



Innovation Brief

on International Development Services

School Rehabilitation, Construction and Maintenance – A Community-Based Approach

Author: John Shotton and Lena Gampp

9

July
2009

The Problem

Current Situation:

In 2000 World Leaders adopted the UN Millennium Declaration committing their nations to a new global partnership to reduce extreme poverty and setting out time-bound targets with a deadline of 2015 that have become known as the Millennium Development Goals (MDGs).

The second MDG targets the achievement of Universal Primary Education.

For many countries and hundreds of millions of young people access to education remains a distant dream.

One of the most stringent reasons is the lack of school infrastructure – total absence of schools or poor infrastructure where schools do exist but with acute dilapidated classroom and toilet facilities, inadequate water supply and missing fencing and boundary walls seriously affecting health and security, and no safe transportation.



In order to reach the goal of Universal Primary Education, in many regions of the world there is a huge and urgent need and demand for both improved school building and renovation together with better maintenance.

The Challenge

Despite all the efforts and attention that have been paid to primary education, the problem of school infrastructure rehabilitation, construction and maintenance, and provision of quality learning environments remains largely unsolved.

The reasons are fourfold:

First, there is a general lack of awareness amongst governments about the problem as such. Where governments are aware, then often the extent of the problem is not recognized and translated into concrete action. Lack of serious interest then results in consequent lack of investment.

Second, potential high cost and other funding priorities prevent many governments from successfully tackling the problem. Not only do concerned ministries not have the necessary funds available, they also lack human resources.

Third, school construction often involves corrupt practices with extensive transmission losses of financial resources.

Fourth, there is generally insufficient knowledge of an approach as how to effectively deal with the first three issues above.

Urgent Call for Action

Providing a cost effective and ethical approach to school rehabilitation, construction and maintenance is one of the greatest challenges faced by governments and development agencies.

The Innovation – A Cost-Effective & Community-Driven Approach

An **innovative approach** is needed to make school rehabilitation, construction and maintenance more cost-effective with communities being granted facilitation to drive the approach.

BMB Mott MacDonald has successfully developed and tested such a new **innovative approach** drawing on the experience of the Andhra Pradesh Primary Education Project (APPEP) in India and has implemented the same in the IMBEWU Project in the Eastern Cape, South Africa and in the Faisalabad Devolution Project (FDP) in Pakistan.

APPEP adopted a *two pronged strategy* of improving classroom transaction by *training teachers* and giving a fillip to *community-based and driven school construction*. IMBEWU and FDP drew on this by piloting the rehabilitation of existing schools and construction of new schools actively involving the community from design through to actual construction and on-going maintenance. Employment was created for the school community - brick making and laying, carpentry and electrical work.



The initiative departed from the typical contractor-based school building approach. It represented an alternative and sustainable approach to the delivery of classroom buildings and related structures which maximized participation of local communities.

Advantages of this innovative cost-effective and community driven approach to school building were and are numerous.

First, the gain from such an approach is that it encourages *community ownership*. By involving the community in the planning and execution of school construction, not only responsibility and empowerment is created, but through a participatory approach, the school constructed is reflective of community need. Creating a sense of local ownership also leads to less room for corruption. Most important ownership leads to responsibility for the new school and better prospects for sustained maintenance. When communities are involved in building schools, they automatically own the schools and a different kind of school develops.



Second, using locally available resources and technologies creates many benefits. Adapting appropriate construction methods has the advantage of taking into account the traditional knowledge of the local people using a construction style that is contextualised. For example using traditional architecture in IMBEWU led to the construction of schools which celebrated local culture. Local jobs were created. This led to improved economic development. At the same time it was also more cost-effective.

Third, an important advantage of this community driven approach to school construction is that it creates more interest on the part of communities in schooling per se.

A Guide to Implementation

The successful experience of BMB Mott MacDonald has shown that in order to realize the advantages of this community driven approach to school construction, it is important to plan systematically.

The process generally consists out of three main steps.

First, a Plan of Action needs to be prepared to initiate and manage the construction programme to build model demonstration schools. **Second**, locally available materials and technologies need to be examined and acquired. **Third**, local people need to be identified and if necessary trained.



In IMBEWU the following step-by-step guide to implementation was developed.:

Step 1: The Project started with visiting existing schools and communities to assess which was to be used as a pilot school.

Step 2: A community and a pilot school were selected, whereupon the governing body as well as a project steering committee (with members of the community) were chosen. At the same time technical advisors were contracted to share best practice lessons. To ensure real community ownership and support the community driven process, the school governing body, through the steering committee was given a leading role in managing the project. This required careful sensitivity to social dynamics, mediation and negotiation.

Step 3: A resource mapping exercise was conducted. Resource mapping analysed patterns of

space, local climatological conditions and available resources.

These three dimensions enabled the construction of buildings that were locally contextualised. For example, in IMBEWU Afribond wall construction and cement stabilised soil blocks (CSEBs) were selected for walling. The Afribond technique was used initially with standard cement bricks, as a filled cavity, brick-on-edge foundation wall. The walls above floor level were constructed using CSEBs in stretcher bond and sealed against rain penetration.



Step 4: The project team together with the community decided on the actual location and design of the school, based on the findings of the resource mapping exercise. This was the moment when the community involved in the case of IMBEWU decided to design a school that was in line with the traditional building style of the community and took into account local particularities.

Step 5: Local people were then trained in brick making and laying and other building skills such as carpentry and painting.

Step 6: As the preparation process for the school construction was finalized, the construction itself started. The trained community members started to build the school that had been designed by the community and took into account locally available resources, technologies and traditions. A unique school, owned by the community emerged.

Conclusion

The IMBEWU School Rehabilitation, Construction and Maintenance initiative was a success and provided an innovative model of good practice that is recommended for replication. It generated community building skills development with over fifty members of the community trained. It also led to significant employment generation for over seventy people.

Further despite the relative high investment in people and capacity building, this community driven approach resulted in a 25% cost reduction set against estimates made using conventional building methods. The Project also managed to promote community growth with wide acceptance within the community and full participation of the steering group with the community taking pride in their school.



Next Steps

Experience in South Africa, but also earlier in India, and later in Pakistan, has shown that there is indeed a very promising sustainable and feasible solution to the thorny issue of school infrastructure thereby allowing hundreds of millions of young people access to education and the MDG goal of Universal Primary Education more than just a dream.

However, if this alternative community based approach to school construction and maintenance is to be taken to scale and full development effects realised, serious advocacy from Development Agencies needs to be undertaken vis:

- Dissemination of experiences
- Publication of website addresses
- Sharing of experiences through conferences
- Organisation of interested parties for lesson-learning

References

- Nederlandse Ministerie van Buitenlandse Zaken (MINBUZA) (2008); Thema's – Onderwijs <http://www.minbuza.nl/nl/themas,sociale-ontwikkeling/onderwijs>
- Province of the Eastern Cape Department of Education (ECDE), (2005) Comprehensive Evaluation Programme; School Community Integration Pilot Project. Baseline Report 2005. Intengu Communications: South Africa
- Province of the Eastern Cape Department of Education (ECDE), (2006); A Journey of Transformation. Intengu Communications: South Africa
- Province of the Eastern Cape Department of Education (ECDE), (2006), Celebrating Successful Partnerships for Quality Education – An Overview of the Imbewu Programme. Intengu Communications: South Africa
- Province of the Eastern Cape Department of Education (ECDOE), (2007), A Community-Centred, Cost-Effective, Environment-friendly Approach to School Infrastructure Development, in the interest of improving Learning and Teaching. Intengu Communications: South Africa
- UN (2008), The Millennium Development Goal Report 2008 http://www.un.org/millenniumgoals/2008highlevel/pdf/newsroom/mdg%20reports/MDG_Report_2008
- UN (2008.), Millennium Summit. <http://www.un.org/millennium/summit.htm>



You are welcome to contact us:

Ms. Moniek Van de Ven, Knowledge and Information Manager (Moniek.Ven@mottmac.nl), or Mr John Shotton (john.shotton@mottmac.nl) BMB Mott MacDonald, Amsterdamseweg 15, 6814 CM ARNHEM, The Netherlands. Tel: +31 26 3577111 www.bmb.mottmac.nl