

**IMPLEMENTATION OF EDUCATION PROJECT MANAGEMENT
CYCLE TECHNIQUE (EPMCT) IN THE MANAGEMENT OF
EDUCATION PROJECTS IN SECONDARY SCHOOLS IN ADAMAWA
AND TARABA STATES OF NIGERIA**

Kabiru Mohammed Badau, Ph. D
***National Business and Technical Examinations
Board (NABTEB),
Benin City.***

And

John Sakiyo, Ph.D
***Federal University of Technology,
Yola.***

Abstract

This study was set out to investigate the Implementation of Education Project Management Cycle Technique (EPMCT) in the management of education projects in secondary schools in Adamawa and Taraba States. Guided by two research questions and two hypotheses, survey research design was adopted for the study. A sample of 13 educational planning specialists, 18 non-educational planning specialists, 179 secondary school administrators and 82 secondary school teachers were drawn through Yaro Yamane formula for finite population and stratified along the two states. A 24 item questionnaire was used to collect data which was analyzed with means and standard deviations, t-test and analysis of variance (ANOVA). The major finding was that the involvement of secondary schools in identification and implementation of education projects were low. High involvement of secondary schools in identification and implementation of education projects in their schools was recommended.

Education projects particularly physical facilities are no doubt the key to successful teaching and learning. It is on this premise that Beynon (1997) opined that any educational system which toys with its adequate provision through management of projects is endangering the success of students. Any educational system is incomplete if educational facilities are not adequately provided. This underscores the importance of education project in providing physical facilities for creating conducive environment for teaching and learning.

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Educational facilities in Nigerian secondary schools have been described as a neglected aspect of the educational system. Adesina (1990) pointed out that although one potent index for evaluating standards and quality in education is the condition of educational facilities for teaching and learning, no other area had been neglected by educational planners, during and after the colonial era like education projects in Adamawa and Taraba States. The problem of inadequate educational facilities and poor implementation of Education projects Management Cycle Technique (EPMCT) appear to be more severe in the states. An interaction with the officials of Planning Divisions of the Ministries of Education in the two states under study revealed that school buildings, furniture and equipment were still inadequate due to poor implementation of EPMCT.

Educational facilities are adequately provided in secondary schools through effective education projects management. Choudlury (2005) reported that effective education project management improves the state of educational facilities. A number of education project management models exist in Nigeria. According to Bogunjoko (2006) Programme Evaluation and Review Technique (PERT), Critical Path Method (CPM), Cost Benefit (CB) analysis and Work Breakdown Structure (WBS) are popular early techniques used in the management of educational projects. Abdullahi (2006) reported that the Implementation of EPMCT was also common in Education Projects in Public Secondary Schools. United Nations Educational, Scientific and Cultural Organization (UNESCO 1997) and Kerzner (2004) recommended system approach for managing complex education projects in institutions of learning in Nigeria.

The responsibility of managing education projects such as physical facilities is a collective one. The planning divisions are empowered by Federal and State Ministries of Education to manage education projects and adequately provide educational facilities in secondary schools. Accordingly, state Ministries of Education ensure that educational facilities are adequately provided and managed through models of project management. As a pre-requisite for providing educational facilities, architects and engineers who provide the technical services collaborate with educators (teachers, educational planners, and educational administrators) and also students to implement the techniques and models of education project management.

The 1988 Civil Service Reforms created planning departments in the Federal and State Ministries of Education to perform among others the function of managing education projects in public secondary schools. The responsibilities of the departments are to plan and manage projects using EPMCT. The Implementation of the technique which rests with the planning divisions of the Ministries of Education is to involve secondary schools in the stages of identification and implementation of the technique. This is expected to result in adequate provision of physical facilities from project management. Educational planners in Adamawa and Taraba States are supposed to involve secondary schools to successfully implement EPMCT because they are beneficiaries of educational facilities for teaching and learning.

Statement of the Problem

The non-involvement of secondary schools in the implementation of EPMCT results in project failure and abandonment in public secondary schools. Secondary schools have not been highly involved in the holistic implementation stages of EPMCT to adequately provide educational facilities in the schools. Inadequate provision of physical educational facilities through poor implementation of EPMCT, affects the performance of secondary schools graduates. Poor teaching and learning in secondary schools takes place where physical facilities are not provided. If buildings, furniture and equipment are not provided through the involvement of secondary schools in the implementation of EPMCT, secondary school programmes will suffer and will lead to poor student academic achievement. This came under critical examination by educationists in Nigeria. This study was designed to determine the extent of involvement of secondary school in the implementation of EPMCT in the management of education projects in secondary schools in Adamawa and Taraba States.

Purpose of the Study

The purpose of this study was to investigate the implementation of Education Project Management Cycle Technique in Adamawa and Taraba States. The specific objectives were:

- a. to determine the involvement of secondary schools in the identification of priority education projects in their schools.
- b. to determine the involvement of secondary schools in the implementation of education projects in their schools.

Research Questions

The following research questions were raised to guide the study:

- a. How are secondary schools personnel involved in identifying priority education projects in the schools?
- b. Are secondary schools personnel involved in the implementation of education projects in their schools?

Hypotheses

The following null hypotheses were formulated and tested at 0.05 alpha level of statistical significance:

Ho₁ There is no significant difference between the opinions of school administrators and teachers on involvement of secondary schools in the identification of priority education projects in their schools.

Ho₂ There is no significant difference among the opinions of Educational Planning Specialists, non Educational Planning Specialists, Secondary School Administrators and Teachers on involvement of secondary schools in the implementation of education projects in their schools.

This research will benefit secondary schools because their priority project needs will be identified for effective planning and implementation. The outcome of the

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research will assist the Ministries of Education in Adamawa and Taraba States in financing implementation of feasible education projects in secondary schools.

Review of Related Literature

The review of literature considered identifying and implementing education projects. Different schools viewed identification and implementation of education projects in the EPMCT. Martin (1994) study indicated involvement of secondary schools in projects identification by collecting data, visiting schools and engaging in numerous consultations with schools. Gniark (1998) quality assessment asserted that identification of education projects provided limited classrooms, laboratories and workshops. Ikoya (2008) study revealed that decentralization of identification of projects enhances the availability, adequacy and functionality of school physical facilities. Ihuoma (2008) concluded that involvement of principals; teachers and students actualize provision of education facilities. Tanner (1984) also recommended that stakeholders should be involved so that planning and sites election will not be politicized.

Work plans could not identify each of the projects activity and relate to sub-activities separately in EPMCT implementation (Heyneman, 1996). Ojo (2006) reported that school personnel were not involved in the procurement of project materials, which affected project implementation. Different sources of financing the implementation of EPMCT were raised in Lewin & Calliods (2006) and discovered to come from national or state budget and other budgetary sources like special taxes and revenue from Parents Teachers Association (PTA), collective efforts of communities and private sector, commercial banks and financial banks and external aid sources.

Methodology

The study adopted a survey design. The design is appropriate because survey design method – collects and analyse pertinent data about population by using questionnaire to guide decision-making about individuals, a programme, materials or methods. This study was carried out in the present Adamawa and Taraba states of Nigeria. The population of the study is presented in Table one.

Table 1: Number of Educational Planning Specialists, Non Educational Planning Specialist, Secondary School Administrators and Teachers in Adamawa and Taraba States.

State	Educational Planning Specialists	Non-educational planning specialists	Secondary school Administrators	Secondary School Teachers
Adamawa	9	6	912	6,435
Taraba	5	16	970	810
Total	14	22	1882	7245

Stratified random sampling was used. The proportion of the samples used while sample from each state was drawn through simple random sampling using balloting as shown in table 2.

Table 2: Sample of Educational Planning Specialists, Non- Educational Planning Specialists, Secondary Schools Administrators and Teachers in Adamawa and Taraba States.

State	Educational Planning Specialists	Non-Educational Planning Specialists	Secondary School Administrators	Secondary School Teachers
Adamawa	8	5	87	73
Taraba	5	13	92	9
Total	13	18	179	82

Instrumentation

The implementation of Education Project Managements Cycle Technique Questionnaire (IEPMCTQ) consisting of a five point response scale ranging from “Never involved”, “Rarely involved” to “occasionally involved”, “frequently involved”, “Always involved” was used for data collection. The questionnaire was divided into 3 sections on which implementation of EPMCT was based. These include bio data, identification of priority education projects and implementation of education projects. A total of 24 items were developed, content and face validity was determined by four validators from the school of technology and science education, Federal University of Technology, Yola. The reliability of the instrument was determined through a pilot test which gave a Cronbach Alpha reliability coefficient of 0.96.

Method of Data Analysis

Copies of the questionnaire were delivered to Planning divisions of the Ministries of Education and secondary schools by National Business and Technical Examinations Board (NABTEB) state officers from the two states and retrieved after a two (2) days completion period. All 292 questionnaire indicating one hundred percent (100%) were returned for analysis.

The research questions were answered through a decision point of above 3.50 and above indicating high involvement, 3.00 – 3.49 as moderate involvement, while those below 3.00 were regarded as low involvement. The test of hypothesis was based on rejecting the null hypothesis when the calculated value of Z and F were greater than the critical value of the statistic. Otherwise, the null hypothesis was accepted when the calculated was below the critical value.

Result

The results of data analysis are hereby presented in table 3.

Research Question 1

How are secondary schools personnel involved in identification of priority education projects in their schools?

Table 3: Means and Standard Deviations of Opinions of School Administrators and Teachers on the Involvement of Secondary Schools in the Identification of Priority Education Projects

S/N	Involvement Activities	X_1 N=179		X_2 N=82		μ	Remark
		\bar{X}_1	σ_1	\bar{X}_2	σ_2		
1.	Considering priority projects.	1.99	0.89	1.99	0.87	1.99	low
2.	Collecting documents.	1.80	1.03	2.22	1.02	2.01	low
3.	Contacting the schools.	1.70	0.62	2.04	0.78	1.87	low
4.	Interviewing School Administrators and teachers.	2.84	0.83	2.37	0.94	2.60	low
5.	Considering education policy.	1.80	1.70	2.29	0.85	2.05	low
6.	Considering problems.	2.54	0.92	2.07	1.01	2.31	low
7.	Consulting students.	2.07	0.94	2.44	1.16	2.26	low
8.	Considering population of schools.	2.42	0.54	2.41	0.81	2.42	low
9.	Considering high dropout.	2.25	0.95	2.25	0.75	2.25	low
10.	Dialoguing with schools.	2.21	0.73	2.01	0.88	2.11	low
11.	Considering enrolment.	2.23	0.55	1.66	0.88	1.95	low
Overall mean					2.16		Low involvement

Source: Field work

X_1 for School Administrators.

X_2 for Teachers.

The data in table 3 above shows that the overall mean (2.16) indicates low involvement by both groups of respondents. This means that secondary schools involvement in the identification of priority education projects was low.

Research Question 2

How are secondary schools personnel involved in the implementation of education projects in their schools?

Table 4: Means and Standard Deviations of Opinions of Educational Planning Specialists, Non educational Planning Specialists, School Administrators and Teachers on the Involvement of Secondary Schools in the Implementation of Education Projects.

S/N	Involvement Activities	X ₁ N=13		X ₂ N=18		X ₃ N=179		X ₄ N=82		μ	Remark
		\bar{X}_1	σ_1	\bar{X}_2	σ_2	\bar{X}_3	σ_3	\bar{X}_4	σ_4		
1.	Proper supervision of implementation of educational facilities projects.	2.81	0.90	2.40	1.01	1.50	1.00	1.88	0.99	2.15	Low
2.	Implementation of the provision of educational facilities projects with ministry of works.	2.41	1.00	2.33	1.02	1.54	0.50	1.89	1.02	2.04	Low
3.	Preparation of work plan for implementation of educational facilities projects.	2.84	1.00	2.40	0.94	2.22	1.10	1.80	0.83	2.32	Low
4.	Timely completion of implementation of provision of educational facilities projects.	3.00	0.70	3.01	0.91	2.00	1.02	2.19	0.96	2.55	low
5.	Financing implementation through State and National budgets.	2.62	1.05	2.70	1.05	1.99	1.00	1.53	0.86	2.21	Low
6.	Funding implementation through UNDP, World Bank, UNICEP.	3.03	0.72	2.82	1.02	1.52	0.78	1.90	0.95	2.32	Low
7.	Funding implementation through local communities.	2.84	0.95	2.82	0.97	1.84	0.82	2.03	1.11	2.38	Low
8.	Prudent management of financial resources for implementation.	2.51	1.13	2.61	1.07	2.00	1.01	1.87	0.79	2.25	Low
9.	Awarding implementation to competent contractors.	2.85	1.12	2.84	1.00	2.04	1.08	1.85	0.97	2.40	Low
10.	Implementation of procurement and purchase projects.	2.84	0.97	2.47	1.17	2.04	0.98	2.08	0.98	2.36	Low
11.	Implementation for improving management of schools.	2.89	1.07	2.72	1.23	2.25	1.02	1.51	0.70	2.34	Low
	Overall mean									2.30	Low involvement

Source: Field Work

X₁ for Educational Planning Specialists.

X₂ for Non educational Planning Specialists.

X₃ for School Administrators.

X₄ for Teachers.

The data in table 5 shows that the overall mean (2.30) of all items indicates low involvement by the four categories of respondents. This indicates that secondary schools involvement in the implementation of physical education projects in their schools is low.

Hypotheses 1: There is no significant difference between the opinions of School Administrators and Teachers on involvement of secondary schools in the identification of priority education projects.

Table 5: Z – Test Difference in the Opinions of School Administrators and Teachers on Involvement of Secondary Schools in the Identification of Priority Education Projects In Their Schools.

	\bar{X}	σ	N	df	Standard Error	Z cal	Z critical	Remark
X ₁	76.20	108.613	381	60	63.128	-4.315	2.000	S
X ₂	348.60	455.407	1743					

X₁ for School Administrators.

X₂ for Teachers.

The data in table 5 shows that the Z-Test calculated (-4.315) was greater than the critical or table Z value. Therefore, this hypothesis which states that there is no significant difference in the opinions of school administrators and teachers on involvement of secondary schools in the identification of priority education projects has been rejected. The result show significant difference in the opinions of school administrators and teachers on identification of priority educational facilities projects in secondary schools.

Hypotheses 2: There is no significant difference among the opinions of Educational Planning Specialists, Non educational Planning Specialists, School Administrators and Teachers on involvement of secondary schools in the implementation of education projects in the schools.

Table 6: ANOVA Result Comparing the Opinions of Educational Planning Specialists, Non- Educational Planning Specialists, School Administrators and Teachers on Involvement of Secondary Schools in the Implementation of Education Projects.

Source of variations	Df	SS	MS	Fcal.	F crit	Significance
Between groups	3	4,264,361	1,421,453.786			
Within groups	216	1,774,751	54,512.737	9.469	8.54	S
Total	15	6,203,633				

In Table 6, the F calculated was 9.469 while the F critical was 8.54. Since the F calculated was more than F critical, the null hypotheses was rejected. Thus, the difference between the opinions of the four groups was significant.

4.2 Findings of the Study

The following are summaries of findings of the study:

1. The involvement of Secondary schools was low in the identification of priority education projects in their schools
2. Secondary schools were lowly involved in the implementation of education projects.
3. There is significant difference between the opinions of School Administrators and teachers on involvement of secondary schools in the identification of priority education projects.
4. The opinions of Educational Planning Specialists, Non- educational Planning Specialists, School Administrators and Teachers differ significantly on the involvement of secondary schools in the implementation of the provision of education projects.

Discussion of the Findings

The findings of this study were discussed in relation to the identification and implementation stages of application performance of EPMCT as raised in the purpose of the study. The first stage is identification of priority educational facilities projects. The finding from table 3 revealed that the involvement of secondary schools in the identification of priority education projects was low. This finding is not consistent with current observation and opinions of educationists as expressed by literature on the subject. Ikoya (2008) and Beynon (1989) among others indicated that secondary schools are highly involved in the identification of priority education projects through decentralization of physical facilities projects and involvement of principals, teachers and students. Information gathered from the schools through discussions however tend to support the findings of the study. According to the information gathered, secondary schools are not consulted in order to identify their priority educational facilities projects

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even though they know how best priority educational facilities projects can be identified for their everyday use. Wrong identification of priority education projects through low involvement of secondary schools may not serve the purpose for which educational facilities were provided in the schools.

They also found out that secondary schools are not highly involved in the implementation of education projects. The grand mean of all the items indicates low involvement. This finding is supported by Tanner (1984), Fuller (1990) and Ojo (2006) that only engineers or consultants are highly involved in the implementation of education projects. The secondary schools who are beneficiaries of the projects are not allowed to provide practical completion certificates. Perhaps, the reason being that government award the implementation of education projects to contractors who will not accept interference from secondary schools in order to do a poor job to make profit. Therefore, the finding that secondary schools are not highly involved in the implementation of their projects is not misleading.

Result from the study also indicated that the involvement of secondary schools in the identification of priority education projects was very low. Any observed involvement is due to chance. This result differs from the findings of Ramaroson (1992), Cash (1994) and Ihuoma (2000) who found that secondary schools are highly involved in the identification of priority education projects. The result does not also support the findings of Devarusu (1995) and Paul (1997) who found that school community participate in identification of priority education projects in their schools. However, the finding of this study regarding low involvement of secondary schools in identification of education projects is in line with the findings of Baum & Tolbert (1985) and Damiba (1992) who found significant difference on the involvement of secondary schools in identification of education projects. One reason for low involvement of secondary schools in the identification of education projects may be “project approach” to educational facilities where government site projects without determining the priority of the schools through consultation of end users.

Even then, Damiba et al (1992) asserted that identification of priority education do not highly involve beneficiary participation. Therefore, the finding that secondary schools in this study are not highly involved in the identification of priority educational facilities projects is not misleading.

The significant difference in the opinions of educational planning specialists, non educational planning specialists, school administrators and teachers on involvement of secondary schools in the implementation of education projects confirms the assertion by Vickery (1984) that secondary schools are not highly involved. He asserted, for example, that Ministry of Education and works are highly involved by providing engineers or consultants to supervise education projects to ensure that they achieve project objectives.

The findings of hypotheses 2 Table 5 are also consistent with Martin & Magnen (1995) belief that school beneficiaries are not highly involved in costing project implementation to propose alterations in the standard construction or renovation cost which are multiplied by a distance factor to allow for the distance between the institutions and site materials production or unloading. This must be added to the cost of

site development, roads, provision of water, electricity and telephone lines. Thus, it can be concluded that secondary schools are not highly involved in determining the cost of project implementation of education projects.

Conclusion

This study concluded that secondary schools were not highly involved in the implementation of Identification and Implementation stages of EPMCT to provide educational facilities in their schools in Adamawa and Taraba states. As end users, secondary schools understand how best to identify and implement education projects for teaching and learning. They also identify and implement educational facilities projects for their usage.

Recommendations

The following recommendations which came out of the findings of the study and their implications are as follows:

1. Secondary schools in Adamawa and Taraba states of Nigeria should be highly involved through consultation in the identification of priority education projects to avoid the ones that are not a priority to the schools.
2. Secondary schools should be highly involved in the implementation team for implementation of education projects so that it can be executed according to specification.
3. Project monitoring committees should be established in schools.

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