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Occasional Papers in Education and Lifelong Learning *an international journal*

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Cost constraints and the quality of teacher education programmes in Nigeria's south-west universities

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ABSTRACT This study examines the professional development needs of teachers, the quality of training provision, what motivates teachers to participate in professional programmes, and who shoulders the cost of professional development of teachers. The investigation was guided by five research questions. Relevant literature was reviewed. The study adopts a survey design approach; and the participants were graduate trainee teachers. Through purposive and random sampling technique, 300 teachers were selected and the instrument for data collection was questionnaire. Correlation, regression and factor analysis were the test statistics. The study found that all the participants agreed on the need for teacher professional development, equitable reward system and on the need for government to subsidise the cost of teachers' professional development. Recommendations were made which would act as motivation for teachers to enroll on continuing professional development programmes.

Key words: National Certificate in Education, In-Service Teacher Education Programme, Professional Development Programmes, cost, quality of teacher education programmes

Introduction

Education is a key to meaningful involvement and success by individuals and nations in a globalised world. Globalisation has brought in its wake, a competitive economic situation that [arguably] seeks to expand capitalism globally seeking out new markets and being driven by communications and information technologies (Currie and Newson, 1998; Hickling-Hudson, 2000). Education attainment gap between the developed and developing countries can be bridged through effective teacher education training programmes for the simple reason that teachers have the most direct and sustained contact with students as well as exercise considerable control over not only what is taught in the classroom, but also the learning environment. Improving teachers' knowledge, skills and competence through professional development is therefore a crucial step in improving student achievement. In the context of the present day's standards-based education reforms, where the goal is for students to achieve high academic standards, effective professional development becomes imperative. The need for functional education for the promotion of a progressive and united Nigeria is therefore very essential. To this end, school-based professional development programmes need to be relevant, practical and comprehensive.

For Nigeria to realise its full potentials as a successful knowledge-based economy, there is a need to raise the level of literacy by supporting professional development of highly skilled teachers in developing [still further] their knowledge base, competencies and capabilities [essential] for creative and innovative thinking that is required to secure the future well-being of Nigeria.

There has been a problem of inadequate professional training of graduates of the National Certificate in Education (NCE) in Nigeria. And, in a bid by the NCE graduates to develop themselves and improve the quality of their teaching, many of them enroll on teacher professional development courses offered by universities and colleges of education often at a great personal cost. These courses—generally known as *in-service training*—take place often during school holidays or on full-time basis, in which teachers who are already serving take a [training] leave from their employers to attend. It is a form of continuing professional development aimed at improving and updating teachers' subject knowledge as well as their classroom practices (Makoju, et al., 2002).

There is need to examine critically the cost implication of teacher education programmes in Nigeria. Nigeria has witnessed a steady decline in the budgetary allocation to the education sector over time. Analysis of the budgetary allocation to education between 2008 and 2012 by the Leadership Magazine (2011) showed

the following [consistent fall] proportionate to the annual national budgets]: 2008 (10.6%), 2009 (10.6%), 2010 (6.2%), 2011 (7.6%), and 2012 (8.4%)). A critical look at the pattern of budgetary allocation to education when compared to the annual national budgets shows that education is poorly funded in Nigeria, and the country is yet to comply with a UNESCO recommendation that 26% of the annual national budget be spent on education (see Ekundayo and Ajayi, 2009). Adequate funding is therefore crucial to the overall development of education in general and teacher education in particular. Without adequate funding, it is hard to see how proper training of teachers can take place.

Statement of problem

The continuing slide in the standard of education in Nigeria in recent years has continued to generate a heated debate in the country. This has been blamed predominantly on teachers, their teaching methods and techniques, attitude to work, competence and general behaviours. The latter development has raised the question of the efficacy of teacher education curriculum particularly professional development of teachers. Widening access to education and improving its quality is central to the development of any country—developing countries in particular. And to realise a United Nations goal of quality education for all by the year 2015, education and training providers must be actively involved. In Nigeria, the biggest problem facing the education sector is that the funds earmarked for education in general and teacher education in particular has consistently been inadequate. A critical assessment of the pattern of budgetary allocation to education mentioned in the preceding paragraphs shows a steady decline and when compared to the annual national budget, the amount budgeted for the education sector is significantly at variance with a UNESCO benchmark of 26% mentioned previously.

The importance of developing a sense of professionalism among teachers cannot be over emphasised. The need to build capacity for the delivery of teacher training programmes in Nigeria is very urgent. Regrettably, most of teachers bear the cost of funding their own training and development. No attempt, however, has been made to ascertain what it costs the in-service teachers in their desire to update themselves academically and professionally. Knowledge of the cost implications of teachers' continuing professional development might persuade employers to offer teachers some form of subsidy. Hence the need to evaluate the cost constraints and the quality of teacher education programmes in Nigeria.

Statement of objectives

The objective of the study is to evaluate the cost constraints of in-service education to graduate teacher trainees. Another objective is to determine the professional development needs of teachers and ascertain the quality of training available on the in-service programme and the appropriateness of the curriculum in relation to the costs incurred by the trainee teachers.

Research questions

1. What are the professional development needs of graduate teacher trainees?
2. How would you ascertain the quality of training provision available in professional development programmes and its appropriateness to school curriculum?
3. What motivates teachers to participate in professional development programmes?
4. What are the challenges graduate teacher trainees encounter in the course of pursuing professional development programmes?
5. What is the cost and total expenditure incurred in undertaking the professional development programmes?

A review of previous work

It is the goal of the educational system in Nigeria to provide high-quality education to every Nigerian citizen. To do so requires an adequate supply of competent individuals who are willing and able to serve as teachers. In the context of today's standard-based education reforms, where the goal is for students to achieve high performance standards, effective professional development of teachers is critical (Odden et al., 2002; Drage 2010). This is because, to maintain good student learning, there is need for teachers to constantly improve on what they teach and how they teach. Although a 'typical' professional development programme for teachers has been found have had little impact on teachers' classroom behaviours and practices, or on the performance of students (Odden et al, 2002), *effective* professional development of teachers is critical for raising standards or for achieving good academic performance of students.

Odden et al. (2002) did not dispute the importance of teachers' professional development, but questioned whether certain professional development programmes are achieving desired outcomes or whether programmes are having the

desire impacts in the classroom. It is through continuing professional development of teachers that there will be an improvement in teachers' subject knowledge, teaching competencies, classroom management skills, as well as in the general understanding of effective teaching methods (that will improve students learning and, at the same time, increase the productivity of teachers themselves). Professional development should therefore be seen as a professional obligation for teachers.

With regard to teacher education in Nigeria, the National Policy on Education (2004, pp. 19-40) has the following provision:

- Since no education system may rise above the quality of its teachers, teacher education shall continue to be given major emphasis in all educational planning and development.
- The minimum qualification for entry into the teaching profession shall be the Nigeria Certificate in Education (NCE).
- All teachers in education institutions shall be professionally trained.
- In-service training shall be developed as an integral part of continuing teacher education and shall also take care of all inadequacies.
- Those already engaged in teaching but not professionally qualified shall be given a period of time within which to qualify for registration or leave the profession.

Imogie (1998, p.105) asserts that some of the competencies required of the teacher to be able to plan and deliver lessons include:

1. An understanding of the behavioural science or process involved in effective communication and learning communication model.
2. Knowledge of subject matter.
3. Knowledge of available sources of materials for teaching.
4. Knowledge about appropriate selection criteria out of available materials/resources for specific instructional objectives.
5. Knowledge and skills in analysis for both formative and terminal evaluation.

A good teacher education programme should therefore be based on relevant and up-to-date curriculum for training teachers to acquire the competencies set out in Imogie (1998). It is clear from Imogie why in-service training or professional development of teachers is given considerable attention in Nigeria. The in-service training programmes are organised for teachers who are NCE graduates and those who are not professionally qualified or trained. No matter the quality and adequacy of

pre-service teacher education, in-service training will still be required (Alani, 2005), to enable teachers to keep abreast with the developments in the teaching profession.

According to the National Policy on Education (2004, p. 19-40) mentioned in the preceding paragraphs, "in-service training shall be developed as an integral part of continuing teacher education and shall also take care of all inadequacies". In order to address the demand for the in-service education, colleges of education, faculties of education in universities, institutes of education, and the National Teachers' Institute, introduced part-time and sandwich programmes for serving teachers who wanted to upgrade their qualifications. Teachers, however, prefer the part-time attendance mode because of the need to combine work with study, and also because it is almost impossibility of obtain study leave with pay.

As Maurer (2000) argues, the primary focus of professional development should be to improve students' learning and that teachers will be more effective when they are exposed to ongoing education and development. Wong (2004) is also of the view that the success and achievement of students or in improving students' achievement begins with the quality of teaching and this should be an overriding goal of any school.

Above all, professional development programmes are expected to serve as a vehicle for producing well qualified teachers for the education system—effective and productive teaching workforce that constantly updates its subject knowledge and skills (Imogie, 2006).

Research method

The study adopted a survey design. The population of the study were all part-time in-service teacher trainees in the faculties of education in three selected universities in the South West of Nigeria. The study used purposive sampling technique to select the three universities in question, namely—universities of Lagos and Ilorin, and Obafemi Awolowo University.

Simple random sampling technique was adopted to select 100 part-time/in-service trainee teachers each from vacation 1 to 6 from the three universities bringing the total number to 300 participants sampled for the study. This is a true representative sample because every part-time/in-service trainee from each of the faculties had an equal chance of being selected (which suggests that the results of the study can be generalised for the whole population). Six departments participated in the study: Adult Education, Educational Administration, Educational Foundations, Art and Social Sciences Education, Human Kinetics and Health Education and Science and Technology Education.

Questionnaire and interview were instruments used for data collection. The questionnaire which was meant for the in-service trainees was divided into two sections. The first section sought information on the social and demographic characteristics of the participants while the second section elicited information on the needs of the professional development programme, the quality of training provision and its relevance to curriculum; what motivates the in-service teachers to participate in the programme, their confidence level in applying the knowledge gained to ensure effective teaching and learning, the challenges or barriers to professional development and the cost of undertaking the programme. The Likert scale was used; strongly agreed, agreed, disagreed and strongly disagreed with numerical values of 4 – 1. This scale measure used for the study ranges from 4 to 1 with the highest rating of 4 indicating the highest level of agreement and the least of 1 showing the lowest level of agreement. There were ethical considerations for the study. This is because the participants were fully informed about the research and why they were chosen to participate before they gave their consent. They were assured of confidentiality of the information they supplied. Interviews were carried out to corroborate the information provided in the questionnaire.

The response rate was 100%. The breakdowns of responses within the departments were: Adult Education; Arts and Social Sciences; Educational Administration; Educational Foundations; Human Kinetics and Health Education and Science and Technology. In order to ascertain the reliability of the instrument, the Cronbach's Alpha reliability was employed. The Cronbach's Alpha reliability statistic was 0.9 greater, than the standard, which is 0.7. This indicates that there is high internal consistency among the items in the instrument. The validity test for the reliability statistic is significant at 5%.

Results

Statistical tests were conducted to evaluate cost implication of graduate teacher trainees' professional development programmes. The social and demographic characteristics of the participants were sub-divided into gender, educational qualification, years of experience, name of institution and course of study, so that a comparison in responses could be determined. In addition, frequencies, factors analysis, correlation and regression statistics were used in data analysis.

Research Question 1

- *What are the professional development needs of graduate teacher trainees?*

The findings from this study in relation to the above question were derived from frequencies and factor analysis presented in tables 1a and 1b (see the appendices). From table 1a, all the participants agreed that the professional development of teachers is very important. The top three rankings [in terms of responses] were (1) *the exposure of teachers to the knowledge, skill and competence required for professional growth and improvement*; this has a mean response of 3.6 (2) *enhance teacher understanding of effective instructional method that will improve students' academic achievement*; this ranking has a mean response of 3.6 (3) *improvement in their classroom management*; this ranking has a mean response of 3.3. Overall, the effect of the responses is 3.4, while the mean scale is 2.5. Factor analysis was used to further probe research question 1. Table 1b shows that one component was extracted and this indicated that the major factor that determines professional development need of teachers is their understanding of effective teaching methods that would improve students' academic achievement; this has the highest factor load of .70.

Research Question 2

How would you ascertain the quality of training available in the professional development programmes and its appropriateness of the curriculum?

The analysis of research question 2 shows that all the participants were not sure of the quality of training available for professional development programmes. This was reflected in their responses which were below the mean scale (2.5). The two lowest rankings were (1) *adequacy of infrastructure and facilities* (2) *teachers' regularity and promptness of lectures*; each of which has a mean response of 2.2. Factor analysis was also used to address research question 2. Table 2b shows that three components were extracted and they were (1) *adequacy of infrastructure and facilities*, which has a factor load of .77 (2) *monitoring of teaching/learning activities*, which has a factor load of .82 and (3) *regularity and promptness of teachers' attendance to lectures* with a factor load of .75.

Research Question 3

What motivates teachers to participate in the professional development programmes?

The findings from this study in relation to the above question were derived from frequencies and factor analysis presented in tables 3a and 3b (see the appendices). Participants were requested to pick the motivators for participation in professional development programmes and their responses (as shown in the frequencies and factor analysis tables in the appendices). The top three rankings were (1) *teachers*

want to be promoted to higher levels, (2) salary increment (3) encouragement and support from their families and friends; these three responses have mean of 3.2, 3.1 and 3.1 respectively. The overall effect of the responses has a mean response of 3.0, which is higher than the mean scale of 2.5. Using factor analysis as a further probe, two components were extracted and they were salary increment and structured reward system that encourages professional growth.

Research Question 4

What are the challenges graduate teacher trainees encounter in the course of pursuing professional development programmes?

The findings from this study in relation to the above question were derived from frequencies and factor analysis presented in tables 4a and 4b (see the appendices). Participants were asked to identify the challenges they encounter in professional development programmes. Their responses indicated that *tuition fees and other financial obligations* (ranked 3.4), *incessant strikes by lecturers* (3.4) and *problem of lack of time* (3.2) were the three major challenges they encounter. The overall effect of the responses has a mean response of 2.9, which is above the mean scale of 2.5. The result of the factor analysis showed that the three major challenges graduate teacher trainees encounter on the professional development programmes were lack of time, which has a factor load of .81; regular strikes by lecturers with a factor load of .83; and sponsorship by employers with a factor load of .81.

Research Question 5

What is the cost and total expenditure incurred in undertaken the professional development programmes?

The findings from this study in relation to the above question were derived from frequencies and factor analysis presented in tables 5a and 5b (see the appendices). Participants were asked to indicate who pays for the cost of undertaking the programmes. There was no agreement among the participants; but factor analysis picked up *enrolment and other costs* as been borne by the government/Ministry of Education.

Correlation analysis¹

The results of the correlation analysis indicate a significant relationship between cost of teachers' professional development programmes and professional develop-

ment needs of teachers, the quality of training available to the graduate teacher trainees and relevance of curriculum, motivation of teachers to participate in the professional development programmes and challenges graduate teacher trainees encounter in the course of pursuing professional development programmes. The results of the multiple correlation coefficient ($R = 0.999$) suggests a significant correlation between cost of graduate teacher trainees' professional development and the independent variables. The adequacy of the regression model is confirmed by the coefficient of determination ($R^2 = 0.998$).

Discussion

Graduate teacher trainees are in need of professional development to increase their understanding of effective teaching methods that would improve students' academic performance and, at the same time, exposure trainee teachers to knowledge, skills and competence required for professional development. The results of this study indicate that even though the above two items—*improve students' academic achievement* and *exposure to the knowledge, skills and competence needed for professional development*—ranked the highest, the other variables were equally important. This finding agrees with Maurer (2000) that the main goal of professional development should be, ultimately, to improve students' learning and that only through ongoing professional development can a teacher becomes effective in practice. The findings from this study also agree with a submission by the Center for Comprehensive School Reform and Improvement (2007) that teachers need continued opportunities to develop skills that meet the diverse needs of learners.

The findings from this study also indicate that all the participants were not assured of the quality of training available on the professional development programmes. They reflected this issue in their responses which were below the mean responses in some cases. The participants' uncertainty about the quality of training provision is related to the inadequate provision of teaching infrastructure and related facilities. The participants' responses also indicate that teachers on the professional development programmes were not adequately remunerated; the latter finding might be responsible, in part, for the low attendance recorded on the programmes. Another important finding relates to teacher trainees' motivation. It is clear from tables 3a and 3b [in the appendices] that graduate teacher trainees are motivated by promotion to higher levels, salary increment, and encouragement and support from their families and friends. However, the pressure from the Ministry of Education for retention, promotion and annual pay rise was also a significant reason to pursue professional development.

The findings from the study also show that graduate teacher trainees are re-

sponsible for paying full the cost of undertaking professional development courses. Ideally, these costs should have been paid for by the Ministry of Education in form of subsidies given to the participants—as part of the participants' training related expenditure [costs]. Training related costs, according to Eurydice (2008), covers both enrolment costs and other costs such as travel costs and are paid in most European Union countries where professional development is compulsory. Graduate teacher trainees in Nigeria are [arguably] 'forced' to embark on professional development programmes not because they have the resources or the means to fund themselves, but because of fear of losing their jobs if they do not update their subject knowledge and skills.

Implications for policy

To encourage teachers to participate in professional development programmes, the Ministry of Education should offer incentives such as salary increases, sponsorships and credits for promotion. Policy makers should use these incentives to encourage and increase teachers' participation in professional development activities. There is a need to embark on retention strategies without salary increases. If the working environment is conducive, teachers will not be too eager to quit their job. One strategy [to address this latter problem] might be to encourage teachers to attend professional development courses that address specific areas of their needs—areas that are more likely to have direct impact on the overall school performance. Policy makers should constantly draw the attention of the government to the issue of adequate funding without which the school education system cannot achieve its set objectives and goals. In every financial year, institutions involved in professional development programmes should identify priority projects—infrastructure, teaching and learning facilities—in their annual budgets.

The issue of continuing professional development programmes may depend on a training plan designed to address the educational priorities of the Ministry of Education in terms of teacher competencies and skills. There might be a need for the training plan to be developed at the school level, as part of school development plans. Policy makers should make serious effort to maintain quality and standards in the professional development programmes. The maintenance of quality and standards has to be approached through curriculum innovation and improvement, quality of staffing, adequate teaching resources and facilities, and effective supervision and administration of continuing professional development programmes.

Implications for practice

Adequate review of the present teacher-education curriculum should be urgently carried out if the millennium development goals are to be met. There should be a policy of continuing review of curriculum for teacher professional development programmes to ensure relevance. In-service/professional development programme should be made an integral part of continuing teacher education in Nigeria. The minimum qualification for teaching in schools should be a degree in education.

Limitations of the study

The study could have covered the 36 states of the federation of Nigeria, but was limited to 6 states because of time and financial constraints. There was also the problem of data collection associated with the movement of the researcher from one state to another.

Conclusion

Establishing and maintaining an adequate supply of quality teachers for effective delivery of curriculum is absolutely necessary. High attrition rate of teachers is costly and might undermine teaching quality. A major factor in the retention of teachers is meaningful professional development. Without adequately qualified teachers to serve the student population, it will be difficult to assure teaching quality. This study has established a significant relationship between the cost of professional development of graduate trainee teachers and variables such as the professional needs of teachers, quality of training available, motivation of teachers to participate in the professional development programmes, financial burden of professional development, and the challenges teachers encounter in the course of undertaking professional development programmes.

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Notes

1. Variables

Y = Cost Implication of Teachers Professional Development; X1 = Professional development needs of Teachers; X2 = Quality of training available to the in-service programmes and appropriateness of the curriculum; X3 = Motivation of teachers to participate in the programme; X4 = Challenges teachers encounter in the course of pursuing professional development programmes; X5 = Unit cost and the total expenditure incurred in undertaken the development programmes.

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Appendices

Table 1a: Professional development needs of graduate teacher trainees

Items	SA	A	D	SD	Total	Mean Scale	Mean Response
The programme exposes teachers to the knowledge, skills and competence required for professional growth and improvement	180	117	--	--	297	2.5	3.6
Teachers improve on their classroom management skills	120	165	12	3	300	2.5	3.3
The programme brings about improvement and increases teachers' knowledge of the academic subjects they teach	120	159	18	--	297	2.5	3.3
The programme increases the level of knowledge/understanding of teachers' attitude and behavior	108	162	30	--	300	2.5	3.3
Enhances teachers' understanding of effective instructional methods that will improved students' academic achievement	186	111	3	--	300	2.5	3.6
For teachers in classrooms, effective professional learning is the single most powerful pathway to promote continuous improvement in teaching	96	168	33	3	300	2.5	3.2
Ensures teachers can effectively make use of applied learning that contributes to career and technical knowledge of the students	69	204	21	6	300	2.5	3.1
Overall effect of responses						25	34

Source: Field work

Table 1b: Component Matrix

	Component 1
The programme exposes teachers to the knowledge, skill and competence required for professional growth and improvement.	.597
Teachers improve on their classroom management skills.	.646
The programme brings about improvement and increases teachers' knowledge of the academic subjects they teach.	.634
The programme increases the level of knowledge/understanding of teachers' attitude and behaviour.	.562
Enhances teachers' understanding of effective instructional methods that will improve students' academic achievement.	.710
For teachers in classrooms, effective professional learning is the single most powerful pathway to promote continuous improvement in teaching.	.432
Ensures teachers can effectively make use of applied learning that contributes to career and technical knowledge of the students.	.607

Table 2a: Quality of training programmes

Items	SA	A	D	SD	Total	Mean Scale	Mean Response
Lecturers who teach part-time courses are qualified for the job.	24	156	78	42	300	2.5	2.5
There is no adequate provision of infrastructure and facilities.	18	60	165	45	288	2.5	2.2
There is strict monitoring of teaching/ learning activities.	3	87	150	18	288	2.5	2.5
There is adequate remuneration of the teachers who teach in the programme.	27	78	156	30	291	2.5	2.4
Teachers attend lectures regularly and promptly.	21	20	132	18	291	2.5	2.2
They are familiar with different teaching methods.	54	183	39	18	294	2.5	2.9
There is provision of multimedia for teaching of large classes.	33	90	117	54	294	2.5	2.3
There is availability of functional library	39	162	81	18	300	2.5	2.7
Overall effect of responses						2.5	2.5

Source: Field work

Table 2b: Rated Component Matrix

	Component		
	1	2	3
Lecturers who teach part-time courses are qualified for the job.	.577	.201	-.208
Lecturers who teach part-time courses are qualified for the job.	.767	.137	0.67
There is strict monitoring of teaching/ learning activities.	.074	.004	.822
There is adequate remuneration of the teachers who teach in the programme.	.585	-.288	.370
Teachers attend lectures regularly and promptly.	.079	.747	.112
They are familiar with different teaching methods.	-	.509	.506
There is provision of multimedia for teaching of large classes.	.148	.350	.459
There is availability of functional library	.573	.614	-.081
	.274		

Table 3a: *The motivation of teachers to participate in the professional development programmes*

Items	SA	A	D	SD	Total	Mean Scale	Mean Response
Teachers are motivated to participate in the programme because of the pressure from the Ministry of Education for retention of their job.	75	156	48	21	300	Uu 2.5	3.0
They go for in-service training programmes because they want to be promoted to higher levels.	117	138	42	3	300	2.5	3.2
Teachers participate in the programme because they want their annual salaries increased	111	111	63	9	294	2.5	3.1
Encouragement and support received from my family and friends.	84	147	51	6	288	2.5	3.1
Work environment that nurtures teachers' professional growth.	57	111	102	18	288	2.5	2.7
Teachers participate in the programme because of the structured reward system that encourages teachers' growth.	42	135	102	15	294	2.5	2.7
Overall effect of responses						2.5	3.0

Source: Field work

Table 3b: *Rated Component Matrix*

	Component	
	1	2
Teachers are motivated to participate in the programme because of the pressure from the Ministry of Education for retention of their job.	.682	-.138
They go for in-service training programmes because they want to be promoted to higher levels.	.732	-.041
Teachers participate in the programme because they want their annual salaries increased.	.792	.193
Encouragement and support received from my family and friends.	.152	.538
Work environment that nurtures teachers' professional growth.	-.177	.772
Teachers participate in the programme because of the structured reward system that encourages teachers' growth.	-.048	.843

Table 4a: The challenges encountered by graduate teacher trainees in the professional development programmes

Items	SA	A	D	SD	Total	Mean Scale	Mean Response
Teachers are confronted with the problem of lack of time.	135	102	42	21	300	2.5	3.2
Tuition fees and other financial obligations required to attend professional development was also a barrier.	135	132	24	3	294	2.5	3.4
Teachers are faced with the problem of frequent disruption in their programme calendar because of incessant strike by lecturers because they come for their programme when the government primary and secondary schools are on long vacation.	138	114	39	9	300	2.5	3.3
Teachers are confronted with the problem of running their homes and facing academic work which is a major challenge.	141	96	27	36	300	2.5	3.1
Teachers who go for professional development programme are sponsored by their employers.	39	66	78	11	297	2.5	2.1
Lecturers are not fully committed when it comes to attending lectures.	48	102	12	24	297	2.5	2.6
In some cases, the professional development programmes run by most institutions are poorly organized	81	117	84	18	200	2.5	2.9
Overall effect of responses						2.5	2.5

Source: Field work

Table 4b: Rated Component Matrix

	Component		
	1	2	3
Teachers are confronted with the problem of lack of time.	.809	.268	.122
Tuition fees and other financial obligations required to attend professional development was also a barrier.	.738	.040	-.196
Teachers are faced with the problem of frequent disruption in their programme calendar because of incessant strike by lecturers because they come for their programme when the government primary and secondary schools are on long vacation.	-.014	.834	-.024
Teachers are confronted with the problem of running their homes and facing academic work which is a major challenge.	.104	.776	-.272
Teachers who go for professional development programme are sponsored by their employers.	-.186	-.069	.809
Lecturers are not fully committed when it comes to attending lectures.	-.032	-.150	.710
In some cases, the professional development programmes run by most institutions are poorly organized.	-.573	.271	.248

Table 5a: Cost of running the professional development programmes

Items	SA	A	D	SD	Total	Mean Scale	Mean Response
The cost of the in-service training is borne by the teachers.	102	114	51	30	297	2.5	3.0
Training-related expenditures which cover both enrolment costs and other costs such as travel cost is paid by the government/ Ministry of Education.	30	72	87	111	300	2.5	2.1
The government/Ministry of Education gives teachers on professional development programme some allowances to enable them cope with the huge financial requirement of the programme.	24	42	84	138	288	2.5	1.8
Overall effect of responses						25	34

Source: Field work

Table 5b: Component Matrix

	Component
The cost of the in-service training is borne by the teachers.	1
Training-related expenditures which cover both enrolment costs and other costs such as travel cost is paid by the government/ Ministry of Education.	-.398
The government/Ministry of Education gives teachers on professional development programme some allowances to enable them cope with the huge financial requirement of the programme.	.891
	.861

Regression and Correlation Analysis

Table 6: Correlation Analysis,

Correlation Analysis							
Variables	Y	X1	X2	X3	X4	X5	
Y	1.000	.480*	.646*	.632*	.471*	.508*	
X1		1.000	.063	.155*	-.017	.194*	
X2			1.000	.226*	.039	.181*	
X3				1.000	.238*	.161*	
X4					1.000	.090	
X5						1.000	

* Correlation is significant at 5% level. Multiple correlation coefficient (R) = 0.999. Regression coefficient of determination (R^2) = 0.998

Table 7: ANOVA

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.457	5	3.091	2.349E4	.000
	Residual	.039	294	.000		
	Total	15.496	299			

Table 8:

Regression Coefficients

	Unstandardized Coefficients	Standard- ized Coeffi- cients		
	B	Std. Error	Beta	T
(Constant)	.007	.009		.788
Professional development needs of Teachers	.229	.002	.351	116.902
Quality of training available to the in-service programmes and appropriateness of the curriculum	.254	.002	.485	160.071
Motivation of teachers to participate in the programme	.191	.002	.341	109.051
Challenges teachers encounter in the course of pursuing professional development programmes	.229	.002	.352	116.965
Unit cost and the total expenditure incurred in running the programme	.094	.001	.265	87.370

Dependent Variable: Cost Implication of Teachers Professional Development

Fig.1: Direct effect of Variable Using Standardized Coefficient

