

Healthy Schools in Rural Areas of the Mekong River Delta in Vietnam

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Abstract

The Cuu Long Delta Rural Water Supply and Sanitation Project built 120 blocks of toilets in rural schools as one component of water supply infrastructure construction works in five provinces in the Mekong River Delta between 2001 and 2007. An innovative and creative school-based personal hygiene, and water, environment and sanitation program was developed, launched and implemented to maximise the health benefits of newly built infrastructure and promote personal hygiene in the community as a whole. Results from the evaluation of the program were encouraging with improvements to student hand cleanliness and good toilet maintenance observed.

Introduction and Background

The Cuu Long Delta Rural Water Supply and Sanitation Project (CLDRWSSP) was jointly funded by the Government of Vietnam and AusAID (the official aid agency of the Government of Australia). The project was based in rural communes in Bạc Liêu, Bến Tre, Kiên Giang, Long An and Vĩnh Long provinces in the Mekong River Delta. The focus of the project was to build water supply (piped, bore pump and rain collection) facilities in rural communes scattered across these provinces with the ultimate aim of improving the health of local population. The local counterparts, the provincial Centres for Rural Water Supply and Environmental Sanitation (CERWASS), were involved in the design and construction of the project and will be managing in some capacity beyond the completion of construction.

Component 1 of the project was related to water supply and sanitation promotion. The focus of this case is the Healthy School program developed to support the project's 120 newly built toilet blocks in schools located in project communes. These fully functioning toilet blocks have latrines, hand washing areas and in some cases a hard waste disposal incinerator. The objectives of the program were to increase general personal hygiene, increase day-to-day upkeep and cleaning of toilets and to promote long-term maintenance of the infrastructure.

Initiating Healthy School Program

With diarrhoeal diseases amongst the top three killers of children in the world today (WHO 2000: 164), washing hands with soap can reduce the risk of diarrhoea by 42-45% (Curtis & Cairncross 2003). Winblad and Dudley (1997) identified sanitation, dirty hands and contaminated water as key aspects to student health. Furthermore, they outlined four priorities for maintaining students' health: keeping the school compound clean of faecal matter and waste, providing or restoring toilets and keeping them clean, providing convenient hand washing facilities and encouraging their use, and providing safe drinking water (Winblad & Dudley 1997: 18).

Schools could provide the most cost-effective means to improve the health of children and thus to advance social and economic development (UNICEF/IRC 1998; WHO 1995; WHO, UNESCO, UNICEF & World Bank 2000). “After the family, schools are most important places of learning for children; they have a central place in the community” (UNICEF/IRC 1998: 1). Furthermore, schools can influence communities through outreach activities because schools are in touch with a large proportion of households in a commune (UNICEF/IRC 1998; Winblad & Dudley 1997).

With this in mind, the idea of a school health and personal hygiene program was conceived. Initial meetings between CLDRWSSP and CERWASS Information, Education and Communications (IEC) staff garnered support for the development of a school education program. Teachers of three project schools agreed to participate in initial discussions about the types of WES resource materials they would find useful. Several meetings confirmed their need for more resource materials. Teachers’ opinions were then sought on nature of materials. The key feedback received was that activities had to be brief and to fit in with the teaching of the curriculum. Pictures and games were used to explore children’s values that might be used to encourage desired WES-related behaviour.

Program Development

Traditional approaches of teaching and learning have primarily focussed on information, over life skills (Postma, Phiri & Snel 2001). However this program focussed on the development of life skills. Life skills: Integrated Approach; Context of Life Skills Materials in Collaboration with a variety of stakeholders; simple, inexpensive and culturally acceptable; Implementing Learning tools and Games that do not require any external materials; Designing and selecting educational methods to increase knowledge, build positive attitudes and values, and skills (Postma, Phiri & Snel 2001; UNICEF/IRC 1998). Moreover UNICEF/IRC (1998) extrapolates that lasting changes in hygiene behaviour are only likely to occur if three factors are addressed: predisposing factors (knowledge, attitudes and behaviour), enabling factors (latrine, hand washing and waste disposal facilities) and reinforcing factors (support and cooperation received from parents, teachers and other peer groups).

In terms of education, the program development concentrated on three elements: knowledge, attitudes and skills (predisposing factors), using existing and newly built infrastructure (enabling factors) and involving teachers, parents and other community groups (reinforcing factors). Winblad and Dudley (1997: 12) refer to a “hidden curriculum” that covers areas such as basic social values and the development of interpersonal skills, which exists in all schools. Integration with existing elementary school curriculum as extra-curricular reference materials and activities, was identified as key to the program being accepted and adopted in project schools.

Websites and documents from other Projects were then scoured for children’s WES-related activities that:

- Incorporated active learning principles, Namely:
 - are fun to do, and therefore keep children’s attention;
 - help children to remember lessons better because learning and doing are linked;
 - encourage thinking, to promote real understanding of health ideas; and
 - reflect local environment and actively help children relate what they learn to own community.

- Advocated behaviour that it is not outside the control of the children to practice.
- Encouraged a sense of communal responsibility.
- Used only very low-cost materials, or materials likely to be available in school.

Once selected, activities were then modified to take into account the teachers' requirements and curriculum, the local Mekong River Delta context, and where possible, children's values that could be tapped to encourage change. The activities and posters were then discussed in detail with teachers in several provinces, and posters and where possible games were pre-tested with children. Final pretesting occurred in two project schools in Long An province.

After a final review workshop with all project and provincial CERWASS IEC staff, the draft materials were embedded in a school program. Both materials and the program were then taken to the Provincial Departments of Education and Training (DOET) for review, comment and their ultimate approval. Materials were approved for use in project schools in all five provinces under the condition that they were used as extra curricular reference materials. That national Ministry of Education of Training (MOET) also gave final approval to the program.

The final Healthy School package of materials comprised:

- Three Healthy School Books (Healthy School Guide, Healthy School Activities and Games, Healthy School Songs)
- Healthy School Songs CD (18 Songs, largely based on songs provided by DANIDA)
- Double-sided game board (Snakes & Ladders and Consequences)
- Personal Hygiene A3 sized flip chart
- Set of 6 water resistant toilet posters (2 x A1 sized posters and 4 x A2 sized posters)
- Water resistant toilet regulations poster (2 x A3 sized posters)

Key features of the materials:

- Provide teachers with ideas on initiating a Healthy School program in their school.
- Checklists for the proper maintenance of newly built school toilet blocks.
- Linkages given to current school texts. All activities listed in the Healthy School Activities and Games book are cross-referenced with existing school texts and approved school curriculum.
- Little or no expense required to conduct activities. Little time and effort needed for teachers to prepare activities. Activities are quick and take little class time.
- Activities are fun for both the teachers and students.

Teacher Training

Coherent linkages between national, provincial, district and local school levels by means of information, assistance, pressure and rewards is essential (WHO 1997). Teacher training was held in each province and was hosted and conducted by representatives of the relevant provincial DOETs. Training was funded by the project, with a representative from CLDRWSSP in attendance at all workshops.

Although exact participants vary from province to province based upon agreement with the provincial DOET, at least two representatives from each project schools attended as well as relevant district DOET representatives. Training workshops were timed to coincide with

construction, so that all teachers were trained to be able to run the program soon after the opening of the toilets.

The Process

School toilet blocks were largely constructed within a 12-month period. A series of three to four visits were organised and conducted by teachers at all project schools to coincide with their completion. Representatives of the CLDRWSSP and provincial CERWASS attended the events to provide advise and to conduct monitoring and evaluation activities. The Healthy School program comprises three to four visits to every project school in every province. A list of activities conducted in each visit is shown in the visit schedule (see Table 1).

Table 1: School Visit Schedule

Visit	Timing	Key Activities
1	1-2 Weeks before the construction completion date	<ul style="list-style-type: none"> • Introduce the school materials. • Discuss how to organise “Health School Activity Day” and procedures for Monitoring and Evaluation (M&E) • Decide upon a date for the second visit (Activities day). • Check students’ hands at grade 3 and 5 (M&E) • Take notes and pictures of the state of toilets and waste disposal pit/incinerator (and comments of schools).
2	On the handover day or when construction finishes.	<ul style="list-style-type: none"> • School conducts “Healthy School Activity Day”.* • Observe and take notes of state of school (M&E). • Discuss and give the guidelines and the checklist about “Healthy School Festival”. • Decide upon a date for the third visit (Healthy School Festival). • Take notes and pictures of the state of toilets and waste disposal pit /incinerator (and comments of schools).
3	3 months after the Healthy School Activity Day (Visit 2)	<ul style="list-style-type: none"> • School conducts “Healthy School Festival”.* • Check students’ hands at grade 3 and 5. • Observe and take notes (use M&E checklist and Healthy School Festival checklist). • Take notes and pictures of the state of toilets and waste disposal pit /incinerator (and comments of schools).
4	After the third visit, but without announcement.	<ul style="list-style-type: none"> • Check students’ hands at grade 3 and 5 (M&E). • Take notes and pictures of the state of toilets and waste disposal pit /incinerator (and comments of schools) (M&E).

*A quantity of soap was donated by Unilever. This was directly distributed, one bar to each participating student in Visit 3. A small quantity was also provided to each school in Visit 2.

Results

Students whose hands were clean increased from 10.1% through to 12.2% from visit 1 to visit 3, likewise dirty hands decreased from 70.8% through to 67.2%. Students’ nails were more likely to be shorter in Visit 3, 58.0% in the first visit were observed to have short nails and increased to 61.1%. However the cleanliness of nails was observed to deteriorate over the visits, with 70.9% in the first visit found to have dirty nails increasing to 73.9%.

In most cases there was a small improvement in the condition of children's hands and nails, however the following points should be taken into account when analysing this output. Firstly, not all students who were inspected in visit 3 had taken part in activities between Visit 1 and Visit 3. Secondly, in most instances the students who were inspected in Visit 3 were not the same students that were inspected in Visit 1. Thirdly, students who were inspected in Visit 3, had not yet participated in the Healthy School Festival and therefore had not participated in the entire program. Finally, at some schools where hands were inspected in Visit 3, school toilets and hand washing facilities were not yet operational.

Overall, boys' hands were generally dirtier than girls. 82.5% of boys' hands were deemed dirty compared to 59.1% of girls. 80.0% of boys had dirty nails compared to 20.0% of girls and might be partly explained by 55.4% of boys had short nails compared to 63.5% of girls. Grade level had little effect on the hand cleanliness of children. 70.1% of grade 3 children had dirty hands compared to 71.6% of grade 3 children. 71.8% of grade 3 children had dirty hands compared to 72.0% of grade 5 children. However 45.1% of grade 3 children had long nails compared to 38.9% of grade 5 children.

Results from the School Checklists can be summarised as follows:

- Provision of soap at hand washing areas in operational toilets improved between visit 2 and 3. Soap was readily available at 63% of schools in visit 2 and 96% of schools by visit 3. 75% of schools had soap located in a clean space at all basins by visit 3. It should be noted that a small supply of soap was provided to the school in visit 2.
- Operational hand washing areas became less clean between the two visits with 67% of basins very clean and well maintained in visit 2, and 50% in visit 3. However, 92% of hand washing areas showed evidence of recent cleaning in visit 3.
- There was a decrease in the general appearance of the operational toilet cubicles between visit 2 and visit 3. 75% of cubicles had clean floors, walls and toilet bowls and no bad odour in visit 2 and decreased to 62% by visit 3. However, 97% of cubicles showed evidence of recent cleaning in visit 3.
- Of schools where classrooms were visible, at 46% of schools in visit 2 had a health corner in some or all classrooms, which increased to 58% in visit 3.

It should be noted that although slight decreases could be seen in most results between visits, it was not unexpected. School toilets inspected in visit 2 in many cases had only recently opened and therefore had not been subjected to regular wear beforehand. Much of the wear evident in visit 3 could be attributed to the everyday wear expected in the first three months of operation. It should also be noted, that both visit 2 and visit 3 were announced to the school in advance, meaning that there was an opportunity for the school to prepare. Visit 4 was unannounced, however it undertaken in only 4 schools.

Data obtained from visit 1, 2 and 3 were analysed. Visit 4 data were omitted because the sample size was too small for meaningful analysis (n = 8). Final monitoring and evaluation testing may be undertaken in all five provinces in the first quarter of 2008. It is anticipated that more significant improvements will have occurred at this time.

Conclusions and Recommendations

As of the end of the 2006-07 school year, the program was 53% complete. The provincial CERWASS IEC teams agreed to take on responsibility to ensure that program visits are conducted as the final toilet blocks are completed.

Direct beneficiaries of the program or students who participated in the program at schools where new toilets were constructed are expected to total 33,193. However it is estimated that a total of over 1 million students (General Statistics Office 2005) will be, should all schools in all five provinces conduct Health School program activities. All five provincial DOETs have been provided with a reduced package of Healthy School program materials for all schools.

A larger pilot testing process would have facilitated a more streamlined program. However project time constraints and logistics made this unfeasible in this instance. A more consultative approach with MOET from the beginning may have facilitated faster approval of materials in each individual province and also enabled greater integration of the activities into the curriculum. Furthermore, this may have given greater enhancement to inter-level linkages in terms of information, assistance, pressure and rewards required in the full program rollout.

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