*. 47(1), 133 – 180.
- Blomeke, S. and Delaney, S. (2011). Assessment of Teacher Knowledge Across Country: a *Journal Review to the State of Research*. *ZDM Mathematics Education*, 44 (6), 223-247.
- Bossan, G. D. (2015). *Comprehensive School Reform and Student Achievement. A meta-Analysis*. (Report. No. 59). Baltimore, MD: Center for Research on the Education of Students Placed at Risk. Johns Hopkins University, Baltimore. 41 - 46
- Bromme, R. (2007). On the Limitations of the Theory Metaphor for the Study of Teachers' Expert Knowledge. In M. Kompf and P. Denicolo (Eds.), *Teacher thinking Twenty years on: Revisiting Persisting Problems and Advances in Education*. Lisse, the Netherlands: Swets and Zeitlinger. 283 – 294.
- Calderhead, J. (2006). Teachers: Beliefs and Knowledge. In D. C. Berliner and R. C. Calfee (Eds.), *Handbook of Educational Psychology*, New York: Macmillan. 709 - 725
- Calderhead, J. (2011). The Nature and Growth of Knowledge and Student



- Teaching. *Teaching and Teacher Education*, 31-53.
- Callahan, S. G. (2006). *Successful Teaching in Secondary Schools*. Glenview, IL: Scott foreman. Publisher. 64 – 69
- Ezewu, E. (2007). *Sociology of Education*, Lagos: Longman Group. Publisher. 68 - 91
- Gage, N. L. (2008). *Theories of Teaching*. In E. R. Hilgard (Ed.), *Theories of Learning and Instruction (Sixty-third Yearbook, Part I, National Society for the Study of Education)* Chicogo: University of Chicago Press. 268 – 285.
- George, J. E. (2008) *Teacher professional development: an international review of the literature*. Paris: UNESCO: international institute of educational planning. 62 - 87
- Getzels, J. W., and Jackson, P. W. (2007). *Mermale der Lehrperson lichkeiten (Characteristics of teacher Personality)*. In K. Ingenkamp (Ed.), *Handbuch der Unterrichtsforschung (Handbook of research on Instruction) (2nd ed.)*, Weinheim, Germany: Beltz. 1353 – 1526.
- Harlen, W. (2007). *Secondary Teacher Understands in Science and its Impact in the Classroom*. *Journal of Research in Science Education*, 27 (7) 323 – 337.
- Hassan, A. A. (2014). *The Effect of Professional Qualification on Students' Performance in Economics in Secondary Schools* Unpublished Postgraduate Diploma Dissertation University of Ibadan, *Journal of Research in Science Education*, 27 (7) 323 – 337.
- Kanert, A. E. (2009). *If we are ever to "Professionalize" School Teaching, Universities must redesign Education Programms*. *Journal of the Teacher Educator*; 24 (4), 29 – 32.
- Kautto-Koivula, K. (2006). *Degree-Oriented Professional Adult Education in the Work Environment. A Case Study of the Mian Determinants in the Management of a Long-term Technology Education Process*. Unpublished PhD Dissertation, University of Tampere, Finland, Publisher. 62- 86
- Kautto-Koivula, K. (2008). *Degree-Oriented Adult Education in the Work Environment*. In Ruohotie, P & Grimmett, P. P. (Eds). *Professional Growth and Development: Direction, Delivery and Dilemmas*. Canada and Finland: Career Education Books. 149 – 188.
- Kleickmann, T. (2008). *Zusammenhange fachspezifischer Vorstellungen von Grundschullehrkräften zum Lehren und Lernen mit Fortschritten von Schulerinnen und Schulern Imkonzeptuellen Verstandnis (relations of teachers' conceptions of teaching and learning science with students' progress in understanding of scientific concepts)*. Munster: Inaugural-Dissertation. 422 - 502
- Lawal, H.S. (2008) *Teacher Education and Educational Grows of the 21st Century Nigeria Teacher*. African Symposium 20-23.
- Ololube, N. P. (2007). *An Appraisal of Teachers' Perception of Academic and Professional Training on Teachers' job Effectiveness in Secondary Schools in Ndokwa East Local Government Area of Delta State of Nigeria*. Unpublished Masters' degree thesis, (M. Ed). Delta State University Abraka, Nigeria. Publisher. 133 -159



- Sambo, A. A. (2005). *Research Methods in Education*. Ibadan: sterling-Horden publishers Ltd. 162 - 177
- Saunders, M., Lewis, P. and Thornhill, A. (2012). *Research Methods for Business Students 6th editions*, Pearson Education Limited. London. Publisher. 171 - 189
- Shah, I. M. (2013). Influence of Academic Performance on Gender on Teachers Perception of Difficult Concept in Secondary Schools in Ikom, Educational Zone of Cross River, Greene and journal of educational research 2(2). Retrieved from <http://www.gjournals.org>. On 4/4/13.
- Shulman, L. S. (2008). Knowledge and Teaching: Foundation of New Reform. *Havard: Journal of Educational Review*, 57 (1) 1 – 22.
- Staud, F. C., and Stern, E. (2002). The nature of Teachers' Pedagogical Content Beliefs Matters for Students' Achievement gains: Quasi-experimental Evidence from Elementary Mathematics. *Journal of Educational Psychology*, 94 (8) 344 – 355.
- Treagust, D. F. (2008). A Case Study of Two Exemplary Biology Teachers. *Journal of Research in Science Teaching*, 28(5) 329 – 342.
- Ukeje, B. O. (2012). Evaluation of the Teacher. *Nigerian Journal of Education*, 1(6) 19 - 24.
- Ukeje, B. O. (2012b). *Quickening Teaching Profession*. The Transformer, publisher. 46 - 57
- Umar, M. A. (2014). The Effect of Teachers' Professional Qualification on Students' Achievement in Economics in Secondary Schools (unpublished postgraduate M. Ed Dissertation) University of Ibadan, Ibadan. Publisher. 103 – 129
- Uzoagulu, A. E. (1998). Practical guide to write research project reports in tertiary Institution, Enugu: Nigeria john classic publisher Ltd. 22 - 36
- Van Driel, J. H., de Jong, O., and Verloop, N. (2002). The Development of Pre-service Chemistry Teachers' Pedagogical Content Knowledge. *Science Education*, 572 – 590.
- Van Driel, J., and Verloop, N. (2009). Development of Experienced Science Teachers' Pedagogical Content Knowledge of Models of the Solar System and the Universe. *International Journal of Science Education*, 30 (9) 1321 – 1342.
- Wiki, M. (2007). Teaching Qualification Retrieved from <http://en.wikipedia.org/wiki/teaching> qualification on 4/4/2007.
- William, S.L (2013). Maintaining professional Competence. San-Francisco: Bass Publishers. 99 – 126
- Wilson, J. (2007). *Student Learning in Higher Education*. London: John Wiley and Sons Publisher. 83 - 95
- Wise, K. C., and Okey, J. R. (2010). A Meta-Analysis of the Effects of Various Science Teaching Strategies on Achievement. *Journal of Research in Science Teaching*, 20 (10) 419 – 435.
- Yeager, J. (2010), *Advanced Economic Theory; 1st Edition*, India:Vernal Publisher. 124 - 147
- Yusuf, B. M. (2013). Security challenges in Nigeria and the implications for business activities and sustainable development a *journal of economics sustainable development*, 4 (2) 20-23



Yusuf, K. (2009). The Need for
Environmental Education in the
Teacher Education Programme in

Nigeria. The African Symposium.
*Journal of Research in Science
Education*, 27 (7) 32 20-22.