Assessment of Secondary School Teachers' Professional Development Programmes and Students Academic Performance in Selected Subjects in Enugu State

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Abstract

This study assessed secondary school teacher's professional development programmes and students' academic performance in selected subjects. Descriptive survey design was used in the study. The population of the study comprised all secondary school teachers all secondary school teachers in Obollo-Afor education zone, Enugu State. Stratified simple random sampling technique was used to select 222 English, Mathematics, Physics, Chemistry and Civic Education from 634 teachers in the zone. Three research questions were formulated for the study. Instruments used in gathering data were Teachers' Training programmes Checklist (TTPC) and Academic Performance Test. Data collected were analysed using percentage. The findings showed that the common profesional development programmes embarked by secondary school teachers includes evening courses, vacation and TRCN courses, workshops, correspondence courses and conferences; teacher's professional development programmes positively influence student's academic performance and improved the level of academic performance of students in English, Maths, Civic Education, Physics and Chemistry. The study concluded that the common profesional development programmes embarked by secondary school teachers includes evening courses, vacation and TRCN courses, workshops, correspondence courses and conferences. Teachers' profesional development brings improvement in the level of academic performance of students in English, Maths, Civic Education, Physics and Chemistry. And thus, positively influences student's academic performance. The study recommended among others that the government and other stakeholders in education should provide adequate profesional development opportunities for the teachers in secondary schools to improve and sustain students' academic performance.

Keywords: Teachers' Professional Development, Quality Assurance, Student's Academic Performance

Introduction

Education enterprise globally is considered a worthwile venture due to its capacity to boost human capital development and development in the society. Quality assurance in education is an emerging policy perspective in the contemporary world which its adoption emanated at the World Conference on "Education for All led by UNESCO" in Jomtien, Thailand, 2002, were representatives of the international community agreed that all countries should pay greater attention towards improving all aspects of their education, ensuring quality and excellence in all ramifications (UNESCO, 2018). Accordingly, the FME (2019) stressed that the primary goal of quality assurance in education is to ensure the sustainability of quality education. Quality assurance in education can be facilitated through the organization of training programmes and workshop for teachers with a view to improve the professional competence of the teachers. Teachers' profesional development is defined as a planned and systematic programme of learning opportunities for teachers which helps to improve their teaching performance (Adeniji, 2000). Thus, there exist a relationship between quality assurance in education and teachers' professional development. As a result, there's been an increasing recognition of the inter-connectivity of quality assurance in education and teachers' professional development (Alaba, 2010). Professional development aims to equip teachers with new teaching ideas and putting their knowledge into practice for the benefit of students' growth. It is seen as an integral part of school improvement, planned and provided systematically according to teachers' needs and appropriate to school's ethos and objectives. Teachers' professional development is designed to expose classroom teachers to teaching innovations needed to meet up with the emerging instructional technological innovations and also to improve their content knowledge, skills and classroom practices in order to enhance student's academic performance which is one of the locus standi of quality assurance in education.

More so, Avalos (2011), notes that teacher's professional development programme is a complex process, which requires cognitive and emotional involvement of teachers individually and collectively, the capacity and willingness to examine where each other stands in terms of convictions and beliefs and the perusal and enactment of appropriate alternatives for improvement or change. Aguokagbuo, (2006) sees teacher professional development programme as that which is comprised of goals and objectives, input, process, evaluation and output that improve teaching competencies and ensure quality education. This is why almost every government around the world invests astronomical amounts of money on traditional professional development activities such as seminars, talks, workshops, and conferences (Johnson & Fargo 2014; Okobia 2013). The Organization for Economic Co-operation and Development (OECD, 2009) adopts a broad definition of teacher professional development (PD) as activities that develop an individual's skills, knowledge, expertise and other characteristics as a teacher. Thus, Professional development aims at developing teachers' professional thinking and practices which enhances the quality of classroom experience.

Meanwhile, the main principles for any professional development programme is to; ensure depth of content knowledge, provide a strong foundation in the pedagogy of particular disciplines, provide more general knowledge about teaching and learning processes, reflect the best available research, contribute to measurable achievements in student learning, expect teachers to be intellectually engaged with ideas and resources, provide sufficient time, support and resources to enable teachers to master new content and pedagogy and integrate these into their practice (American Federation of Teachers, 2008). Ekpela (2005) identified causes of poor-quality output of teachers to include unpreparedness in terms of skills update, attendance at workshop/seminars and conferences. Alaba (2010) reported that teachers' regular attendance in conferences, seminars and workshops resulted in improvement of skills and improved quality educational outputs.

In addition, the nature of teachers' professional development Programmes has been criticized by researchers in failing to facilitate quality education output. In an instance, Ayeni (2010), stressed that professional development approaches such as seminars, workshops and conferences are relatively ineffective because they are usually short-term, typically lasting from one to eight hours; they lack continuity due to inadequate follow-up and on-going feedback from experts; they take a passive approach to training teachers, allowing little opportunity to learn by doing and reflecting with colleagues. Borko (2004) observed that these types of professional development programmes are "woefully inadequate" because they tend to be fragmented and intellectually superficial, disconnected from classroom practices and unrelated to most teachers' actual needs and interests. Hence, education systems across the globe are currently embarking on deep reforms that include a planned and systematic professional development programme for teachers geared towards improving their teaching performance due to the growing concern about the challenges inhibiting teachers' instructional task performance and persistent decline in students' academic performance which negatively impact the realization of objectives of education (Borko, 2004). Teacher professional development comprises of all formal and informal learning embarked upon and experienced by the teachers in a compelling learning environment under conditions of complexity and dynamic change in order to improve their skills and knowledge to facilitate the attainment of educational objectives.

No doubt, one of the goals of quality assurance in education is to ensure quality teaching and learning in schools which are indicated by improved students' academic performance. Academic performance is described as the results of accomplished student's achievement in various academic subjects by means of exertion, skill, practice or perseverance (Anekwe, 2006). Anastasi and Uraina (2005) noted that it is the aspect of measuring the effects of relatively standardized set of experience. Academic performance is hence, the level of academic success and the attainment of predetermined learning objectives by the learner measured in terms of scores and grades. The level of academic performance is determined through the results of internal and external assessment that takes the form of formative and summative evaluations. In secondary school setting, the standardized format for assessing the students' academic performance is through external examinations like the West Africa Senior School Certification Examination (WASSCE). The test instruments for WASSCE are designed to test the level of attainment of the goals, aims and objectives of the curriculum implemented in secondary schools by classroom teachers. Thus, the WASSCE stated educational goals are achieved when the students excel academically in performance and experience under the mentorship of professional teachers. The essensse of exposing classroom teachers to new teaching methods and emerging innovations in educational instructions through professional development programmes is to ensure enhanced student's academic performance.

Conversely, the findings of Ayeni and Akinola (2008); Ipaye (2002); Ogunu, (2001); Okebukola (1996) and Zobaida (2008) revealed that challenges such as: inadequate mastery in lesson planning and delivery by teachers; lack of proper monitoring and evaluation of students' learning; inadequate professional profesional development programmes affects classroom instructions. These situations are likely to impede the actualization of educational objectives leading to low academic performance among students. All nations world-wide are currently embarking on deep reforms of their education system one of which is through ensuring a planned and systematic professional development programme for teachers towards improving their teaching performance due to the growing concern about the challenges inhibiting teachers' instructional task performance and the persistent decline in students' academic performance which negatively impact the realization of objectives of education in schools. The lack of realization of objectives of education has been attributed by researchers to gaps in curriculum instruction, learning facilities, poor funding, and institutional management and most importantly teachers' incompetency as a result of poor professional development. It then appears that innovative forms of teaching are needed to develop student competencies such as deep mastery of challenging content, critical thinking, complex problem-solving, effective communication and collaboration, and self-direction. In turn, effective professional development (PD) is needed to help teachers learn and refine the pedagogies required to teach these skills and ensure quality out-put in our secondary education system. However, teachers' low enrolment in professional development programmes can be linked to the persistent poor academic performance of students in secondary schools in Obollo-Afor Education Zone. Therefore, this study focused on assessing secondary school teachers' professional development programmes and students' academic performance in Obollo-Afor Education Zone, Enugu State.

Purpose of the Study

The study assessed secondary school teachers' professional development programmes and **students' academic performance** in Enugu state. Specifically, the study:

- i. ascertain the common professional development programmes used by teachers.
- ii. find out the level of academic performance of secondary school students
- iii. find out the influence of teachers' professional development programmes on student's academic performance.

Research Questions

The following research questions were answered:

- i. What are the common professional development programmes for teachers in Enugu State?
- ii. What is the level of academic performance of secondary school students?
- iii. What is the influence of teachers' professional development programmes on the student's academic performance in external examination?

Methodology

The study employed descriptive survey type. The population for the study comprised all secondary school teachers from Udenu L.G.A, Igbo-Eze North L.G.A, Igbo-Eze South L.G.A. in Obollo-Afor education zone. Stratified simple random sampling technique was used to select 222 English, Mathematics, Physics, Chemistry and Civic Education from 634 teachers in the zone. Three research questions were formulated to guide the study. Instrument used in gathering data for this study were Teachers' Training programmes Checklist (TTPC), and Academic Performance Test. The instrument was validated by experts who confirmed that it's valid for this study. Data collected were analyzed using percentage.

Results

Research Question 1: What are the common professional development programmes used by teachers?

Table 1a: Available Professional Development Programmes for Teachers 2015-2019 (Percentage of Attendance)

Training programmes	2015	2016	2017	2018	2019
Evening courses	32%	39%	43%	40%	43%
full time courses					
Ch 4 42	0%	0%	0%	0%	0%
Short time courses	0%	0%	0%	0%	0%
Vacation courses					
Workshops	38%	40%	42%	39%	30%
vvoi ksnops	32%	39%	30%	39%	43%
Seminars	32%	39%	30%	39%	43%
Correspondence courses	32/0	39/0	3070	3970	43/0
- 11 (TD) 1	10%	10%	10%	17%	20%
Radio/TV courses	0%	0%	0%	0%	0%
TRCN programme					
Conferences	32%	39%	43%	40%	43%
Conferences	32%	39%	30%	39%	43%

Source: PPSMB Statistical Unit Obollo Education Zone, 2019.

Table 1a. above shows that from 2015-2019, teachers have been exposed to various professional development programmes geared toward improving their teaching proficiency. From 2015-2019, 32%, 39%, 43%, 40%, and 43% of teachers respectively were enrolled into evening courses. While 38%, 40%, 42%, 39%, and 30% of teachers took up vacation courses. 32%, 39%, 30%, 39% and 43% participated in workshops and seminars respectively. At the same time, from 2015-2019 of the year under study, 10%, 10%, 10%, 17% respectively and 20% were engaged in correspondence courses. And 32%, 39%, 43%, 39% and 43% registered for TRCN. While 32%, 39%, 30%, 39% and 43% participated in conferences. These training and opportunities were designed to help these teachers to be abreast with instructional innovations and teaching pedagogies so as to sustain the benchmark and ensure quality in education output.

Research Question 2: What is the Level of Academic Performance of Secondary School Students?

Table 1b: % of Passes/failures in English Language, Mathematics, Civic Education, Physics and Chemistry WASSEC, from 2015 to 2019

2015	No of	English	Fail	Mathema	Fail	Civic	Fail	Physics	Fail	Chemistry %	Fail
	Teachers on	% of		tics % of	•	Education %		% of Passes		of Passes	
	Training Passes Pass		Passes		of Passes						
-	programmes	3									
	58	24.44	75.6	38.6	61.4	37.3	62.7	29.34	70.66	35.0	65
2016	No of Teachers on Training programmes	Passes	Fail	Mathema tics % of Passes		Civic Education % of Passes	Fail	Physics % of Passes	Fail S	Chemistry % of Passes	Fail
	62	34.22	65.78	38.8	61.2	39.4	60.6	31.22	68.78	38.44	61.56
2017	No of Teachers on Training program me	Passes	Fail	Mathema tics % of Passes		Civic Education % of Passes	Fail	Physics % of Passes	Fail s	Chemistry % of Passes	Fail
	63	35.11	64.89	40	60	39.9	60.1	33.3	66.7	39.7	60.3

Source: PPSMB Statistical Unit Obollo Education Zone, 2019.

The **table 1b**, on the other hand shows that 58 teachers took part in professional training programmes in 2015, 62 teachers in 2016 and 63 teachers in 2017, with the percentage of failure/passes indicating improvement in the level of academic performance of students in English, Maths, Civic Education, Physics and Chemistry from 2015 to 2017.

Research Question 3: What is the influence of teachers' professional development programmes on the student's academic performance in external examination?

Table 2: Influence of Teacher's Professional Development Programmes on 2017 WASSEC Results

S/N	Training	No of	Subjects	No of	Distinctions	%	Credit	%	Pass	%	Fail	%
	programmes	Teachers		Candidates								
1	Evening courses	43	English	3,371	257	7.6%	2,329	69%	552	16.37%	233	6.9%
2	Vacation courses	42	Mathematics	3375	547	16.20%	1674	49.6%	895	26.51%	259	7.67%
3	Workshops	30	Physics	1474	318	21.57%	906	61.46%	187	12.6%	63	4.27%
4	Seminars	30	Chemistry	1479	381	25.76%	795	53.75%	150	10.14%	153	10.34%
5	Correspondence courses	10	Biology	2,084	298	14.29%	1,286	61.7%	312	14.1%	188	9%
6	TRCN programme	43	Civic education	1,865	448	24%	949	50.9%	337	18.1%	131	7%
	Total	198		13648	2249	16.49%	7,939	58.1%	2,433	17.81%	1,027	7.5%

Source: PPSMB Statistical Unit Obollo Education Zone 2019.

Results in **table 2** revealed that a total number of 198 teachers embarked on different professional in 2017. And that out of 13, 648 candidates that sat for English, Mathematics, Physics, Chemistry, Biology and Civic Education in WASSCE, a total of 12,621 candidates representing 92.4%, obtained distinction and above, while only 1,027 candidates representing 7.5% failed. This finding when compared with the data in **table 1b**, shows that teacher's participation in professional development positively influences student's academic performance in the area.

Table 3: Professional Development Programmes for Teachers and WASSEC Results for 2018

S/N	Training	No of		No of								
		Teachers	Subjects	Candidates	Distinctions	%	Credit	%	Pass	%	Fail	%
1	Evening courses	40	English	3,891	463	11.9%	2,523	64.4%	741	19%	164	4.21%
2	Vacation courses	39	Mathematics	3,856	1,100	28.52%	2,071	53.70%	447	11.59%	238	6.17%
3	Workshops	39	Physics	1,802	246	13.65%	953	52.88%	494	27.41%	109	6%
4	Seminars	39	Chemistry	1,826	695	38%	894	48.9%	178	9.7%	59	3.23%
	Correspondence courses	17	Biology	2,291	365	15.9%	1,501	65.5%	295	12.9%	130	5.7%
5	TRCN programme	40	Civic education	2,023	655	32.44%	1,011	49.9%	245	12.1%	112	5.5%
	Total	214		15,689	3,524	22.5%	8953	57%	2,400	15.3%	812	5.2%

Source: PPSMB Statistical Unit Obollo Education Zone 2019

From **table 3** above, a total number of 214 teachers embarked on different professional in 2018. And out of 15, 689 candidates that sat for English, Mathematics, Physics, Chemistry, Biology and Government in WASSCE 14,877 candidates representing 94.8%, obtained distinction and above, while only 812 candidates representing 5.2% failed. This finding therefore, shows that teacher's professional development has high positive influence on student's academic performance.

Table 4: Professional Development Programmes for Teachers and WASSEC Results for 2019

S/N	Training	No of	Subjects	No of	Distinctions	%	Credit	%	Pass	%	Fail	%
		Teachers		Candidates								
1	Evening courses	43	English	3,421	89	2.5%	1,857	54%	1,070	31%	405	11.8%
2	Vacation courses	30	Mathematics	3,475	1,083	31%	1,433	41%	697	20%	262	7.5%
3	Workshops	43	Physics	1,737	555	31.9%	901	51.9%	221	12.7%	60	3.5%
4	Seminars	43	Chemistry	1,759	184	10.5%	894	50.8%	490	27.8%	191	10.8%
5	Correspondence courses	20	Biology	2,154	119	5.5%	1,241	57.6%	545	25%	249	11.5%
6	TRCN programme	43	Civic education	01,680	359	21%	784	46.6%	303	18%	234	13.9%
	Total	222	N	14,226	2,389	16.8%	7,110	50%	3326	23.4%	1,401	9.8%

Source: PPSMB Statistical Unit Obollo Education Zone 2019.

The results in **table 4** above, a total number of 222 teachers embarked in different professional in 2019. And out of 14,226 candidates that sat for English, Mathematics, Physics, Chemistry, Biology and Civic education in WASSCE respectively, a total number of 12,825 candidates representing 90.2%, obtained distinction and above, while only 1,401 candidates representing 9.8% failed. This finding therefore, shows that teacher's professional development has influence on student's academic performance.

Discussion of Findings

The findings of research question one of this study shows that there has been inadequate collaborative and variety of approaches to professional development programmes such as evening course, vacation courses, workshops, seminars, correspondence courses, TRCN, and conferences but the number involved are not enough to make meaningful impact in the system. This is why Fadoku (2012) revealed that only experienced teachers with formal training are expected to know how to design, implement, aid, sustain relevant and effective in-service continuing professional development which are participatory, school-based, and focus on student's learning.

This study noted that distance education such as vacation courses and evening play an important role in helping to address the growing shortage of qualified teachers. In addition, the number of universities in Nigeria is offering degree and courses for educators across the country have grown in recent years. The findings from the tables 1, above shows that teacher's attendance to these are grossly inadequate and has negative effect on students' academic performance. Supporting this assertion, Hill, Beisiegel, and Jacob, (2013) noted that traditional professional development activities have very limited or null potential to improve teachers "value added" scores, and therefore no potential to benefit students.

Accordingly, vacation, evening and correspondence courses among others are important areas being used extensively to provide pre-service teacher preparation, upgrading of academic qualifications and in-service continuing professional development of contents and instructional methods, all aimed at improving the quality of education output in Nigerian secondary schools.

In Nigerian, the National Open University of Nigeria (NOUN), operates the NOUN Radio, also in University of Lagos, Akoka, Nigeria uses the UNILAG Radio, and the Institute of Management and Technology, (IMT) Enugu among others are known for their radio. These Radio Stations are where students listen and receive their lectures. These are very popular and are being used by these institutions, to broadcast educational of variety on areas such as teacher education, rural development programme in agriculture for farmers, science education, creative writing, and mass communication, in addition to traditional courses in liberal arts, science and business administration (Amadi, 2010). The inadequacies in teachers' professional development constitute gap that can possibly lower the standard of teachers' instructional task performance and the rate at which students understand the most subjects taught in schools which in turn affects their academic performance. This can be attributed to factors like; unwillingness of some teachers to participate in any meaningful professional development programme, inadequate funding by the government, lack of adequate training module, qualitative teacher education among others and most likely, because most of professional development

embarked by teachers are organized by local developers who are often times not well-equipped with relevant knowledge on Professional Development theory and practice, and with a relatively short span and scope.

In Table 2, a total number of 198 teachers embarked on different professional in 2017. And out of 13, 648 candidates that sat for English, Mathematics, Physics, Chemistry, Biology and Civic Education in West African Senior School Certificate Examination (WASSCE), a total number of 12,621 candidates representing 92.4%, obtained distinction and above, while only 1,027 candidates representing 7.5% failed. Therefore, the finding shows that teacher's participation in professional development programmes positively influence student's academic performance. This is however in line with the findings of Ayeni and Akinola (2008) who noted that there is positive relationship between adequate in-service training opportunities for teachers in secondary schools and student's performance.

Table 3 revealed that a total of 214 teachers embarked on different professional in 2018 and out of 15, 689 candidates that sat for English, Mathematics, Physics, Chemistry, Biology and Civic education in WASSCE, a total number of 14,877 candidates representing 94.8%, obtained distinction and above, while only 812 candidates representing 5.2% failed. This shows that teacher's professional development programmes likely influence student's academic performance, as these development programmes aims at re-educating qualified and competent teachers empowering them with new knowledge, attitude, skill and behaviors for advancement and meaningful contributions to quality assurance in education in Nigeria. In this respect, Little (1993), argued that, perhaps due to lack of better alternatives or ideas many schools and school districts around the world continue to invest their resources in organizing these kinds of Professional Development events conducting one-off workshops, inviting university lecturers to give specialized talks and seminars or sending their teachers to costly conferences and conventions once or twice per year.

The results in table 4 indicated that a total number of 222 teachers underwent different professional in 2019, while 14, 226 candidates that sat for English, Mathematics, Physics, Chemistry, Biology and Government in WASSCE respectively, a total number of 12,825 candidates representing 90.2%, obtained distinction and above, while only 1,401 candidates representing 9.8% failed. The study therefore indicates that teacher's participation in professional development programmes likely has positive influence on student's academic performance. Supporting the above finding, UNESCO, (2002) observed that professional ensured to some extent substantial performance, recognized and measurable learning outcomes in schools. This also corroborates the finding of Bateman and Organ (2003) that discovered a strong positive relationship between teachers' involvement in seminars and workshops and their output.

Conclusion

The study shows that the common profesional development programmes embarked by secondary school teachers includes evening courses, vacation and TRCN courses, workshops, correspondence courses and conferences. Teachers' profesional development brings improvement in the level of academic performance of students in English, Maths, Civic Education, Physics and Chemistry. And thus, positively influences student's academic performance.

Recommendations

The government and other stake holders in education should provide adequate professional development opportunities for the teachers in secondary schools.

- i. sThere should be scholarships opportunities to encourage more secondary school teachers to embark on profesional development programmes for improved professional competence and improved students' academic performance in secondary schools.
- ii. Annual professional development programmes should be made compulsory for all teachers the moment they are employed.

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