

Impacts of Foreign Education Intervention Programmes on the Performance of Basic Science and Technology Teachers in the Federal Capital Territory, Nigeria

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Abstract: This study investigated the perceived impacts of foreign education intervention programmes on the performance of Basic Science and Technology teachers in the Federal Capital Territory, Nigeria. Descriptive survey design was employed for the study and a sample of eighty-nine teachers were randomly selected out of two hundred and sixty-two basic science and technology teachers from one hundred and sixty-one junior secondary schools in FCT, Nigeria. Data was collected personally in FCT Junior Secondary schools through the use of classroom Observation-checklist. The collected data were analyzed using descriptive and inferential statistics. The findings from the study revealed that; Basic Science Teachers' performance was positively impacted through regular in-service training, workshops, and seminars organized by foreign organizations in Nigeria. On the basis of findings and conclusion, the study recommended that, FCT should partner with other international organizations to create opportunities for all teachers to attend teacher training programmes since their performance is enhanced through foreign education intervention training.

Key words: Foreign, education, intervention, programmes, Basic Science and Technology, teachers, performance.

I. INTRODUCTION

There has been a significant increase in the level of interest and support that science teachers throughout Nigeria are receiving in their professional development. The Government of Nigeria has been working in active collaboration with International Development Partners such as the British council, United Nations International Children Emergency Fund (UNICEF), Department for International Development (DFID), United Nation Educational, Scientific and Cultural Organization (UNESCO), United State Agency for International Development (USAID), Japan International Cooperation Agency (JICA), Korea International Cooperation Agency (KOICA), Chinese Government Cooperation (CGC), World Bank as well as Civil Societies and Non-Governmental Organizations (NGOs) to achieve the Education for All and Universal Basic Education goals and Sustainable Development Goals (SDGs) in Nigeria.

USAID collaborates with the Government of Nigeria to strengthen education systems at the state and local government levels in Nigeria. The Nigeria's education system

has not kept pace with its rapidly growing school-age population. The quality of Basic Education is extremely poor, leading to low demand and unacceptably low academic performance. Of the 30 million primary school-aged children in the country, it is estimated that up to 10 million are not enrolled in formally recognized schools, less than one third will attend Junior Secondary School (JSS) and even fewer will proceed to Senior Secondary School (USAID, 2019). The USAID expands its programme to Strengthen effective education management systems, focusing on increased capacity to provide quality education services in terms of teaching quality in secondary schools, improve education quality, demonstrated by increased reading skills and increase equitable access to safe, relevant and accredited educational options. In the Basic Education sector, USAID employed a programme "system-strengthening approach" that supports the delivery of Basic Education services by addressing key issues in the management and sustainability of basic education. This includes; supporting the government for data collection and analysis for appropriate educational policy and decision making. Major achievement has been the adoption of a system that tracks and prioritizes funding for education that has led to an increase in the education budget for Northern states.

The UNICEF Intervention programme in education for Nigeria was aimed to improve the school environment as well as the style and quality of teaching in schools. Emphasis is also placed on increasing science teacher motivation especially in the Northern part of Nigeria.

The British Council's Department of Business, Innovation and Skills (BCDBIS) took up the funding of a partnership project between Nigeria and Higher Education in the United Kingdom, through its Education Partnership in Africa (EPA) project. The program also empowered science teachers to result-orientated session planning embedding core skills of literacy, numeracy and ICT in specialist curricula. This programme helps the teachers to develop a template for successful lessons to meet teachers' needs. The Science teachers are equipped to cope with the individual learning barriers using the existing theories of class teaching to

enhance understanding of how students learn and more effective ways to teach, and improve teachers use of ICT in teaching and learning through it programme “Connecting classrooms” which lasted for 5 years (FCT-SEB, 2011).

The Korea International Cooperation Agency (KOICA) has also focused on meeting the Basic Human Needs (BHNs) of developing countries and fostering their Human Resources Development (HRD). This focus has been broadened to also promote sustainable development as well as strengthening partnerships with developing partners like Nigeria. KOICA holds both foreign and In-Country training to enhance the capacity building of member country, aimed at improving the e-Government capability in the delivery of government service. KOICA trained more than 600 Nigerian teachers on use of ICT-based Model Education in partnership with the FCT and other states of the federation (FCT-UBEB 2016).

The World Bank's education programs were to support the government's programme for improving the quality of science and technical education and to strengthen the capacity of the planning and implementation structures. The project was reported to have been only marginally successful due to the problems encountered, especially in the early stages of the project, coordination and management problems, as well as low levels of commitment and ownership (World Bank, 2009).

Japan International Cooperation Agency (JICA) in collaboration with Federal government of Nigeria conducted a baseline survey in 2005 to ascertain the strategies in use, the needs and challenges facing teaching and learning of mathematics and basic science education at primary and Junior Secondary School (JSS). Major findings of the survey presented to stakeholders showed a mirage of difficulties such as; Poor teacher-student strategy, Perceived difficult concepts, Monotonous use of lecture method of teaching and Inadequate and poor utilization of available teaching materials (SMASE, 2005). The JICA in collaboration with Federal Ministry of Education implemented a Technical Cooperation Project, titled “ Strengthening Mathematics and Science Education Project (SMASE)” and was aimed to improve mathematics and science teachers teaching approaches with a view to producing young scientists in the country. Most foreign agencies work in selected partner states, predominantly in Northern Nigeria, (e.g. FCT, Niger, Nasarawa, Katsina, Bauchi, Yobe, Borno, Kano, Jigawa and Kaduna state) there has been aid for Basic Science Education for over 10 years.

This study was built on teacher development theory of Frances Fuller, 1969. Fuller developed a theory based on the stages of concern in a teacher's career, which has served as a foundation for the researchers who have followed her in this field. In Fuller's theory, teachers move through three stages of concerns: self (e.g., survival, self-adequacy, and acceptance), task (e.g. student performance and teacher duties), and impact (e.g., social and educational impact on the system). Fuller theorized that a teacher could not move to the

next stage of concern without first solving the concern of the previous stage.

Patricia, ukaigwe & Adieme (2018) conducted a research titled Teachers' training needs for sustainable functional secondary Education in Nigeria. The study adopted analytical survey research design and the population of the study comprises all 317 head teachers and a sample of 216 head teachers was chosen using stratified sampling technique, the 14-item questionnaire was used to obtain data from the teachers. Z-test was used to test the null hypotheses at 0.05 level of significance. The finding of the study revealed that continuous training of teachers enables them to acquire teaching skills and knowledge, share teaching experiences, collaborate with colleagues, gain access to career opportunities for professional development and enhances teachers' teaching competency. The study recommended that the head teachers as change agents should strive to meet teachers training needs in order to achieve the sustainable functional education society expects from the school system. The relevance of the study to the present research is that both focused on the continues training of teachers in secondary schools.

Statement of the Problem

As a matter of fact, some efforts have been made in terms of research with innovative teaching methods, workshops, seminars and conferences organized locally by teachers' associations such as Science Teachers Association of Nigeria (STAN), State Universal Basic Education Board (SUBEB), FCT-UBEB, and Foreign Education Intervention Programmes (FEIP) such as JICA, KOICA, BCEP, AUDA-NEPAD and many others. Despite these efforts at improving the quality of Science and Technology teacher education, much is still desired to be done since the performance of learners is still below the expectation of stakeholders, such as, students, parents, teachers, governments and general public. There is therefore, a problem in science and technology teacher education, which an attempt is being made to solve. Hence there is need to investigate the Impact of Foreign Education Intervention Programmes (FEIP) on the performance of Basic Science and Technology Teachers in Federal Capital Territory, Abuja

Basic Science and Technology teachers in the FCT have been receiving foreign education intervention training with the aim to improving their knowledge and professional effectiveness. The expectation is that once the teachers are trained, they should be able to deliver knowledge to students in a better way that lead to improvement in students' performance.

Research Questions

The study answered the following questions;

- i. What is the perceived impact of Foreign Education Intervention Programmes (FEIP) on the performances of Basic Science & Technology (BS & T) teachers' teaching methods?

- ii. What is the perceived impact of Foreign Education Intervention Programmes (FEIP) on the performances of Basic Science and Technology teachers’ utilization of technology resources in the classroom activities?

III. METHODOLOGY

In carrying out this research, the descriptive survey research design was utilized and the subjects of this study were the Basic Science and Technology teachers who benefited from Foreign Education Intervention Programmes in the FCT, Nigeria. The Federal Capital Territory (FCT) was selected for the purpose of this study simply because it has the highest number of teachers who benefitted from foreign education trainings in Nigeria. The population for this research was the entire 262 Basic Science and Technology teachers from 165 public Junior Secondary Schools in the six Area Council of the FCT. A total of 86 teachers were randomly selected for the study. The instrument that was used for data collection in this study was the Classroom Observation-Checklist which was validated by experts from Faculty of Education, University of Abuja, Therefore, for the reliability of this research instrument, some teachers who attended foreign education intervention training were selected and observed during classroom lesson using the study instrument (classroom observation checklist), the same observation was conducted to same set of teachers who attended foreign education intervention programmes. The approach was used to determine the suitability of the test items for the study and also confirm the internal consistency of the test. The reliability coefficient of $r = 0.71$ was obtained. The quantitative Data was analyzed using Statistical Package for Social Science Software (SPSS) 20.0 versions, Descriptive statistics were used to summarize data in form of frequency counts, simple mean and standard deviation.

IV. RESULTS AND DISCUSSION

Research Question One: What is the perceived impact of Foreign Education Intervention Programmes (FEIP) on the performances of Basic Science & Technology (BS&T) teachers’ teaching methods?

Table 1: Classroom observation for Basic Science and Technology teachers on teaching methods

	Item	Mean	Std
1	The teacher uses variety of Student-centered instructional strategies	3.53	0.704
2	The teacher interrelates ideas and information across subject matter areas through questioning	3.15	0.630
3	The teacher involves students in the lesson activities through demonstration	3.20	0.640
4	The teacher has knowledge of the subject curriculum	3.28	0.656
5	The teacher connects content to global communities	3.01	0.601
	Total	3.16	0.113

(Decision mean = 2.5)

Table 1 shows mean scores of participants on different aspects of teaching methodology. In all the statements assessed on the table above, the mean score of all items were above 2.5 (decision mean) which indicate participants’ high performances in teaching methods. The item one which has the highest score of 3.53 indicate that the Basic Science teachers who attended Foreign Education Intervention Training uses variety of Student-centered instructional strategies, Hence, the overall mean score of all the item statements is 3.16 with 0.113 standard deviation and this indicate that the overall mean score is higher than the decision mean (2.5). Thus, it was concluded that Foreign Education Intervention Training has positive impact on the performance Basic Science Teachers’ teaching methods in the Federal Capital Territory, Nigeria.

Research Question Two: What is the perceived impact of Foreign Education Intervention Programmes (FEIP) on the performances of Basic Science & Technology (BS&T) utilization of technology in the classroom?

Table 2: Classroom observation for teachers on utilization of technology in classroom activities

S/N	Item	Mean	Std
1	The teacher uses technology as instructional resources in the classroom	2.91	1.022
2	The teacher uses technologies to teach basic skills in science and technology	3.30	1.037
3	The teacher integrates technologies to lesson activities to enhance problem solving	3.27	0.955
4	The teacher uses cell phones in teaching and learning activities in the classroom	2.60	0.929
5	The teacher use of social media technology becomes common place as a teaching tool in classroom	3.04	0.904
6	The teacher effectively uses supplementary technologies such as computers, overhead- projectors, smart-board in classroom	3.03	0.947
7	The teacher provides and uses audio-visual aids in the classroom	3.17	0.954
8	The teacher uses printed pictures, charts, graphs, etc. in the classroom	3.20	0.958
9	The teacher uses computers to access online information	2.71	0.897
	Aggregate mean	3.04	0.026

Table 2 showed mean scores of participants on different aspects of utilization of technology in the classroom. In all the statements assessed on the table above, the mean score of all items were above 2.5 (decision mean) which indicate participants’ high performances in utilization of technology in the classroom. The item 2 which has the highest score of 3.30 indicates that the Basic Science and technology teachers who attended Foreign Education Intervention Training uses technologies to teach basic skills in science and technology, Hence, the overall mean score of all the item statements is 3.04 with 0.026 standard deviation and this indicates that the overall mean score is higher than the decision mean (2.5). Thus, it was concluded that Foreign Education Intervention

Training has positive impact on the performance of Basic Science Teachers' based on utilization of technology in the classroom activities in the Federal Capital Territory, Nigeria.

V. DISCUSSION

The results of this study also revealed that teachers who had the opportunity to attend foreign education intervention training perform better in the utilization and integration of technologies in classroom which as a result enhances teaching effectiveness and improves students' academic performances. This finding agrees with finding of Azkiyah, Simon, Bert and Creemers (2014) whose result revealed that when teachers participate in effective teacher development programme, their teaching quality will improve which eventually is expected to affect students' achievements.

VI. CONCLUSION

Teachers have crucial roles to play in bringing about improved learning in students, their ability to effectively carryout these roles would be determined largely by the quality of professional development programmes made available to them and utilize by them. The teacher professional development could lead to marked improvement in content, process, context and outcomes of student learning in schools. However, based on the findings, the study concludes that;

- i. The Foreign Education Intervention Programmes have positive perceived impact on the performance of Basic Science and Technology Teachers in their teaching strategies,
- ii. The Foreign Education Intervention Programmes have positive perceived impacts on the performance of Basic Science and Technology Teachers in their utilization of technology in the classroom activities,

VII. RECOMMENDATIONS

In line with the research findings and conclusion, the following recommendations were made;

- i. There is need for continuous provisions for science teachers to go on in-service training programmes since their performances are enhanced through such trainings. The training programmes will be organized by the Federal Ministry of Education in partnership with international development partners.
- ii. Federal Capital Territory should adopt foreign education strategies in order to improve science teachers' performance that will go in line with international best practices
- iii. The teachers who benefited from foreign education intervention trainings should be given opportunities to extend the knowledge and skills acquired to other teachers who had not benefited from such trainings.

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