From the paper: Faith in Water: Water supply, sanitation and hygiene facilities and related education in faith-based schools

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Integrating water, sanitation, hygiene and the environment in school education

Good education in school about water, sanitation and hygiene is as important as good sanitary facilities: both components go hand-in-hand. In 2002, UNICEF, the United Nations Children's Programme was cooperating with over 50 countries to achieve integrated WASHE (water, sanitation, health, hygiene and environment) programmes in schools, an increase of 43% in six years[1]. Nine years of cooperation between UNICEF and IRC have resulted in a number of lessons on effective education programmes on water supply, sanitation and hygiene, especially in primary schools. These have been summarised below.

1. Adjust education to the child-development cycle

Children have different needs and potentials for learning at different ages. *Young children aged 2-4* enjoy learning new skills, playing with and handling objects. They like activities such as telling stories and singing, which develop their language skills, and miming and acting as adults, who are their ultimate role models. At this age they can learn how to use the toilet and wash their hands and take some responsibilities for hygiene. The teacher can also start playful activities to 'clean' the facilities or refill the water reservoir of a handwashing facility. These are, however, learning activities rather than participation activities. Squatting sideways over a squatting toilet enables young children to hold on to a handrail, which makes toilet use less challenging for them.

Children aged 5-8 are imaginative. They discover the world and their own capabilities in a playful way. In the meantime, they gain self-confidence and make the first steps towards independence. They experience the positive effects of personal care for their appearance and value this in a simple way: looking and smelling good means to feel good. In this age group, children can start to be actively involved in making and implementing simple plans for good hygiene, but they cannot yet take full responsibility. Physical games and activities are important to use pent-up energy. Sweeping the class room, filling soap or water containers, putting different types of solid wastes in separate boxes and bins, etc. must still be closely guided by adults, including for safety reasons.

The agegroup of 9-12 years old can work well together with others and discuss experiences and practices with friends. They become aware of the consequences of poor hygiene practices and begin to see relationships between theory and practice, although abstract concepts are still difficult. They like watching and taking part in practical demonstrations and are very helpful. They also like to be given particular responsibilities. At this age, children also learn that different means or practices can lead to the same overall result and are open to comparing solutions.

Girls and boys can now be involved as groups in activities to plan, maintain and manage good hygiene and sanitation, do home assignments, such as simple structured observations for arithmetic and hygiene lessons, and do outreach activities with younger siblings at home. Knowledge on physical development and building of self-confidence and respect helps early maturing girls and boys. They are also helped by knowing about a same-sex teacher that they can go to for questions and problems. Girls who start to menstruate need access to sanitary napkins and sanitary pants to deal with unexpected bleeding. In some programmes, they learn how to make these themselves.

[1] Every child clean through school hygiene. Background paper of an E-conference on school sanitation and hygiene education, UNICEF and IRC, 2002.

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Twelve to fifteen year olds begin to develop social and analytical skills for exploring their position in the community. They can question gender and socio-economic differences and are aware of their own development and growth and develop a desire for gender-related privacy. They start to understand abstract concepts around hygiene, environment and social relations. Respectful learning about personal female and male hygiene becomes important, to begin with in same-sex groups and using indirect methods such as stories and drawings to facilitate discussion. Pre-adolescents like to have tasks and be trusted to carry them out. They begin to take their own responsibilities and develop a sense of social justice. At this age, girls and boys can be actively involved in the planning, construction, operation and maintenance of facilities. They can form their own school health clubs, enjoy outreach work in the community and can learn to use waste productively through practising segregation and recycling in school and at home.[2]

2. Use participatory learning methods

Most teachers in primary and secondary school have been trained in traditional teaching approaches, in which there is very little room for active participation by the students other than answering questions. While class instruction has its place, children greatly enjoy and benefit from more participatory learning methods. These methods involve children actively in the learning process and allow them to learn from what they do themselves and from the other children. There are many participatory methods - some are listed in Table 2.

Table 2 Examples of participatory methods in schools[3]

Participatory methods for ages 4-7	Participatory methods for ages 8-12
• Listening to and telling stories	• Reading and analysing stories
• Reciting poems and songs and singing songs	• Reciting poems, making and singing songs
• Drama/short skits	• Doing quizzes
• Seeing and doing various types of puppet plays	• Conversations and discussions
• Simple sorting games	• Drama, role plays, pantomime and dancing
• Language and number games and assignments	• Drawing and painting
• Reading and reacting to stories	• Making various types of models
• Walks, doing simple observations	• Writing compositions and creative writing
• Skills demonstrations, with peer observation and analysis	• Brainstorming
• Movement games, competitions	• Excursions
• Conversations and discussions	• Skills demonstrations
• Drawing, painting, colouring, claying	• Peer observations and analysis
• Doing simple tasks	• Language and mathematics games
	• All kinds of competitions

3. No need to use costly equipment and material

Contrary to what is often thought, participatory education in water, sanitation, hygiene and the environment does not require special investments, such as a toolkit with specially designed and

[2] More details in Postma, Leonie; Getkate, Renate and van Wijk-Sijbesma Christine (2004). Life Skills-BasedHygiene Education: A guidance document on concepts, development and experiences with life skills-based hygiene education in school sanitation and hygiene educationprogrammes. Delft, The Netherlands, IRC International Water and Sanitation Centre. (Technical Paper Series; no. 42). http://www.irc.nl/content/download/11504/168690/file/life_skills.pdf

[3] As above. The book also contains a description of many participatory learning methods.

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printed material. For many activities, teachers can use what is already available: blackboard, chalk, paper, pencils, water, sand, pebbles, etc.

Fig. 1 Well model with types of water use and types of pollution

Fig. 1, for example, shows a small model of a dug well made by students in Vietnam. On slips of paper, the children first wrote each purpose for which the well water was used (ways in which water goes out) and then on a second set of slips in which ways people contaminated this water (types of pollution going in). The teachers used this activity in environmental education with older children and also with the parents on parents' day.

In another game, children from a tribal region in North Vietnam sorted pencil drawings of different utensils for storing and drawing drinking water from the least to the most risky. Under each drawing they placed slips with the names of the utensils in their tribal language and other slips with the names in Vietnamese. The teachers later reused the papers for a competition by timing the speed with which the children could lay out the mixed-up drawings and slips in the correct position.

Learning can be combined with physical activity. In a lesson in a dry part of Sri Lanka, the teacher let two lines of 8-10 year old children race against each other to two buckets of water, where two children would stand ready to pour water over their hands, give them a small piece of soap to wash their hands and then pour more water to rinse off the soap (Fig. 2). The race stoppped as soon as the groups had used up their water. Besides the expected winners on speed, the teacher announced as the real winners the group that had taken more time for hand washing and the group with the most hand washers: they won the prices for the best hygiene and the most economic use of the water.

Fig. 2 Race on water use for hand washing, Karukapone primary school, Sri Lanka

4. Integrate WASHE education in the curriculum

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Irrespective of the value of education on health and environment, good exam results are the prime objective of the teachers, children and parents. Including WASHE topics into the school curriculum and exam therefore makes all the difference. Integration is possible under different subjects, e.g. under science, social studies and/or civic education (Zambia).

5. Practice multi-purpose learning

Another way to make it easier for teachers and students to address water, sanitation, health and the environment (WASHE) as part of school education is to combine this learning with practising basic education skills such as reading, writing, arithmetic and geography. The above examples from Vietnam linked WASHE with writing, reading and language skills. Through simple home surveys, e.g. on what sources are used for drinking water, how the water is stored and drawn, and if the family has a toilet, a bathing place and soap, students have gathered WASHE statistics and used them in class to practise counting, adding, subtracting and percentage calculating skills as well as discussing health risks and ways to mesurably improve home conditions. Children have also learned to drawn community maps, in which they noted water sources, open defecation areas and houses with sanitary and no, or unsanitary toilets.

6. Link with broader values and skills

Besides scholastic knowledge, attitudes and skills, children learn many other skills from their activities and interactions in school, which when developed well will serve them during their whole lives. The lifeskills approach (Table 3) uses learning methods which consciously promote these more generic skills for their current and future lives. A related approach is Value-Based Education, developed by the African Institute of Sathya Sai Education in Ndola, Zambia. As shown by its name, the approach bases water education on five basic human values and related sub values: *Truth* (with e.g. discrimination between true and false, good and bad, respect for all religions and secularism), *Love* (with sincerity, tolerance, friendship, kindness to animals), *Peace* (with freedom from jealousy, greed, pride, self-discipline, self-control and self-respect, power of concentration, silence), *Right Conduct* (with e.g. cleanliness, service to others, leadership, conservation of nature and the environment) and *Non-Violence,* with among other things, democratic decision making, sense of social justice, kindness, courtesy and concern for others[4].

Table 3 Five categories of generic skills developed through life skills education

Inter-personal Skills	Skills for Building Self- Awareness	Values Analysis & Clarification Skills	Decision-Making Skills	Coping & Stress Management Skills
- Empathy building - Active listening - Giving & receiving feedback - Non/Verbal communication - Assertion & refusal skills - Negotiation & conflict management - Cooperation & teamwork	- Self-assessment skills - Identifying personal strengths & weaknesses - Positive thinking skills - Skills for building self image and body image	- Skills to understand different social norms, beliefs, myths, ethics, culture, gender, diversity, poverty - Skills for identifying what is important, influences on values & attitudes, and aligning values, attitudes, behaviour - Skills for recognizing & acting on	- Critical & creative thinking skills - Problem solving skills - Analytical skills - Skills for generating alternatives - Information gathering skills - Skills for evaluating information	- Self control skills - Coping with (peer) pressure - Time management skills - Dealing with emotions: grief, anxiety - Dealing with difficult situations (conflict…also loss, abuse

[4] Victor Kanu, Water Education: A Human Values Approach, in UN Habitat, Water Education in African Cities, Report of an Expert Group Meeting. Johannesburg, Soth Africa, 30 April-2 May, 2001, pp. 20-33.

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- Relationship & community building skills		discrimination and stereotypes - Identifying & acting on rights, responsibilities & social justice	e.g. the media - Skills for assessing risks & consequences - Goal setting skills	trauma,) - Help seeking skills

Source: UNICEF Workshop on Life Skills Education, New York, 2000.

7. Practice learning in school

It is still quite common that children learn about water, sanitation and hygiene in school, yet cannot apply their learning in school, because they lack the fundamental facilities, or they are not functioning, are so dirty that they cannot be used, or have turned into health hazards. A good WASHE programme obviously combines good facilities, education and practices.

8. Recognise and prevent/stop misuse

Quite recently, more information has also become available on the negative effects that poor design and supervision of school water and sanitation facilities and a lack of communication and trust between teachers and students can have for vulnerable groups. Children can be quite cruel, and distant toilets are typical places where a group of boy-bullies or a girl 'queen' and her followers tease children that are younger, weaker or picked on for other reasons. Toilets are also typical locations for wrong student conduct - smoking, drinking, sexual behaviour – and group initiation. Colleagues in one workshop on WASHE also told about cases of misuse of power by teachers, such as sexual abuse of girls who have to bring water to the house of male teachers living at schools without water supply.

9. Monitor and evaluate conditions, practices and progress

WASHE facilities and education approaches can be simply evaluated and monitored for progress. Presence, functionality, hygiene and (non/partial) use of supply of (drinking) water, toilets and handwashing facilities with soap are easy to observe. For the evaluation of the education approach, the joint school WASHE programme of the Government of India and UNICEF used a participatory scoring system of five scales of 20 marks each, with at the lowest (0) level no hygiene education at all, while at the highest level (100) hygiene education was integrated in the curriculum, used participatory learning methods and materials, and teachers involved children in monitoring and upkeep of school sanitation facilities[5]

10. Reach out to homes and communities

Last, but not least, WASHE programmes offer good opportunities for two-way cooperation between the schools, parents, the religious community, local businesses and local institutions, such as councils and water/health committees with homes and community.

[5] Jeremy Colin et al., UNICEF-Government of India Child's Environment Programme 1999-2003. Annexes to Part One: Evaluation Report, Loughborough University and IRC, June 2004.

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Pilot Approach to Sustainable Development

Sheet from presentation on Child-friendly Wash facilities by Eng. Suranga De Silva, UNICEF Sri Lanka

Parents and communities frequently support local schools in improving their WASHE facilities and school children bring information home and encourage improvements at home. The child-to-child programme promotes improvements especially through communication between children, e.g. reaching out to younger brothers and sisters. In programmes in Nepal and Pakistan, school teachers successfully promoted that parents built low-cost toilets and used them with all family members.[6]

Conclusion

Good sanitation and hygiene habits and the protection of the environment are values common to all Faiths. So are many of the values developed in the lifeskills and value-based education approaches. With globally about 64% of schools being faith-related, there are unique opportunities and benefits from linking spiritual learning with learning on water, sanitation, hygiene and the environment, and the improvement of water and sanitation facilities in schools. Materials on designs, strategies, approaches and results are widely available[7]; what remains is their adjustment and use in faith-based education and the development of school water, sanitation and hygiene education programmes as part of the education systems of individual faiths.

[6] See Chapters 9 and 14 in J Wicken, J, Verhagen, J, Sijbesma, C, Da Silva, C and Ryan P (eds) 2008. Beyond construction: Use by all, A collection of case studies from sanitation and hygiene promotion practitioners in South Asia. London, UK, WaterAid; Delft, the Netherlands, IRC and Geneva, Switzerland, WSSCC. http://www.irc.nl/page/40450

[7] The most complete resource site is the IRC-UNICEF website http://www.schools.watsan.net/ Here you find key publications and links to other websites. More can be found on the IRC web site http://www.irc.nl/sshe. The World Bank, WSP, UNICEF toolkit on hygiene, sanitation and water in schools for in-depth information on setting up activities in schools www.schoolsanitation.org. Some key publications are (1) Towards Effective Programming for WASH in Schools: A manual on scaling up programmes for water, sanitation and hygiene in schools http://www.irc.nl/page/37479. on school hygiene education http://www.irc.nl/page/26444 and on child-friendly WASH facilities http://www.irc.nl/page/9587