ANALYSING SANITATION INFRASTRUCTURE IN URBAN SCHOOL AT BHAKTAPUR, NEPAL

-need of child friendly facilities, hygiene practices and partnership building -

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Aims and Objectives

- to identify the need of Water, Sanitation & Hygiene Education [WSHE] in schools of Nepal;
- to conduct a comparative study of two existing schools in terms of WSHE;
- to relate numerous weaknesses [Hardware & Software] to the planning, designing and implementation processes of sanitation infrastructure including the role of Parent-Teacher Association [PTA], School Management Committee [SMC] & Child Club [CC];
- to draw conclusions & recommendations.
**Study Methodology**

- **Information**
- **Case Study**
- **Numerous weaknesses**
  - Planning & design practice
  - Mechanism of making user friendly

**Hardware**
- Sanitation facilities (water, toilet, waste disposal), Hand washing (Hardware)

**Software**
- Knowledge, Attitude, Life skills, Behavior, Hygiene behavior (Software)
  - Less information/concept
  - Participation of user lacking
  - Poor awareness

**Conclusions & Recommendations**
- Improvement in existing
- Future design
Background Study

Child friendly & healthy School environment

<table>
<thead>
<tr>
<th>Sanitary facility</th>
<th>Good daily practice</th>
<th>Sustainability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drinking water</td>
<td>Personal health &amp; hygiene practice</td>
<td>Role of CC, PTA &amp; SMC</td>
</tr>
<tr>
<td>Hand washing</td>
<td></td>
<td>Planning &amp; design process</td>
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<tr>
<td>Toilet facility</td>
<td>Sanitation program – Curriculum &amp; extra</td>
<td>Maintenance &amp; operation</td>
</tr>
<tr>
<td>Urinal room</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waste disposal</td>
<td>Knowledge, attitude, Behaviour, life skill</td>
<td></td>
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<tr>
<td>School compound</td>
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</tbody>
</table>

Need of water, sanitation and hygiene education in school

- second home
- agent of change
- child right
- most vulnerable to environment hazard & worst affected

School Environment WSHE

Hardware

Software

- Health
- Attitude & behavior
- Physical growth
- Class Performance
Case Study Schools

- Save Our Soul, Herman Gmeiner Higher Secondary School (SOSS)
- Genuine English Boarding School (GEBS)

<table>
<thead>
<tr>
<th>SOSS</th>
<th>GEBS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well-designed school</td>
<td>Running in existing residential building</td>
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</table>

**Criteria of selecting these schools:**

(a) famous schools in the local communities;
(b) have shown interest in providing information and for interviewing;
(c) old and new establishment;

- **Structured questionnaire for the students** of grade V in both the schools focusing on the issues.
- **Consultation with the Teachers** to get the information regarding planning and management of those facilities and their future programs.
- **Personal visit to both the schools** to check the condition of the toilets as well to find out the practice of hand washing and drinking water.
Though majority of students in both cases felt water and sanitation facilities convenient, some of them have identified them as inconvenient due to detached block, unhygienic condition, lack of privacy and inadequate water.
SOSS | GEBS | Legend
---|---|---

**Toilet use at convenient time**
- a - Yes
- b - No
- p - No because of distance

**Use of toilet facility**
- x – Break time
- y – During class
- z – Morning

**If toilet during class**
- m – Ask with teacher and go
- n – Wait until the class is over
**Comparative Study of Schools – Planning/Management**

<table>
<thead>
<tr>
<th>SOSS</th>
<th>GEBS</th>
<th>Legend</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="SOSS Diagram" /></td>
<td><img src="image2" alt="GEBS Diagram" /></td>
<td><strong>Flush toilet after use</strong>&lt;br&gt;a - Yes&lt;br&gt;b – No&lt;br&gt;c – Sometimes&lt;br&gt;&lt;br&gt;<strong>SMC consult during design</strong>&lt;br&gt;m – Yes&lt;br&gt;n – No&lt;br&gt;&lt;br&gt;<strong>Sanitation facilities maintained</strong>&lt;br&gt;p – Yes&lt;br&gt;q – No</td>
</tr>
</tbody>
</table>

- Though SOSS is well planned school, architect has given little emphasis on water and sanitation facilities;

- More than half of the students in each case are satisfied with planning and maintenance of sanitation facilities; however, after interviewing with school management, it has been found that no consultation with students during extension of facilities, no allocation of budget and human resources for maintenance and operation.
Hand washing and drinking water - SOSS

Hand washing and drinking water - GEBS
### Comparative study of schools – Awareness / IEC

<table>
<thead>
<tr>
<th>SOSS</th>
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</table>
| ![SOSS Diagram](image1) | ![GEBS Diagram](image2) | Sanitation Club in school  
  a – Yes  
  b – No  
  c – Yes and past member  
Extra-curricular activities related to Sanitation  
  w – Sanitation song  
  x – Poem Competition  
  y – Quiz  
  z - Others |
| ![SOSS Diagram](image3) | ![GEBS Diagram](image4) | Teachers check students nails  
  a – Everyday  
  b - Once a week  
  c – Others  
Students punished if not neat & tidy  
  x – Yes  
  y – No  
  z – Wash hands before & after eating |
Information, education and communication (IEC) materials are placed in teachers room as a decorative elements instead of classroom and corridor (along students’ pathway). Students are reluctant to visit teachers’ rooms;

Hardly any educational and informative messages have been placed in the toilets, urinal room or hand washing areas.;

First aid boxes are also kept in the teachers’ room but those date expired medicines are hardly replaced
Based on the analysis, numerous problems associated with different aspects were categorized as

- **Physical aspect** (location, design, detailing)
- **Participation of users and lack of maintenance and operation**
- **Low level of awareness among management/PTA/stakeholder**

- Comparatively water and sanitation facilities at SOSS is better than that of GEBS; however, they are not child friendly – lack of covered passage ways, female menstruation hygiene facilities, drinking water located outside, etc.
- Though there is a practice of checking personal hygiene in each school, but no facilities in the school to practice them
Conclusions

• Absence of the emerging new concept of incorporating ‘child-friendly’, ‘child-psychology’ including menstrual hygiene in planning and construction of sanitation facilities. Hence, poor personal health & hygiene behavior due to lack of practices;

• Lack of user’s participation in planning, designing and managing those facilities and weak mechanism of planning & operation;

• Low level of awareness among school community and the concerned agencies. As a result, numerous opportunities to improve the sanitation facility & hygiene conditions have been lost;
**Recommendations**

Promote user friendly (child-friendly, gender-friendly & differently able-friendly) design for sanitation facilities to enable, stimulate & promote appropriate hygiene practices among children. Ensure provision of female menstrual hygiene facility in the school. Fix the location, movement patterns & layout plan, detailing of the fixtures including colors & texture based on child psychology so that hygiene behavior can be achieved;
Ensure the safe drinking water adjacent the classrooms;

Consult children & consider their attitude, behavior & use mode in planning & designing sanitation facilities & their operations. Use IEC materials along the students movement path;
Strengthen the managerial & technical capability of the SMC by acting as an agent between the students at school level to other concerned agencies at higher scale including UN, NGO’s & other line agencies at district level;
Thank you very much for your kind attention