

**Education Sector Support Programme in Nigeria
(ESSPIN)**

School Infrastructure and Maintenance

Doc. No.: ESSPIN 032

May, 2009

Contents

Acronyms and Abbreviations	iii
ESSPIN School Infrastructure and Maintenance	1
Introduction.....	1
Main Issues	1
Assessment.....	2
Issues to be Addressed.....	3
Overall Approach.....	4
Practical Support to States and Communities.....	7
Annex 1 – Budget for Infrastructure, Water & Sanitation	11

Acronyms and Abbreviations

ESSPIN	Education Sector Support Programme in Nigeria
LGA	Local Government Area
LGEA	Local Government Education Authority
MOE	Ministry of Education
SBMC	School-Based Management Committee
SUBEB	State Universal Basic Education Board
TA	Technical Assistance
UBEC	Universal Basic Education Commission
UKP	United Kingdom Pounds

ESSPIN School Infrastructure and Maintenance

Introduction

1. The challenges facing the Education sector in Nigeria are considerable at the present time. In trying to meet these challenges it is essential that the issue of infrastructure is addressed. Having a good physical learning environment is a critical part of the education process

Main Issues

Status of Basic School Infrastructure

2. It is estimated that 75% of the school infrastructure in the Project States is in very poor condition. In some States, particularly in the rural schools, the situation is worse than this. In rural Kwara for example it is estimated that less than 20% of the school classrooms meet the current minimum requirements for a safe and comfortable learning environment. The poor quality and shortage of classroom furniture exacerbates the problem. Many classrooms are overcrowded and students are reduced to sitting on the floor.
3. The situation regarding water and sanitation is also extremely poor. It is estimated that less than 20% of all schools have adequate water and sanitation facilities. Many schools with thousands of students do not have suitable toilets and a considerable number have no toilets at all. Similarly many schools do not have a water supply.

Condition of Existing School Buildings

4. Most of the school buildings are in poor condition. One of the main reasons for the current chronic situation is that the Education Sector, particularly infrastructure, suffered from an approximately 20 year period of neglect during the military regime. The situation has been exacerbated by the fact that most of the buildings that have been constructed in recent years are also of very poor quality. They have been badly built because of poor procurement practices, poor management of construction, poor workmanship, the use of poor quality materials, a lack of supervision during construction and political interference.
5. Even where buildings have been constructed to an acceptable standard (generally those more than 20 years old) there has been a severe lack of maintenance which has resulted in many buildings being in a state of disrepair and thus having a reduced lifespan

Rehabilitation of Existing Structures

6. In the recent past a lot of emphasis has been placed on the rehabilitation of existing buildings. This in itself is posing a further problem because funds are being badly utilised on sub standard buildings that have been constructed on poor foundations, have under

strength concrete block superstructures and weak floor slabs. All that this achieves is a short term cosmetic job on a defective shell. It is not uncommon for buildings that were completed less than 5 years ago to require 'rehabilitation'. It is essential that the quality of the buildings that are erected in future are of good quality so that this cycle of degradation can be broken.

Magnitude of the problem

7. It can be seen from the foregoing that the scale of the problem is enormous. The condition of the infrastructure throughout the project States is in very poor condition when considered as a whole and it will take a considerable period of time to improve the situation. It is important that the deterioration is arrested, that good practice is restored and the process of rebuilding starts on a good footing.

Assessment

8. In order to make the assessment for this Position Paper visits were undertaken to all of the Project States, with the exception of Lagos State, which was not in a position to host the visiting Consultant at the time. The visits were undertaken in March and May 2009.
9. The condition of the existing infrastructure was assessed by a combination of site visits to a random selection of schools in the States and extensive discussions with stakeholders. Consensus was reached regarding the overall condition which is expressed in this report. The major problems that exist in most of the buildings are the following:
 - Inadequate foundations that soon result in cracked walls
 - Very poor floor slabs and consequently weak and damaged screeds
 - Poor quality sandcrete blocks in the walls with many having holes
 - Poor quality timber roof trusses (not seasoned and not termite treated)
 - Roof sheets of inadequate gauge and poorly fixed
 - Poor quality timber ceilings
 - Poor quality window and door frames and shutters
 - Poor quality furniture
 - Poor and often no maintenance
10. Meetings were held with a range of representatives from the State MOEs and SUBEB, from Director level down to technical assistants, the emphasis being on the staff from the Planning Research and Statistics Directorates. Meetings were also held with some LGEA officials
11. The MOEs and SUBEB explained their Institutional arrangements and the Organograms for the 4 States visited are basically similar, and conform to a traditional Public sector format.

12. An assessment was made of the capacity of the staff, the operating procedures they use, and practices they apply for the implementation of infrastructure projects. It was found that apart from senior staff, the capacity of the organisations was generally rather weak. The staff require capacity building in the form of training and on-the-job assistance with planning. There is also the need for the development of better prototype designs, tender documents and operating manuals. The organisations also lack administrative capacity. This manifests itself in lack of transport, furniture, computers and printers, records and filing systems connectivity etc.
13. The mechanism for budget allocation and the process that is followed was explained and was found to be logical but subject to excessive delays. This is due to the bureaucratic processes that have to be followed. Delays in releasing the budgets are also often caused by delays in the States fulfilling their obligations for counterpart funding, which in turn suggests a lack of proper planning and management of finances at higher levels. In several of the States visited (in March and May 2009 the budget for 2008 had still not been released). However 70% of all funding for Education is allocated for infrastructure and therefore if these funds were disbursed in time and value for money achieved this would make a significant difference to the States infrastructure needs.
14. The ESSPIN State team leaders and Education quality representatives were also consulted at length. At all the meetings and discussions held stakeholders were asked for their recommendations and suggestions for interventions that could be made by the ESSPIN project to improve the delivery of infrastructure to the States

Issues to be addressed

15. Before determining the overall approach and the practical steps to be taken to support the States and the Communities it is important to identify the issues to be addressed
 - Procedural Delays in the release of annual budgets. This is having a detrimental effect on the implementation of infrastructure projects. Administrative processes need to be streamlined and the States need to deposit their counterpart funding from the UBEC fund in a timely manner
 - Planning and Data Collection. Assistance needs to be given to the States in the preparation and reviewing of their short and medium term workplans. This needs to include methods of data collection and verification
 - Procurement procedures. Open and transparent procurement methods need to be used in the procurement of all construction contracts. Only reputable and competent construction companies should be allowed to bid for contracts. Political interference needs to be curtailed.
 - Water and Sanitation. The present situation is extremely poor and the provision of sanitation and water is a priority

- Prototype designs. Improved designs with accompanying specifications and tender documents should be used for all new school buildings to enable an improvement in quality of the building stock
- Capacity Building at State level. The introduction of operating manuals and training of staff at MOE and SUBEB. The roles of these 2 organisations sometimes overlap which results in a dilution of responsibilities in certain areas. Specific roles and responsibilities need to be defined
- Capacity Building at LGEA and Community level. For the sustainability of education as a whole including infrastructure it is essential that the communities play a greater role. Communities and LGEAs need to develop a sense of entitlement and also ownership and responsibility for the infrastructure they receive. They should be incorporated in the planning process and be involved in the supervision and maintenance of school buildings
- Poor quality school buildings. The cycle of poor quality buildings that require rehabilitation after less than 10 years (in some cases less) must be broken. This is a downward spiral. In most cases all that 'rehabilitation' achieves is a cosmetic job that lasts for a few more years before the cycle is repeated. This results in very poor value for money and makes no sense from a building or economic point of view.
- Prioritisation of construction of sanitation, water supplies, classrooms and provision of furniture. Due to the critical nature of the situation prioritisation is necessary and emphasis needs to be put on the decongestion of urban classrooms, and building new classrooms in underserved rural areas, rather than diverting resources to Library and Laboratory construction. These units have a relatively high cost and high service demands which are often not met.
- Supervision of Construction There are very weak systems in place at present for supervision. Most States do not even have a budget for this. The results of having unsupervised contractors is predictable, and contributes to the ongoing trend of poor quality. Some States, realising this problem, have started to employ outside Consultants to fill this role. To overcome the problems of transport it is proposed that this function is decentralised with a greater involvement of the LGEAs and the Communities
- Administrative Capacity of MOE and SUBEB This is a constraint on the ability of these institutions to operate effectively and needs to be addressed jointly by ESSPIN and MOE/SUBEB
- Maintenance A workable Maintenance policy needs to be developed and implemented to preserve the sector's building stock

Overall Approach

16. Realistically ESSPIN does not have the resources to make a direct impact on the quality of the existing building stock. However, there is much that the programme can contribute

towards improving processes and procedures which have brought about this dire situation, and thereby ensure that in future the situation will get better.

Adoption of Realistic Targets

17. It is important for a project of this nature to adopt realistic targets. With the general educational infrastructure in such bad condition and the scale of the problem so big, it is not realistic to aim for a complete transformation of the situation in the time frame of the programme. The objectives can be ambitious but must be achievable

Sustainability

18. The interventions introduced under the ESSPIN programme need to be sustainable and their benefits enduring. Provided the interventions of ESSPIN can re-establish the basis of good practice this can be built on by the MOE and SUBEB in the future. If this is achieved the long term benefit to all the stakeholders will far exceed the short term benefit during the ESSPIN programme

Capacity Building and strengthening of Govt Systems

19. The current institutional arrangements in the Planning, Research and Statistics Directorates of the State MOEs and SUBEB are well established and conform to a traditional model of organisation for authorities implementing infrastructure programmes. While some aspects of these organisational structures do not function particularly well or efficiently, they are fundamentally sound. It would therefore be detrimental in the long term to work outside of these systems with the intention of achieving a short term objective more quickly. Therefore, ESSPIN's approach will be to work within these existing institutions with a view to strengthening Government systems and getting them to work more effectively. Considerable input will therefore be in the capacity building and training of staff at State level.
20. 70% of the current infrastructure budget is allocated for infrastructure. This is a significant resource and if it can be used effectively it will make a big difference to infrastructure delivery.
21. Capacity building and training of the MOE and SUBEB staff at State level will form an important part of the ESSPIN approach

Involvement of Communities

22. At present there is very limited involvement of Communities in the planning, implementation and maintenance of school buildings. The capacity of the communities to contribute is in fact very weak, due to their limited resources. In the past Communities have tried to construct classrooms and toilets in a small number of locations but the standard of these buildings is nearly always lower than those built by Contractors working under SUBEB. This is because the Communities receive no support, and generally try to do

too much with small amounts of money. The inevitable result is buildings being badly built and often not being completed.

23. The ability of Communities to carry out construction directly with donated funds would be limited and require considerable technical and managerial assistance. Communities generally do not have the requisite organisational structures or skills to manage construction, and therefore this approach is not recommended on a large scale. It may however be adopted on a small scale/pilot basis. Instead the approach that will be adopted by ESSPIN will be to try to raise Community awareness in terms of their entitlements, the benefits of ownership, and their awareness of some fundamental principles of good construction.
24. This latter would be to enable them to provide rudimentary supervision of construction while ongoing by contractors. Work will be done in conjunction with the School based Management Committee Programme to raise the Communities' awareness and involve them in the planning stages and also the supervision of construction. This will be carried out at a fairly rudimentary level, using basic manuals which include pictorial illustrations of good construction practice. Samples of building materials that meet the required specification will also be supplied and/or demonstrated. This will help to ensure that the Contractors on site use good quality materials and acceptable workmanship. Mechanisms will be put in place to enable the Communities to get advice and assistance from SUBEB when they consider it necessary. The wide coverage of the mobile telephone network in most of the Project areas will be of great help in this regard.
25. This supervision input from the Community will help raise the quality of the buildings and at the same time, by involving the Community, will help them develop an interest in the buildings and a sense of ownership. With this input into the construction from the beginning, and the sense of ownership and benefit to them of the buildings the Communities will be far more willing to play a part in the maintenance and long term well being of the buildings.

Use of Model Classroom Construction as a basis of the Training and Capacity Building programme

26. In 3 of the 4 Project States ESSPIN has agreed to work on a pilot basis in limited number of LGAs for the first phase of the project. The intention is that in these selected LGAs example prototypes of classroom blocks will be constructed in the first year of the project. These will be used, not simply as 'models' for good design and construction but more importantly, as a vehicle for the training of the technical staff of MOE and SUBEB, LGA staff and Communities. It will also allow ESSPIN access to processes and procedures which have been notoriously non-transparent, and the opportunity to affect and reform these.
27. The intention will be for ESSPIN to provide technical assistance to follow and support the complete process from planning and procurement, to actual construction and use this as a

platform for training. This will give the opportunity for workshops and training sessions to be given on 'live projects', which should be a more effective means of developing capacity.

28. Construction Management and Supervision Manuals will be drawn up and refined and adapted to the local situation as the training progresses. All players in the construction management process will receive training from the planners down to the site supervisors. It will also provide the opportunity to impart practical knowledge, at an appropriate level, to the Community.
29. CE has direct experience of using this inclusive approach involving all the players elsewhere, and it has proven success. By working with individuals at all stages of the process ESSPIN technical staff will quickly be able to identify problem areas and work together as a team to find and implement solutions rather than imposing them with a policing attitude

Restore good practice in construction of infrastructure

30. The aim of the training and capacity building is to restore good practice and improve the quality of the school buildings. This will provide good quality comfortable classrooms, prolong the lifespan of buildings and break the current wasteful cycle of continuous spending on cosmetic 'rehabilitation' of buildings with weak foundations and walls. With the needs being so great in the education sector as a whole it is essential that value for money is realised for the 70% of the budget that is allocated to infrastructure.

Practical Support to States and Communities

Capacity Building at State Level

i. Preparation of State Workplans and Pilot Projects

31. Working sessions will be held with SUBEB and MOE representative to review their current workplans and prepare the Workplans for the first 2 years of the ESSPIN programme. This will involve several visits to the SUBEB offices in each of the States for up-to a week at a time to carry out reviews and assist in the formulation of the Workplans.
32. Issues to be addressed will include:
 - Data collection. Assist with methods to obtain relevant information for planning purposes and introduce checks to verify the accuracy of information being used.
 - Review current SUBEB workplans in terms of priorities and quality/ effectiveness.
 - Ensure that institutional responsibilities between and within MOE and SUBEB are well defined.
 - Establish the current budgetary status and ensure the availability of funds for the first two years of the ESSPIN programme.
 - In association with the ESSPIN State Team Leaders and SUBEB prepare the Workplan for the 1st Year of the programme utilising the ESSPIN budget for construction of model classrooms in the selected LGEAs, water and sanitation facilities and pilot projects.

- Workshops will be held to discuss key issues relating to school layout plans, preparation of prototype designs and specifications for school buildings and furniture.
- The preparation of the technical procurement documents will also be dealt with in the workshops and mechanisms for the prequalification of competent contractors explored.

33. Following initial visit to each of the States covering the above issues a series of follow up visits will be held to agree the final workplans and review the procurement documents. The tender process will be monitored including the preparation of the tender evaluation reports and award of contracts.

ii. Preparation of Manuals for Construction Management, Supervision and Maintenance

34. The intention is to develop these Manuals at State level in each State with the participation of all the relevant personnel in the MOE and SUBEB. The skeleton of each of these manuals will be essentially the same for each of the States but they will be formulated and edited in the teamwork atmosphere of individual Workshops. In this way each of the attendants at the Workshop will be able to actively contribute to the formulation of the Manuals – it is intended that this non prescriptive approach will promote greater interest and ownership of the manuals and be appropriate to the needs and conditions in each States. In addition to being a useful training exercise in itself it will result in the production of Manuals and Guidelines that can be embedded in the system and used in the future in the construction and maintenance of the school buildings.

iii. Direct on the Job Training in Construction Management and Supervision

35. Workshops and training sessions will be held at regular intervals during the construction of the model classrooms and water and sanitary facilities that are being implemented in the first year programme. These training sessions will include site visits. During this period the Construction Management and Supervision Manuals will be put into practice in a 'live' situation and further refinements and improvements can be made to the Manuals in the process.

Capacity Building at LGEA and Community Level

36. As outlined elsewhere in the report it is essential for the Communities and LGEAs to become more involved in the infrastructure process. In order to introduce infrastructure issues to the Community it is intended that this is done in close co-operation with the School Based Management Committee Programme that is being incorporated in the ESSPIN project. Workshops will be held with the LGEA staff and the SBMCs with the objective to involve communities more in the planning, supervision of construction and maintenance of school buildings.

37. Workshops will be held with SBMCs with the following objectives:

- To sensitise the communities regarding their entitlement to school buildings of a reasonable quality.
- To involve communities and LGEAs in the planning of school buildings.
- To provide simple guidelines on the quality of building materials and good building practice. This will be done in the form of a simple manual with illustrations and captions in the local language and will be supplemented with samples of building materials (concrete blocks of acceptable strength, door and window frames and locking mechanisms, roof sheets of the correct gauge etc).
- To set up empowerment mechanisms that will enable the voice of communities to be heard and establish a course of action that should be followed when they require assistance.
- To establish the part Communities can play in the Maintenance of School facilities.

38. Community and LGEA personnel will also participate in the “on the job training sessions” that will be conducted during the construction of the model classroom blocks and water and sanitation facilities. This will enable all the participants in the infrastructure programme to establish the best ways in which Communities can participate and become more involved in the construction and maintenance process.

Development and Implementation of School Maintenance Policy

39. There is currently little or no maintenance in most schools in the Project States. The objective will be to develop a tiered maintenance policy with mechanisms that enable the various maintenance functions to be implemented at the appropriate level. It is intended that a Maintenance Manual will be developed in tandem with the Construction management and Supervision manuals.

40. It is essential that regular periodic inspections of the school building stock are included in the inspection process and budgets and mechanisms are established for maintenance.

Direct Budgetary Assistance

41. It is proposed that direct budgetary assistance is provided from ESSPIN for the following facilities in schools in the initial 2 years of the project.

- Water Supplies + Sanitation
- Model Classroom Blocks in selected LGEAs.
- Pilot projects at selected LGEAs.

A breakdown of the proposed budget is included as an Annex to this report.

42. In addition to providing badly needed facilities in the form of classrooms, water and sanitation; the construction of these facilities will provide a training vehicle for capacity

building among the MOE and SUBEB staff at State level and also the LGEAs and Communities at school level.

International and National technical Assistance

43. In order to provide the Capacity Building outlined in this paper it is intended that both International and National Consultants are engaged. At this stage it is likely that two TA teams are formed each comprising 1 International and 1 National Consultant and that the Project States are divided between the two teams. This would provide continuity but rotating the teams and the States may also provide variety and added value. A decision on the option to be adopted will be made as the training programme evolves.
44. A copy of the programme indicating the roll out of the training programme is attached in the Annex to this Report.

Annex 1 – Budget for Infrastructure, Water & Sanitation



