

Evaluating the Implementation of NTI/NCE Mathematics Programme by Distance Learning System

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Abstract *The study evaluated the implementation of NTI/ NCE mathematics curriculum by distance learning system. The study was guided by three research questions and corresponding hypotheses. The population was made up of 322 NTI mathematics students and 15 course tutors while the sample was made up of 158 students and 7 courses in four NTI study Centers in Bayelsa state Nigeria. The instrument used for the study was NTI Mathematics Curriculum Evaluation Questionnaire (NMCEQ). The instrument was validated by experts and a coefficient reliability of 0.82 established using Crombach's alpha method. Pearson product Moment Correlation Coefficient was used in analyzing the data. Findings revealed a significant relationship between structural facilities, teacher's qualification and evaluation on the implementation of the NTI/NCE mathematics curriculum by distance learning system. The paper therefore suggested among others the provision of adequate facilities and the training and retraining of teachers for the effective implementation of the curriculum.*

Keywords: *Evaluation, Implementation, Mathematics Programme and Distance Learning.*

Introduction

In the past decades, student's enrolment in schools has increased without a commensurate improvement in school facilities and manpower. This problem as noted above has called for the introduction of different forms of non- conventional education programmes in Nigeria and other parts of the developing world. Such non conventional programmes are often called different names such as correspondence education, home study, independent study, continuing education, part-time, studentship, sand which programmes and distance learning system.

Danjuma (2004) noted that though these programmes are operated using different learning styles, and administrative system, a major feature about them is that the students and teachers do not have a direct contact as obtained in the more conventional education programmes.

The need for distance learning system according to Ezeni (2006) affects almost all sector of Nigeria society. The author stressed further that the house wife need distance education to effectively teach and monitor the academic progress of her children and ward at home, the farmer also need high degree of distance learning, inform of extension programme for improved crop and animal yield, the trader and artisan need a form of distance learning for improved productivity and better service delivery. In the education scene teachers need to improve their knowledge through in service programmes to enhance better teaching and learning and contribute maximally to community service.

This is sensitive to the Federal Government Commitment to teacher production and retention as noted in the FRN (2004). The policy document clearly stated that teacher education will continue to be given a major emphasis in all educational planning and that "no education system can rise above the quality of its teachers." To effectively implement this policy statement, FRN through the national policy on Education (2004) noted that the minimum qualification for teaching is the Nigeria Certificate in Education (NCE).

Such policy statement if strictly followed without certain adjustment in teacher education programme, will certainly throw many serving teachers out of the teaching profession thereby increasing the rate of unemployment in the country. In a survey carried out by Jubril (2005) 29.8% of Public primary school teacher in Kebbi State, Nigeria had qualifications lower than the NCE. This therefore means that such teachers need in-service training programme to safe guide their jobs. Relative to this, College of Education, Universities, National Open University and the National Teachers Institute (NTI), has instituted different distance learning programmes for teachers aimed at training and retraining of teachers to achieve set goals. Jegede (2003) noted that among these bodies, the NTI stands very strategic among others in producing middle level manpower at the NCE level in meeting the demands of teacher education in Nigeria.

The National Teachers Institute (NTI) was established in 1978 through decree 7. The Institute was originally set up to manage Teacher Grade II (TCII) examinations in the three core subjects (mathematics, English language, and General Paper). These were the three core subjects, which were Federally examined for the award of Teacher Grade Two Certificates, which was then almost the highest qualification needed for teaching at the Primary School level. Following the national policy directives of NCE as the minimum qualification for teaching, the scope of NTI was widened to include mounting of courses leading to the award of the Nigeria Certificate in Education (NCE Primary) in certain subject areas to qualify recipients to teach in primary school. At present, the institute, runs NCE programmes in subject areas such as Christian Religions Studies (CRS) Cultural and Creative Arts (CCA) English Language (Eng), Islamic Religions Studies (IRS), others are Physical and Health Education (PHE), Social studies (SOS) Primary Education Studies (PES), Education (EDU), Integrated Science (ITS) and Mathematics (MAT).

Any school programme need periodic evaluation. Such evaluation can be in part or whole. Jeremiah and Alamina (2006) noted that the evaluation can be carried out in almost all the stages of the curriculum development process, from the need assessment stage to quality control stage. Such report can provide comprehensive data which can be used as quality control mechanism which may call for subsequent innovations. Thus the fundamental problem of this study is to evaluate. The level of structural facilities for the implementation of NTI/NCE programme in mathematics by distance learning system in Bayelsa State Nigeria

Statement of the Problem

Teacher education in Nigeria has witnessed a lot of innovation in the past decades. These innovations were aimed at improving teaching and learning. The poor performance of school children in public examinations is an eloquent testimony that such innovation has not yielded an acceptable dividend.

Of all the factors that could be responsible for this, the school environment, motivational variables, instructional strategies and media are often attacked by concerned citizens and the government. Little or no attention is paid to the fact that lack of periodic evaluation of school programme could cause damage in the system, there by making it impossible to achieve set goals and objectives. The researchers noted that some earlier studies on evaluation were carried out without matching them with the NCE mathematics programme through distance learning system in Bayelsa state. This research is an attempt to fill that gap. It is therefore pertinent at this time when Nigeria is moving towards Scientific advancement to constantly monitor and evaluate our mathematics education programme as it determine the direction of our Scientific break through.

Purpose of the Study

The major concern of this study was to evaluate the implementation of the NTI/NCE mathematics programme of the Distance learning System. In this regards, the study was designed specifically to achieve the following objectives.

1. To determine the relationship between structural facilities and the implementation of NTI/NCE

- mathematics programme by distance learning system.
2. To determine the relationship between teachers qualification and the implementation of NTI/NCE mathematics programme by distance learning system.
 3. To determine the relationship between evaluation strategies and the implementation of NTI/NCE mathematics programme by distance learning system.

Research Questions

To guide the study, the following research questions were posed

1. To what extent do structural facilities relate to the implementation of NTI/NCE mathematics programme by distance learning system?
2. To what extent do teachers qualification relate to the implementation of NTI/NCE mathematics programme by distance learning system
3. To what extent do evaluation strategies relate to implementation of NTI/NCE mathematics programme by distance learning system.

Research Hypotheses

To guide the study, the following research questions were transformed or converted into corresponding null hypotheses.

- (HO₁) There is no significant relationship between structural facilities and the implementation of NTI/NCE mathematics programmes by distance learning system.
- (HO₂) There is no significant relationship between teacher's qualification and the implementation of NTI/NCE mathematics programme by distance learning system.
- (HO₃) There is no significant relationship between evaluation strategies and the implementation of NTI/NCE mathematics programme by distance learning system.

Research Methods

The research design for this study was the descriptive survey. The population comprised 322 mathematics students and 15 course tutors in six NTI study centres during the 2009/2010 academic year. The sample was made up of 158 students and 7 course tutors, which was drawn from the population using the proportionate random sampling technique. The instrument used for the study was Mathematics Curriculum Evaluation Questionnaire (MCEQ) The instrument was validated by experts and coefficient reliability of 0.82 established using Crum Bach alpha technique. Data collected was analyzed using pearson product moment correlation coefficient.

Hypothesis testing

(1) Hypotheses One

There is no significant relationship between structural facilities and the implementation of NTI/NCE mathematics programme by distance learning system.

Table 1: Pearson Product Moment Correlation Coefficient Analysis of relationship between structural facilities and implementation of NTI/NCE mathematics programme.

Variable	Σx Σy	Σx^2 Σy^2	Σxy	df	r.cal	r.crit	Decision $p > .05$
Structural facilities	2147	2914	36713	164	0.199	0.195	*
Implementation	2788	51040					

* = significant at 0.05 alpha level, $p < 0.05$ at $df = 164$

The data presented in table 1, indicated that the calculated r. value of 0.199 is greater than the critical r. value of 0.195, at 164 degree of freedom at 0.05 alpha levels. Hence, the null hypothesis which states that there is no significant relationship between structural facilities and the implementation NTI/NCE Mathematics programme by Distance Learning System is rejected. This implies that there is a significant relationship between structural facilities and implementation of NTI/NCE mathematics programme by distance learning system.

(2) Hypothesis Two

There is no significant relationship between teacher qualification and the implementation of NTI/ NCE mathematics programme by distance learning system.

Table 2: Pearson Product Moment Correlation Coefficient analysis of relationship between teachers qualification and implementation of NTI/NCE mathematics programme by distance learning system.

Variable	Σx Σy	Σx^2 Σy^2	Σxy	df	r.cal	r.crit	Decision at $p > .05$
Teacher qualification	2002	25444	34350	164	0.245	0.195	*
Implementation	2788	51040					

* = significant at 0.05 alpha level, $p < 0.05$ at $dt = 164$

It is established from table 2, that the calculated r. value at 0.245 is grater than the critical r. value at 0.245 is greater than the critical of 0.195, at 164 degrees of freedom and at 0.05 alpha levels. Hence, the null hypothesis is rejected, which implies that there is a significant relationship between teachers qualification and the implementation of NTI/NCE mathematics programme by distance learning system.

(3) Hypothesis Three

There is no significant relationship between evaluation strategies and the implementation NTI/NCE mathematics programme by distance learning system.

Table 3: Pearson Product Moment Correlation Coefficient analysis it relationship between evaluation strategies and the implementation of NTI/NCE mathematics programme by distance learning system.

Variable	Σx	Σx^2	Σxy	df	r.cal	r.crit	Decision at p>.05
	Σy	Σy^2					
Evaluation strategies	2152	29384	36819	164	0.201	0.195	*
Implementation	2788	51040					

* = significant at 0.05 alpha level, $p < 0.05$ at $df = 164$

From table 3 It is established that the calculated r. value of 0.201 is greater than the critical r. value of 0.195, at 164 degrees of freedom and at 0.05 alpha levels. This implies that the null hypothesis is rejected, therefore, its further indicates that there is a significant relationship between evaluation strategies and the implementation of NTI/NCE mathematics programme by distance learning system.

Discussion of Findings

The major objective of this study was to evaluate the implementation of NTI/NCE mathematics programme by distance learning system. The result of the investigation indicated a significant difference between structural facilities and the implementation of NTI/NCE mathematics programme by distance learning system. The Pearson Product Moment Correlation Coefficient statistics was used to establish the degree of relationship. This might be as a result of the fact that instructional facilities plays a great role in the implementation of school curriculum and that distance learning systems need to have adequate facilities that will promote effective learning. Earlier studies such as Sidney and Ngozika (2005), Andrew (2006) and Alaka (2007) all collaborate with this study. In their various findings, they identified a significant relationship between school facilities and curriculum implementation.

The findings again revealed a significant relationship between teacher's qualification and the implementation of NTI (NCE) Mathematics curriculum by distance learning system. The Pearson product Moment Correlation coefficient was used in establishes the relationship. This might be associated with the fact that teachers play a significant role in any teaching learning process relative to the implementation stage of a school curriculum. Earlier studies such as Jeremiah (2004) and Alalibo (2010) where at variance with this findings. Studies such as Ali (2007), Elems (2008), Poploar (2008) all collaborate with the findings of this study.

The result of the investigation also revealed a significant relationship between evaluation strategies and the implementation of the NTI (NCE) Mathematics curriculum by distance learning system. The Pearson Product moment correlation coefficient was used to establish the relationship. This might be related to the fact that proper evaluation is an index of measuring the efficiency of a school programme in terms of meeting the demands of set goals and objectives. The result of other studies such as Ochilongua (2006), Eke (2009) tend to support the result of this finding. These studies all identify the cardinal role of evaluation in the effective implementation of a school curriculum.

Conclusion

Based on the findings of this work, the following conclusions are reached.

1. There is a significant relationship between structural facilities and the implementation of the NTI/NCE mathematics curriculum by distance learning system.
2. There is no significant relationship between teacher's qualification and the implementation of NTI/NCE mathematics curriculum by distance learning system.

3. There is no significant relationship between evaluation technique and the implementation of NTI/NCE mathematics curriculum by distance learning system.

Recommendations

Based on the findings the following recommendations are made:

1. Facilities should be adequately provided in NTI study centers to enhance the implementation of mathematics curriculum.
2. National Teachers Institute (NTI) course tutors or teachers should be encouraged to go for in service training, workshops, seminars and conferences to up date their knowledge on current trends and innovations in mathematics education curriculum.
3. National Teachers Institute and other relevant bodies should carry out periodic evaluation on the NTI programme. Such evaluation can serve as quality control mechanism which may call for subsequent innovation.

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