Processes of design prioritisation, standardisation and customisation

Experiences from recent UNICEF consultancies in Rwanda Democratic Republic of Congo and drawing from precedent studies from the UK

Presentation at UNICEF workshop Bangkok
3 August 2010
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Architect / independent infrastructure consultant
Design Prioritization for
National infrastructure programmes

Does your country currently have design standards for Education facilities

Explore; The benefits of undergoing national or organizational (UNICEF) design standards review.
Design Prioritization for National infrastructure programmes

There is always limited funds to build national infrastructures.
- Capital investment is intensive
- The needs and aspirations are always greater than available resources.

“Global and national priorities plays a large role in setting standards and guidelines for the physical environment and it does change according to the social - political -economic climate of the nation. But what does not change is than we (should) build according to what we educate for.”
In 18th century
“Create an industrialised nation”
The predominately rural population moved into urban factories. Which marked the beginning of mass education in Britain. To educate an obedient population with the ability to read, write and calculate became key to economic development.

Victorian schools emphasised basic hygiene and health provision which counteracted the unhealthy living conditions and improved the children’s overall health and ability to learn.

Design;
- High ceilings, lots of light and ventilation windows- air circulation to prevent disease spreading
- Fixed front facing desks – produce a disciplined work force.
National Priorities Historic case studies

Post WWII Britain “Recovery and Modernisation”
Much of public infrastructure was destroyed in the war and in a time of scarce resources the schools was remodelled according to modernistic principles of efficient modular components.

Typical post war school using standard components

Temporary class rooms used for over 13 years
UK Building schools for the Future (BSF) programme 2004-2010

Most schools had not been modernised for 40 years leaving them in dilapidated and rundown conditions. In 2004, England’s Labour government launched Building Schools for the Future (BSF) programme. It was the biggest-ever school buildings investment programme in England, and in fact the largest and most ambitious scheme of its kind in the world. The aim was to rebuild or renew nearly every secondary school in England and create ‘world-class’ schools worth £45billion. It was to see every state secondary school in England – around 3,500 in total – rebuilt or remodelled.

“It is one of the primary concerns of a modern state to educate their young generations to become part of a well educated, modern and productive society.”
UK Building schools for the Future (BSF) programme 2004-2010 “Knowledge based society”

Building Schools for the Future programme placed research based education together with investing in information technology (ICT); at the heart of the schools infrastructure agenda. The question was not how to bring our buildings up to standard but how to create learning environments for the next generations of learners in the 21st century? The goal was to improve the lives of children (‘every child matters’) major capital investment into rebuilding and refurbishing works customised to each individual school. The BSF programme, believed that the circumstances of each school in their community is unique requiring specifically designed solutions within an overall spatial framework of guidelines.
Customization

Each school is customised to the community and site. This became a resource intensive system. Multiple layers design teams. The design team (architects, engineer, Quantity surveyor etc....) Central government review panel design team Local authority review design team
Global Priorities

**MDGs**
The Millennium Development Goals 2
- Increase net ENROLEMENT rate in primary school, (increase access)
- Increase RETENTION (keep pupils in school)
- Increase adult literacy ATTENUATION (increase quality of education)

**UNICEF Child Friendly Schools principles**

**Education in emergency (INEE)**

**Safer school construction (INEE,World Bank )**

**Education for All (EFA) initiative**
The *Education for All* (EFA) 1990 movement lead by UNESCO
Goal 2; Promote education for all people irrespectively of gender, disabilities, race and age.
EFA goals:
- Ensuring free universal primary education
- Gender equality in education,
- Expand early childhood care,
- Reducing adult illiteracy,
- Promoting life skill development and ensuring quality education to all educational levels.

The *Education For All* annual monitoring report 2010 reiterates the need to improve the quality of education and to increase retention and attenuation rates as priorities. **The report states that children drop out of school for variety of economical and cultural reasons, including cost, cultural barriers and marginalisation. Girls and children with disabilities are the most likely to not complete a full course of primary education. So are children from rural areas, who are twice as likely as urban children to miss out on education.**
Global Priorities
- MDGs
- Education for All
- Education in emergency
- Safer school construction
- Safer school construction

UNICEF Child friendly Schools /WASH Priorities
- Economic / Human development
- Pedagogical theory
- Education policy

National Priorities
- Skill based society
- Knowledge based society
- Obedient society
- Or if we are promoting free thinkers

We need to be aware that this informs space quality standards to educate the next generation for............
Reviewing Rwanda’s schools infrastructure standards and guidelines

To share the experience in drafting the new national school infrastructure standards and guidelines for Rwanda. They have now been successfully adopted by the Ministry of Education and are expected to be met by all primary and Tronc Commun (lower secondary) schools in Rwanda.
National policy education vision context

The National Investment Strategy
“focused investment” in the area of Human Resources Development.

Vision 2020
To provide Universal Primary Education (UPE) by 2010 and subsequently Basic 9 year Education for All (EFA) by 2015.

To build a knowledge-based and technology-led economy. Particular attention has been given to the teaching of Science, Technology and Information Communication Technology (ICT) at all levels. Currently the same goals as UK!

Increase the countries human capital to enable girls to reach their full potential by tackling the underlying causes for girls drop-out rates.

Economic Development and Poverty Reduction Strategy
To give access to quality and effective education within an equitable framework
Primary and Tronc Commun schools
Abbreviations & Acronyms
5

Section 1 – Standards Framework
1.1 Introduction
1.2 Targeted use and audience
1.3 Rwanda Education Quality Standards 2008
5
Four standards of Child Friendly Schools Infrastructure
1.4 Rwanda specific standards
1.5 Child Friendly Schools Approach
5

Section 2 – Planning
2.1 Categorization grading of facilities
2.2 Schools infrastructure check list
2.3 Refurbishment / Upgrading
2.5 New site selection
2.6 Site layout for schools (Refer to site zoning plan below.)
2.7 Atmosphere of the school
2.8 Disaster Risk Reduction Strategy
2.9 Energy
2.10 Electricity
2.11 Community involvement
2.12 Curriculum - 6 year’s basic education

Section 3 – Standards – guidelines

Standard A
“A school must have appropriate, sufficient and secure buildings.”
A.1 Schedule of accommodation
A.1.1 Class rooms / Basic teaching areas
A.1.2 Head teachers room
A.1.3 Staff room / teachers resource room
A.1.4 Storage space
A.1.5 Science Laboratory
A.1.6 ICT room
A.1.7 Play/ Games / leisure area
A.1.8 Outdoor learning area / Habitat area
A.1.9 Library / Learning resource area
A.1.10 Multi purpose hall
A.1.11 Medical sick room
A.1.12 Kitchen
A.2 Spatial qualities
A.2.1 Internal temperature
A.2.2 Ventilation
A.2.3 Day Lighting
A.2.4 Sound
A.2.5 Water penetration
A.2.6 Dust
A.3 Safe and Secure buildings
A.3.1 Security

Standard B
“A school must be a healthy, clean, secure and learner protecting environment.”
B.1 Water
B.1.1 Potable water (safe drinking water)
B.1.2 Non potable water
B.1.3 Water supply systems
B.1.4 Testing water supply systems and the quality of water delivered to children
B.2 Sanitation Facilities (Toilet and hygiene)
B.2.1 Sanitation Facilities Quantity
B.2.2 Sanitation Facilities Quality
B.2.3 Sanitation Facilities Usage
B.2.4 Technical solutions
B.3 Environmental and Waste management
B.3.1 Composting
B.3.2 Incriminator
B.3.3 Stagnant water
B.4 Secure and learner protecting environment
B.4.1 Passive surveillance against harassment and abuse
B.4.2 Fences

Standard C
“A school must have a child-friendly, barrier free environment which promotes inclusive access and equal rights of every child.”
C.1 Child-Friendly environment
C.2 Barrier Free Environment
C.2.1 Access
C.2.2 Ramps
C.2.3 Accessible toilets and hygiene facilities
C.2.4 Classrooms
C.2.5 Signage
C.2.6 Tactile surfaces
C.2.7 Special Needs Rooms
C.3 Equal access
C.3.2 Specific Religious needs
C.3.3 Gender Balance

Standard D
“A school must have adequate and appropriate equipment that support the level of education.”
D.1 Furniture
D.1.1 Class room furniture design
D.1.2 Class room layout
D.2 Equipment list

Bibliography
Annex
Sample design drawings
Until appointing a consultant ...

...Once upon a time UNICEF Rwanda was not too involved in construction and was only tackling soft components as curricula, health issues...

2001 The Education Sector Policy is established Major partners in Education: UNICEF and DFID start to get organized with coordination meetings with all other partner in the sector.

2003 The Education Strategic Plan Important gaps highlighted were access, quality and equity. (UNICEF Rwanda Education at the time didn’t want to get involved in hardware.)

2004 The Joint Review of the Education Sector, establish strategies for all partners.

2005 UNICEF Rwanda Education strategy for basic education and the gap in construction is identified

End 2005 CFS concept spread out mainly for soft components but the need for hardware is also identified.

2006 UNICEF starts to receive funds for construction and it is recognized that is doing better than others in the sector.

2007 School for Africa initiative come to visit Rwanda to promote also CFS. All partners and Districts in Rwanda are building differently and the need of a standard and typical design take place. How to develop it? UNICEF (already in CFS) can fund it and the idea of an international consultant became reality.
Time scale

1 month inception period
2 months expert working group and drafting
3 months national, regional consultations

5 months Director of school construction MINEDUC takes the document through Ministerial approval

**Total**
11 months from commencement to approval of a national standard
Revising Country specific standards; “Acknowledging the national legislative context”

Rwanda Education Quality standards 2008

Rwanda Building Control Regulation [MINIFRA]

will offer practical guidelines on how to achieve the Quality standards

Will fall under national construction regulations.

2000 guidelines

“Child Friendly Schools Infrastructure Standards and Guidelines” 2009 Primary and Tronc Commun

review
The standards are organised from ‘Soft to Hard’ issues;

<table>
<thead>
<tr>
<th>Soft</th>
<th>to</th>
<th>Hard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard A</strong></td>
<td><strong>to</strong></td>
<td><strong>Hard</strong></td>
</tr>
<tr>
<td>“A school must have appropriate, sufficient and secure buildings”</td>
<td></td>
<td>Description of schedule of accommodation, spatial qualities of facilities</td>
</tr>
<tr>
<td><strong>Standard B</strong></td>
<td></td>
<td>Description of sanitation facilities, water supply and waste management</td>
</tr>
<tr>
<td>“A school must be a healthy, clean, secure and learner protecting environment.”</td>
<td></td>
<td>Description of barrier free environments, access, special needs</td>
</tr>
<tr>
<td><strong>Standard C</strong></td>
<td></td>
<td>Description of classroom furniture layouts suitable for various teaching techniques</td>
</tr>
<tr>
<td>“A school must have a child-friendly, barrier free environment which promotes inclusive access and equal rights of every child”</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Standard D</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“A school must have adequate and appropriate equipment that support the level of education.”</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Main issues

Developing Country specific standards learning from national regional and global practices.

Process of facilitating an inclusive decision making process to gain buy in.

Reach an document which acknowledges the incremental process of development.
Prioritisation of Quantity or Quality

Every country has limited human and financial resources, and technical capacity to mobilise. Within this 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.
1) The Process; Research and drafting

01 **Research of other Ministry of education standards.** Many good practice guidelines for school infrastructure are available from around the globe (e.g. Eastern Cape Department of Education, 2005; Leathes, 2009; Petal, 2008; Theunynck, 2002; UNICEF, 2009; UNICEF and the Ministry of Education, Iraq, 2006; **UNICEF and the Ministry of Education, Thailand, 2008**). Thus, the process started with researching the different categories of documents.

01a **Study of existing school designs in Rwanda.** Rwanda has been undergoing the process of building up schools since the end of the genocide in 1994, with support through a sequence of major school building programmes from the World Bank, African Development Bank, Belgian Technical Cooperation, and UNICEF. Thus, it was important to learn from past construction project designs and to interview key personnel who were involved in these projects in order to build upon the strengths and to improve on the challenges.

01b **Comprehension of the national building regulations/code.** Rwanda at the time of writing the school standards was simultaneously undergoing the drafting of their Building Code, thus the Ministry of Education team worked closely with the Ministry of Infrastructure to anticipate these regulations so that they could fit harmoniously when both documents were completed.

01c **Study of international building regulations.** Rwanda’s Ministry of Infrastructure took parts of the building regulations from the UK as a starting point (e.g. DfES, 2003, 2004, 2006; DETR, 2000) and therefore the educational standards also commenced with the UK building regulations and guidelines. The lessons learnt and the debate originating from a more developed country was important for determining which knowledge was appropriate to be transferred for Rwanda’s context and what components were missing.

01d **Study of UNICEF guidelines and manuals.** That ensured gaining best practice guidance on the *Child Friendly School* principles of child centred learning environments and the education philosophy.

01e **Study of international standards.** It was important for the national standards to conform to international standards such as INEE (2006) and Sphere (2004) while harnessing knowledge from other guidance notes for safer school construction such as Hertz et al. (2009).
The Process 2; Consultation and Presentations

02 Consultation stages. In order to gain the best Rwanda-specific technical knowledge and to set the level of acceptable standards, the Ministry of Education team from the department of schools infrastructure undertook a consultation process, thereby also supporting buy-in.

02a Site visits and user group consultation. The team visited a range of schools: old, new, private, and public across the country. The team also held one-on-one interviews with head teachers, carried out workshops with staff, and organized sessions with children (e.g. “Let Our Children Teach Us!” from Wisner, 2006) to gain their views and concerns about the condition of their school infrastructure.

02b Working side by side with Ministry of Education engineers. Working jointly with the Ministry of Education staff ensured that their immense working knowledge and experience of each region was tapped into.
Overall very poor school building and environmental quality. Lack of ventilation, day-light, access, facilities, equipment, water, sanitation, and furniture.

Staff and pupils feedback:

Rwanda: Inadequate quality

Staff and pupils feedback:

"Some classes have only two windows and it becomes so hot that children fall asleep."

"Dust falling from the roof disturbs my concentration during lessons."

"I have to leave my seat to go to the toilet during the class."

"I cannot focus when it rains because the roof leaks and the water drops into our eyes and makes us cough."

"During the rain, the water from the roof leaks into the classroom and makes it difficult for us to see and hear the teacher."

"I have to sit on the floor because there are not enough desks in the classroom."
**02c Expert working groups.** Working group sessions were organized for each standard (Standards A, B, C, and D) and experts were invited from government departments, national, and international organizations such as MINEDUC, MININFRA, UNICEF, UNDP, BCT, ADRA, CARE, CITT, KIST, KIE, DIFID, JICA, Electro-gas, Handicap International, Rheinland-Pfalz Rwanda, and Right to Play. These half-day workshops were hosted at the Ministry and typically involved 8-12 participants.

**02d Key informant interviews.** It was not always possible to arrange for all experts and specialists to be in one room, so one-on-one interviews were carried out with key personnel such as directors within the Ministry and engineers from international organisations.

**02e Regional and national consultations.** Workshops were organized in each region where a draft document was presented for comment and verification. Representatives such as district education officers, infrastructure officers, head teachers, and parents consisting of a total of 218 participants were involved in giving feedback on the standards.

**02f Presentations to the Ministry.** Gaining the policy makers’ commitments and agreements has been a key to the rapid adoption of the standards. Simple and accurate presentations were made to the Ministry of Education’s senior management committee. In these meetings, it was important to highlight that key stakeholders were consulted throughout the process.
“People learn efficiently when they are in a friendly environment” director of education
Bugesera district

“The school environment can motivate the pupils to like school” director of education
Gicumbi district
Inclusive debate with all stakeholders about prioritizing individual standards.
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><strong>Must</strong></th>
<th>States the spaces or a quality that is a minimum requirement.</th>
</tr>
</thead>
<tbody>
<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>
</tr>
</tbody>
</table>
Scale of effect
Adopted by Ministry of Education in August 2009 (11 months after commencement)
3,100 class rooms have been built in 2009-2010 according to new standards.
2,100 planned in 2010-2011
These standards are referred to in the recently published Rwanda Building Control Regulations by the Ministry of Infrastructure.
Need to extend these standards through similar process to other education levels and health facilities.

- Early childhood development
- Upper secondary education,
- Tertiary education,
- Teacher training colleges, and Technical schools
- Health facilities
Challenges

Retaining the political interest at the ministerial level. Persistent lobbying was needed to gain permission for carrying out the regional and national consultations. Keeping this agenda at the forefront of Ministry staff’s attention ensured that progress could be made.

Lack of professional capacity in country to design and engineer a building to an acceptable level, even with the standards and guidelines. Thus “Ministry of Education created sample drawings” developed through an internal workshop with Ministry engineers. They were finalised through the support from UNICEF’s Rwanda construction unit. Need for sample drawings;
National/Organizational Design Standardization

“Having a standard plan”
Increase quality and safety by;

- Engineering calculations have been made for the standard design.

- Secondary emergency exit included.

- More window openings for light.

- Better ventilation.

- Privacy measures by separating boys’ and girls’ toilet blocks.

- Accommodating people with disabilities through access ramps, WC.

- Omitting a teachers’ platform to allow free wheelchair movement within the classroom and flexible teaching layouts.
Class room layouts

Interactive classroom layout
- 46 pupils max
- (42 pupils with 2 wheelchairs)

Front directional classroom layout
- Bench layout
- 46 pupils max

Groupwork classroom layout
- 46 pupils max
- (44 pupils with 2 wheelchairs)
Developing UNICEF DRC schools infrastructure standards and guidelines

To share the experience in reviewing current practice and setting UNICEF DRC infrastructure standards, management and monitoring tools.
Thematic technical working group to develop common contractual documents; COOPI, IRC, IRC, OXFAM
So....together with engineers from the partner organization we set-up a Thematic technical working group to develop common contractual documents; COOPI, IRC, IRC, OXFAM

-Design drawings EP/CEICA/PS/CS
-Specifications
-BoQ
-Monitoring tools

It was vital to use tried and tested templates from Copenhagen Supply Division and Rwanda construction unit.
Results; Improve outcomes by

- Design
  Increasing accessibility to disabled.
  Increase daylight and ventilation
  Reduce seismic risks
  Include secondary emergency exit

- Cost benefit
  Reducing cost by working together on an accurate BoQ.

- Draft UNICEF construction contracts and advocate their use not SSA.

- Produce a monitoring tool to be used by all, UNICEF, Partners, community.
# UNICEF DRC mapping exercise

## Education

<table>
<thead>
<tr>
<th>Class rooms</th>
<th>via partners</th>
<th>by UNICEF</th>
<th>sub-total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-2009</td>
<td>42</td>
<td>399</td>
<td><strong>441</strong></td>
</tr>
<tr>
<td>2010~</td>
<td>249</td>
<td>309</td>
<td><strong>558</strong></td>
</tr>
<tr>
<td><strong>total</strong></td>
<td><strong>291</strong></td>
<td><strong>708</strong></td>
<td><strong>999</strong></td>
</tr>
</tbody>
</table>

## Health

<table>
<thead>
<tr>
<th>via partners</th>
<th>by UNICEF</th>
</tr>
</thead>
<tbody>
<tr>
<td>2007-2009</td>
<td>4 centre de sante</td>
</tr>
<tr>
<td>2010~</td>
<td>16 centre de sante</td>
</tr>
</tbody>
</table>

## Protection

| cite de la joie |
Standardisation – Standard design/plan as a way to ensure certain quality control, acknowledging the scale of implementation UNICEF and governments partake.
Standardisation and customisation

No standard  Standard design  Customisation

Low standard
Adapting designs with children
India Mapusa
Processes of design prioritisation, standardisation and customisation
School Environment Assessment Tool (SEAT)

The School Environments Assessment Tool (SEAT) is in principle a set of specifically tailored questionnaire to obtain specific information about the existing condition of a school environment from the local school community.

Tools such as the “School Environment Assessment Tool” (SEAT) have been developed as a draft for Rwanda, have been tested in DRC, adoption by any country welcomed. It required testing, refinement and nationally specific adaptation.
Standardised data sets derived from the assessments will be collated and contribute to accurate planning and prioritise action plans at each administrative level. This would allow effective strategic planning to be based on first hand, up-to-date information. Furthermore it could provide the relevant data to select sites equitably and transparently while providing the data over space and time for planning and monitoring the construction effectively.

“Once you know what you have and don’t have, it becomes easier to know what you need and plan for it.”
This assessment tool will sit side by side to the national school infrastructure standards (or agreed reference). The information and data gained through this assessment will then be used to inform the Annual Schools Infrastructure Action Plan and be monitored against the school Infrastructure Strategic Plan and Policy.
2.2 Assessment of existing classroom provision

<table>
<thead>
<tr>
<th>Explanation/Help</th>
<th>Assessment Criteria</th>
<th>Total number</th>
<th>Action required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Only classrooms to be calculated (A)</td>
<td>Overall number of existing classrooms</td>
<td>A</td>
<td></td>
</tr>
<tr>
<td>Overall student number (boys + girls) (B)</td>
<td>Current overall student number</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>The number of pupils per classroom in average</td>
<td>Current pupil/classroom ratio</td>
<td>(B/A)</td>
<td></td>
</tr>
<tr>
<td>Calculate: B/A</td>
<td>Classroom size approx. average (m²)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calculate length x width of each classroom = m² size,</td>
<td>Take average of all classrooms</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For district use

Requirements according to national “child friendly schools Infrastructure standards”:

- Maximum number of pupils (46) per existing classroom size. Provision of 1m² floor area per pupil. Calculate 46 x m² of classroom.
- Overall max. pupil number provided for according to standard. Calculate: pupil number per standard x existing number of classrooms.
- Calculate: overall pupil number minus max pupil number per standard = pupils not provided for. Divide number by 46 (the max pupil number).

- According to standard: pupil/classroom ratio
- According to standards max. overall pupil number
- If student numbers are estimated to remain constant. Number of class rooms required
- If double shifting is planned, number of class rooms required
- If double shifting is planned, overall maximum pupil number is doubled

Note: This calculation only determines how many classrooms are required overall, if student number is estimated to remain constant. This assessment does not determine if the spatial and internal quality and furniture provision is complying with the standards. Refer to 2.6 for assessment of spatial classroom quality. If student numbers are estimated to increase refer to table 2.2 to schedule estimated student numbers.
2.6 Assessment of the spatial quality of learning spaces (per room)

<table>
<thead>
<tr>
<th>Assessment Criteria</th>
<th>Learning spaces</th>
<th>Action required</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>total</td>
<td>P1</td>
</tr>
<tr>
<td>Do the walls have stone (S) or concrete (C) foundations?</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What are the walls made of:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Mud (M)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Concrete (C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Timber (T)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) Fired brick (B)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) Compressed Earth Blocks (E)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) Other (specify)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Do the rooms have a ‘structural frame’, columns and beams?</td>
<td>Yes (Y) / No (N)</td>
<td></td>
</tr>
<tr>
<td>What material are (the ‘structural frame’) columns and beams:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Timber frame (T)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Reinforced concrete frame (C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) Steel frame (S)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>What is the structure of the roof trusses:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a) Metal (M)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) Timber (T)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Does the roof leak?</td>
<td>Yes (Y) / No (N)</td>
<td></td>
</tr>
</tbody>
</table>
The questionnaire is written in non-technical language understandable by head teachers, teachers, students and parents alike. It engages the school community to assess the current physical condition of their school environment without the need for a district engineer or other construction ‘specialist’. The important aspect is that it enables the school community to form its individual perception of the current quality of their school buildings and grounds in respect to the new national standards. This assessment process aims to firstly inform the school community of the existence of the child-friendly standards, which may be unknown to them and secondly allows them to form a clear understanding of the discrepancy between what they have and what they should (have a right to) have.
Field testing the SEAT in DRC
Quick way to gather information as well as a way to disseminate Child Friendly Schools principles.
The process of **collecting and assessing technical data concerning** the physical environment **can contribute to strengthen partnership and trust relationship between all administrative levels** and in particular between district government and local school population, parents and teachers. In the support the **cultivating a civil society.**
Documents shared;

01 Manuscript accepted by the International Journal of Disaster Resilience in the Built Environment titled “Developing Rwanda National standards and guidelines.” Authors: Seki Hirano, Eudes Kayumba, Annika Grafweg, Ilan Kelman

02 The approved Rwanda child friendly schools infrastructure standards and guidelines, available on INEE site

03 School Environment Assessment Tool (SEAT) welcomed for adaption, usage and comments for more information contact author Annika Grafweg email; annika@if-untitled.com

seki@if-untitled.com