Ethical school construction
innovation and accountability

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Rights based education:

CRC

• State parties recognize the rights of the child to education...; (Article 28)

• (d) Make education....available and accessible to all children

• (e) Take measures to encourage regular attendance at schools and the reduction of drop-out rates
Global frameworks

Millennium Development Goals

• **MDG 1** Eradicate extreme poverty and hunger.

• **MDG 2** goal of achieving universal primary education.

• **MDG 3** Eliminating gender disparity in primary and secondary education preferable by 2005, and at all levels by 2015.

• **MDG 4** Reduce Child Mortality Rate

• **MDG 5** Improve maternal health

• **MDG 6** combating AIDS, malaria and other diseases - The provision of clean and hygienic school environments

• **MDG 7** ensuring environmental sustainability - appropriate construction, material selection and procurement.

• **MDG 8** Develop a global partnership for development

Education for All

• To promote universal access and equity in education

• To broaden the means and scope of basic education

• To enhance the learning environment
Accessible, inclusive, healthy, safe school environments are a right not a service
building back better/safer initiative:

......to ensure that reconstruction would not lead to conditions which could result in a similar disaster recurring.

...proposed that ‘shelter must be considered as a process, not as an object’. Davis (1978: 33)

Good recovery must leave communities safer by reducing risks and building resilience.’ Post-tsunami learning Clinton ten propositions;

Disaster Mitigation Lessons from "Build Back Better" Following the 26 December 2004 Tsunamis

J. Kennedy, J. Ashmore, E. Babister and I. Kelman
Which process is needed?

Set of principles:

“A school must have appropriate, sufficient and secure buildings”

“A school must be a healthy, clean, secure and learner protecting environment.”

“A school must have a child-friendly, barrier free environment which promotes inclusive access and equal rights of every child”

“A school must have adequate and appropriate equipment that support the level of education.”

Quality School Environment
Construction Process:

**Design and planning stage**
- Context specific design/construction standards/
- National building codes
- Spatial/structural technical drawings
- BOQ
- Budget allocation
- Community engagement
- Stakeholder buy-in

**Contract Stage**
- Programmatic input required

**Construction stage**
- Contract in place (time/cost/quality)
- Contract documents in place
- **Clear lines of accountability**
- Contract administration
- Site supervision
- Monitoring (community)

**Maintenance stage**
- Community ownership
- Maintenance procedures
- DRR procedures

School in Jakarta
Design/Planning stage:

“Child Friendly Schools Infrastructure Standards and Guidelines”

Primary and Tronc Commun schools

Rwandan Ministry of Education

Approved document

August 2009
Rwanda Education Quality Standards 2008

Standard A
“A school must have appropriate, sufficient and secure buildings”

schedule of accommodation, spatial qualities and facilities

Standard B
“A school must be a healthy, clean, secure and learner protecting environment.”

sanitation facilities/provision, water supply and waste management

Standard C
“A school must have a child-friendly, barrier free environment which promotes inclusive access and equal rights of every child”

Description of barrier free environments, access, special needs

Standard D
“A school must have adequate and appropriate equipment that support the level of education.”

classroom furniture layouts suitable for various teaching techniques
Overall school environment:

The classrooms:
Accessibility:

- Level ideal
- < 1:20 Accessible pathway
- Max 1:10 assistance required
- > 1:10 Hazard

Ramp gradient
WASH: Toilet facilities

Accessible Toilet Plan
Technical drawings:

Child Friendly School - classrooms building

typical crossing section A-A
Community participation/stakeholder buy-in:

• To be context specific
• Equitable site selection
• To encourage ownership
• To engage with end-user expertise
• To work within existing resources (financial/human capacity/technical skill)
• To use sustainable materials
• To use appropriate construction technology
Community feedback:

Staff and pupils feedback:

“Some classes have only two windows and it becomes so hot that children fall asleep”

“Dust falling from roof disturbs my studies”

“When it rains we have to stop teaching because the rain hitting the roof is so noisy, and we have to shut the shutters and then the room is dark”
....otherwise:

Not healthy, child-friendly, gender responsive

Unsafe construction

Not accessible
**Challenge: Prioritisation of Quantity / Quality**

Every country has limited human and financial resources, and technical capacity to mobilise. Within resource scares environment a central challenge is to establish a fine balance between providing sufficient quantity to an adequate quality without overstretching the nations financial resources and demanding too much from the limited human skill base.
Inclusive debate with all stakeholders about prioritizing individual standards.
Prioritisation; Incremental development approach

To enable the Ministry of Education to state clearly the minimum standards and simultaneously offer best practice guidelines for future, the document follows terminologies such as **must**, **should** and **may**.

<table>
<thead>
<tr>
<th>Terminology</th>
<th>Definition</th>
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<tbody>
<tr>
<td><strong>Must</strong></td>
<td>States the spaces or a quality that is a minimum requirement.</td>
</tr>
<tr>
<td><strong>Should</strong></td>
<td>Gives guidance on spaces or a quality that is encouraged which is in line with best practice.</td>
</tr>
<tr>
<td><strong>May</strong></td>
<td>Gives guidance on spaces and qualities identified as beneficial where resources are available.</td>
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Construction Process:

Design and planning stage
• Context specific design/construction standards
• Spatial/structural technical drawings
• BOQ
• Budget allocation
• Community engagement
• Stakeholder buy-in

Construction stage
• Contract in place (time/cost/quality)
• Contract documents in place
• Clear lines of accountability
• Contract administration
• Site supervision
• Monitoring (community)

Contract Stage

Maintenance stage
• Community ownership
• Maintenance procedures
• DRR procedures

School in Jakarta
Construction stage:

• Construction contract with construction drawing set/ BOQ/ Cost plan

• Construction site supervision procedure to fixed stages set out by contract

• Overall Monitoring procedures

• Community monitoring (non-technical)

• Certification and evaluation (payment)

Clear lines of accountability
Construction stage:

- no child labour on site

- Site safety of school community; children/teachers during construction activities/retrofit/rehabilitation

- Site safety for workforce

- Safety of construction materials
Accountability

- Clear lines of accountability
  - signed in the contract:
    - Contractor
    - Implementing body eg. NGO
    - UNICEF Education Programme
    - UNICEF Construction UNIT
    - UNICEF Engineer

- Participation contributes to create ownership

- Community
  - Report problems
    - Monitor Non-technical
  - Contractor
    - Contractor’s Field Engineer
  - Field Engineer
    - monitor
  - Implementing body eg. NGO
    - monitor
  - UNICEF Engineer
  - UNICEF

- Monitor Non-technical
Effective Monitoring:
COLUMNS DEMOLISHED

CONTRACTOR START TO USE VIBRATOR FOR CONCRETE
otherwise: Low quality outcome
Structurally unsafe
Structurally unsafe
Once the construction is finished, it is very difficult to assess the structural deficits, exposing children to an unsafe environment.
Challenge: Remote monitoring; Construction in the context of insecure situations

- Sites cannot be accessed, due to conflict/insecurity

- Lines of accountability may exist in the contract, yet site monitoring is not possible

**Community based construction monitoring**

- **Best** possible guarantee to monitor the non technical aspects, key-stages, materials, workforce

- **Creating ownership** of the process and building through participation
Contractual relationship of implementation

- Budget support to Government not yet possible

**PCA**
(Programme cooperation agreement)
Unicef monitor

- **ONG**
(international)

**SSA**
(Special service agreement)
Contract administration

- **Entreprise**
(local)
- **ONG**
(local)

Suivi des chantier by les entreprises e administration contractuelle
The **monitoring tool** developed for inaccessible / unstable areas.
clarifies the responsibility of each party makes maximum use of community and site engineers to ensure monitoring of progress, payment and quality.
Monitoring tool:

• Common monitoring tool developed with all partners, part of contract, PCA, (Programme cooperation agreement)
Internal capacity:

• *internal capacity* to manage construction activities is required

• There is a need for a construction specialist (Engineer/Architect/construction Unit)

To *advocate* quality school construction to the governments, through *design standards*, *building codes*

To *advocate* child-friendly policy

To *monitor and contract administer* construction activities

To use *innovation professional skill* to create appropriate context specific solutions

“*The Construction Unit is established in UNICEF’s Country offices as part of the program components and its main responsibility is to perform the role of facilitator and coordinator of stakeholders, supporting them when required, anticipating challenges and having a global overview of all contractual/administrative/logistic and financial issues involved the rehabilitation or and construction activities.*”
Challenges:

How to design and built with inclusiveness, safety, health and child-centred in mind?

• obligation/ responsibility to find workable/affordable/context specific solutions

The role of the construction specialist

INNOVATION
ACCOUNTABILITY

COMMUNITY
ENGAGEMENT

The scale of impact?

• National government’s responsibility to implement school infrastructure

• UNICEF can advocate best practises/ construction standards and guidelines for CF schools/ construct model schools/ advocate sound construction procedures