



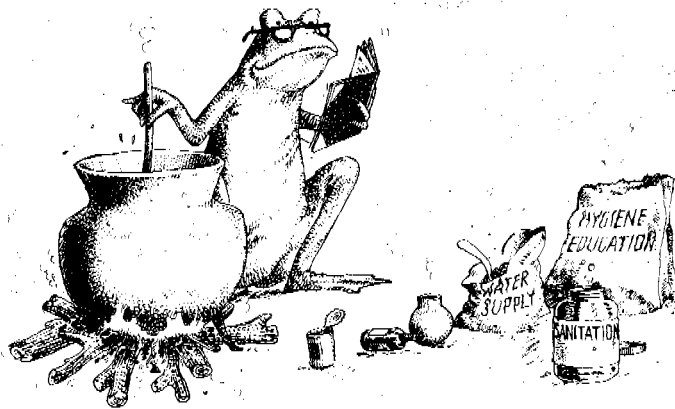
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International Water and Sanitation Centre

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Just Stir Gently

The way to mix hygiene education
with water supply and sanitation



IRC INTERNATIONAL WATER AND SANITATION CENTRE

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Just Stir Gently

JUST STIR GENTLY

The way to mix hygiene education
with water supply and sanitation

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Abstract

This book provides options and methods for integrating hygiene education with water supply and sanitation projects. Aspects covered include the process of behavioural change; hygiene education planning, implementation, monitoring and evaluation; hygiene education approaches and methods; programme organization; manpower and costs. Illustrations and examples are used to reinforce the text and to give some ideas from "real life" situations.

The book is intended primarily for those responsible for the development and implementation of hygiene education components in water supply and sanitation projects. Those responsible for the formulation, planning and management of integrated water supply and sanitation projects might find the book useful as well.

Keywords: health education / hygiene / behaviour / administration / planning / health personnel / costs / evaluation/ monitoring.

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Preface

The subject of this book - Hygiene Education - is a process which aims to promote conditions and practices that help to prevent water and sanitation-related diseases. Hygiene education is an important component of water supply and sanitation projects for two reasons: (1) to maximize the potential benefits of improved water supply and sanitation facilities and (2) to help users to appreciate the need for their proper operation and maintenance and to create a willingness to contribute to their costs.

Integrating hygiene education with the other aspects of water supply and sanitation projects requires skilful planning and management. However, responsible staff are often not fully prepared for these tasks, either by their professional background, or by their experience. This problem is compounded by the fact that a great deal is still unknown about what constitutes a successful hygiene education programme.

This book brings together present knowledge and experience of integrated hygiene education programmes. Its aim is to facilitate:

- decision making in the integration of hygiene education in the various phases of water supply and sanitation projects;
- negotiation and cooperation among government agencies, donor agencies and health institutions on hygiene education related matters;
- better planning and management of hygiene education programmes as a first requirement for increasing the success of such programmes.

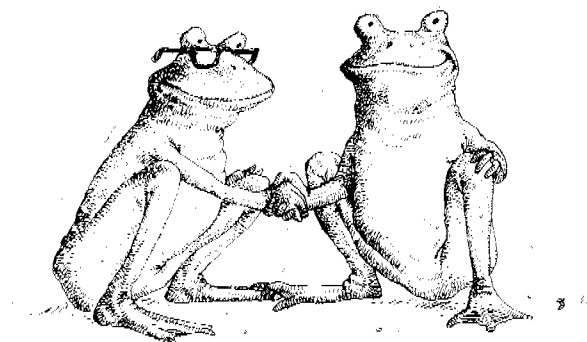
The intended primary users of the book are those responsible for the development and implementation of hygiene education components in water supply and sanitation projects. Those responsible for the formulation, planning and management of integrated water supply and sanitation projects might find the book useful as well. It has been assumed that the reader is generally knowledgeable about these types of projects, but is not so familiar with the integration of a hygiene education component into the overall project activities.

As there is no single truth or single path leading to the successful integration of hygiene education, the information and views provided in this book should be used as an aide-memoire rather than as strict guidance. As "the proof of the pudding is in the eating", we are looking forward to hearing of your experience with hygiene education and with the use of this book. Communicating your experience will not only help to make the book more useful for your colleagues and successors, but will also help us all to find out what contributes to the success of a hygiene education programme, and thus increase the impact of such programmes.

Acknowledgements

Information used in preparing this book has been compiled from many sources in many countries and over many years. Author Maricke Boot is indebted to all those in the water and sanitation sector who generously shared their knowledge and experience, either through word of mouth or in written accounts. The book clearly builds on the earlier publication *Hygiene education in water supply and sanitation programmes: literature review with selected and annotated bibliography*, No. 27 in the IRC Technical Paper Series, which should be seen as a companion volume. We gratefully acknowledge the financial support for both these publications from the Netherlands Minister for Development Co-operation, Section for Research and Technology.

Special mention should be made of those who made valuable contributions by reviewing the document in its draft form: Ms. C. Butijn, Ms. L. Burgers, Mr. M. Dierx, Dr. J. Hubley, Mr. D. de Jong, Mr. L. Laugeri, Mr. M. Seager, Ms. M. Simpson-Hebert, Ms. V. Wathne, Ms. M. Wegelin-Schuringa, Ms. C. van Wijk-Sijbesma. Mr. S. Esrey has been very helpful in revising Table 1. Also much appreciated was the continuous support of Ms. L. Burgers and Mr. J.T. Visscher during the whole process of development of the book. Special thanks are due to Mr. B. Appleton for editing the text, to Mr. D. de Jong for guiding the process of publication and to Ms. N. Wildeboer for proofreading the text. Ms. L. Wolvers' contributions were invaluable as usual, and she did a splendid job in text processing and desktop publishing.



Throughout this book, the text has been illuminated by drawings from the hand of Mr. K. de Waard. In these drawings, frogs stand in for human beings.

We wanted to produce a book which would have both universal value and visual appeal, but we were faced with the problem that available photographs and other illustrations generally applied to a specific country or culture.

A compounding problem was the gender issue: if the photograph showed a man, we could be accused of male bias; if we selected photographs showing mainly women, we ran the risk of creating the wrong impression that hygiene education is only women's business. We also had the feeling that it would be nice to try out an alternative approach from the usual photographs of women cleaning toilets and children washing hands.

The first sketches of the frogs were pre-tested on men and women from Bangladesh, Ghana, India, Malaysia, The Netherlands, Pakistan, Peru, The Philippines, Tanzania, United Kingdom, United States of America, Vietnam, Yemen and Zambia. The pre-testing reassured us. Frogs appear to be found in all countries, and most associations are either positive or neutral. The frog drawings were generally appreciated as nice cartoons, which raise curiosity to read the accompanying text. We hope you like them.

1. Introduction

1.1 Need for hygiene education

The need for hygiene education directly follows from the general objectives of water supply and sanitation projects. These are:

- to help prevent water and sanitation-related diseases; and
- to help improve living conditions.

To meet these objectives, it is not sufficient just to construct improved water supply and sanitation facilities. New facilities have to be used, continuously, by everybody and in a safe way. This requires an interest from both communities and officials in having safe, reliable and accessible facilities constructed, used and maintained. Hygiene education aims to be instrumental in this process as it promotes an optimum use of water supply and sanitation facilities and a care for their continuous functioning through proper operation and maintenance.

An evaluation of gravity fed piped water supplies showed that the biggest concern of the users is to get water to the tapstands, whereas preventive maintenance that aims at keeping the system intact and thus avoiding contamination is not yet so much a matter of concern. Thus a case for hygiene education.

Source: Engler, M. (1989) p. 1.

Thus, technical aspects and educational aspects together create conditions for meeting the general project objectives, which can be further elaborated as follows:

Preventing diseases

Water and sanitation-related diseases include various types of diarrhoea, worm infestations, skin and eye diseases and mosquito-borne diseases. Together they form the most frequent cause of illness and death in the developing world.

Water and sanitation projects generally aim to reduce these diseases. They thus contribute to:

- improving public health and personal well-being;
- reducing costs of curative health services;
- higher productivity of school children and working people because less energy is lost from poor health and illness.

Improving living conditions

Adequate water and sanitation are basic human needs. Water and sanitation projects address these needs, and so help to improve living conditions. New water supplies may result in:

- less burden of water collection, reducing the overall workload, especially of women and children;
- time and energy gains used for better family care, schooling and productive activities;
- use of surplus water for small-scale economic activities.

Benefits of sanitation improvements are:

- a clean environment through the safe disposal of wastewater, human and animal wastes, and solid waste;
- productive use of wastewater, human and solid wastes;
- suitable locations and facilities for bathing and clothes washing;
- a private and convenient place to relieve oneself;
- increased social status and self esteem through an improved living environment.

Improved living conditions are also often considered a pre-condition for reducing outward migration and attracting/holding educated manpower.

Linking technical facilities and user practices

To maximize potential benefits of water supply and sanitation projects, technical and behavioural measures must go hand in hand. Benefits of a safe water supply will easily be lost if water is not collected and handled in such a way as to prevent contamination before it is drunk. And latrines may become a hotbed of diseases when they are not used and cleaned properly. For example, research in rural Thailand indicated more reported diarrhoeal disease in households where women use latrines than in those where defecation took place in the field (Nongluk and Hewison, 1990).

Hygiene education is meant to help establish the link between improved facilities and user practices. Table 1 presents a summary of basic measures which help to prevent water and sanitation-related diseases. More information on how hygiene behaviour and practices can help to reduce the risks of disease transmission can for example be found in Cairncross and Feachem (1983) and Benenson (1990).

Personal hygiene in Table 1 refers to water (and soap or substitute) used for cleaning the body, including bathing and washing the eyes, face, or hands. Domestic hygiene refers to the use of water in keeping the home clean, as well as cleansing those components of the home environment that are related to disease transmission (eg. clothes, utensils, floors, counter tops, or towels). The

category 'personal and domestic hygiene' also includes the safe collection, transportation, storage and use of drinking water. In the case of schistosomiasis, personal and domestic hygiene relates to reduced human contact with infected water and increased use of improved water supplies for bathing and washing (Esrey et al, 1990).

Table 1: Prevention of transmission of water and sanitation-related diseases

<i>Disease</i>	<i>safe drinking water</i>	<i>safe excreta disposal</i>	<i>personal and domestic hygiene*</i>	<i>food hygiene</i>	<i>wastewater disposal/drainage</i>
Diarrhoeas	●●	●●●	●●●	●●●	-
Polioyelitis and hepatitis A	●	●●	●●●	●●	-
Worm infections:					
ascaris, trichuris	●	●●●	●●●	●●	●
hookworm	-	●●●	●	-	-
pinworm, dwarf tapeworm	-	●●	●●●	●	-
other tapeworms	-	●●●	●	●●●	-
schistosomiasis	-	●●●	●●●	-	●
guinea worm	●●●	-	-	-	-
Skin infections	-	-	●●●	-	-
Eye infections	-	●	●●●	-	●
Insect-transmitted diseases:					
malaria	-	-	-	-	●
urban yellow fever, dengue	-	-	●**	-	●●
bancroftian filariasis	-	●●●	-	-	●●●

Based on: WHO (1983), Esrey et al (1990) and Cairncross and Ouano (1991).

Importance of preventing disease transmission: ●●● high ●● medium ● low to negligible

* Personal and domestic hygiene often require use of more water.

** Vectors breed in water storage containers.

Maximizing health benefits

Over the years many studies have been carried out to learn more about the relationship between water, sanitation and health. A recent review of 144 of these studies by Esrey et al (1990) showed that demonstrable health impacts affecting all age groups in most of the developing world can be expected from improvements in water supply, sanitation and hygiene. Six diseases were included in this review: Diarrhoea, ascariasis, guinea worm, schistosomiasis, hookworm and trachoma. A number of factors were identified to maximize the health benefits from water supply and sanitation:

- The water supply should be as close to the home as possible - to increase the quantity of water available for hygiene practices.
- Water supply and health programmes should emphasize hygiene education to encourage people to use *more* water for personal and domestic purposes.
- Sanitation facilities should be culturally appropriate, since use of the sanitation facility will affect its health impact - probably reflecting the importance of user acceptance.
- In achieving broad health impacts, safe excreta disposal and proper use of water for personal and domestic hygiene appear to be more important than drinking water quality.
- Sanitation facilities should be installed in conjunction with water facilities when fecal-related (diarrhoea and worm) diseases are prevalent.
- Use of facilities is essential during critical seasonal transmission periods for diseases, such as guinea worm, which have such periods (p. vii-ix).

What is evident when reading across as well as down Table 1 on the previous page is that (a) hygiene and safe excreta disposal are the most important interventions for several diseases and (b) these two types of interventions affect a broad range of disease conditions. Thus, hygiene - including the use of more water - and safe excreta disposal are important measures to maximize health benefits.

1.2 Hygiene education defined

Definition

Hygiene education is defined as *all activities aimed at encouraging behaviour and conditions which help to prevent water and sanitation-related diseases.*

This definition implies that hygiene education relates to a different range of activities for different groups of people. Most hygiene education will take place at the community level, encouraging men, women and children to look after facilities and to increase hygienic practices such as using latrines, hand washing after defecation, and the safe storage of drinking water. However, hygiene education may also be directed at other groups. For example, project engineers and technicians may need hygiene education to encourage the design and siting of latrines that are safe and easy to use and maintain. Hygiene education is needed at all levels of the society and all phases of the project to make people pro-active for the health aspects of water supply and sanitation. A bird's eye view of the hygiene education area is presented in Table 2 at the end of this chapter.

In this book, the focus is on hygiene education as an integrated component of a water supply and sanitation project. Discussion of other health and hygiene education activities - such as under primary health care programmes or national

campaigns - is limited to a discussion of the needs and possibilities for cooperation and coordination. These issues are covered specifically in Chapters 4 and 11.

A new initiative to improve hygiene in schools has been developed in Manicaland Province, Zimbabwe.

An open tank with a tap is built between the toilets and the classrooms. On Monday mornings each child brings about five litres of water and pours it into the tank.

During the week children are then able to wash their hands after using the latrine.

On Friday any water remaining in the tank is used to water the school garden. Over the weekend the tank is left empty, which prevents mosquito breeding.

This simple idea combined with intensified hygiene education for the children should be promoted on a wider scale so that the means as well as the message are provided together.

Source: Zimbabwe, Ministry of Health (1990) p. 6.

As an integrated component of a water supply and sanitation project, hygiene education is closely linked to community participation. Community participation here refers to active involvement of the men and women concerned in major project decisions and activities. Both community participation and hygiene education are important tools for maximizing the potential benefits of water supply and sanitation improvements. In practice, community participation and hygiene education activities are often intertwined, as in discussions on the siting of a new water point, the day-to-day care of facilities and the safe disposal of human excreta. This relationship between community participation and hygiene education is made clear in Chapter 2. In the subsequent chapters, it is assumed that personnel responsible for hygiene education are also active in community participation activities.

Related areas

Water supply and sanitation projects may often be embedded in other programmes, such as slum improvement or low cost housing, solid waste disposal, surface water drainage, and conservation of the natural environment. In such cases, hygiene education can also cover the wider aspects involved, to help maximize potential health benefits.

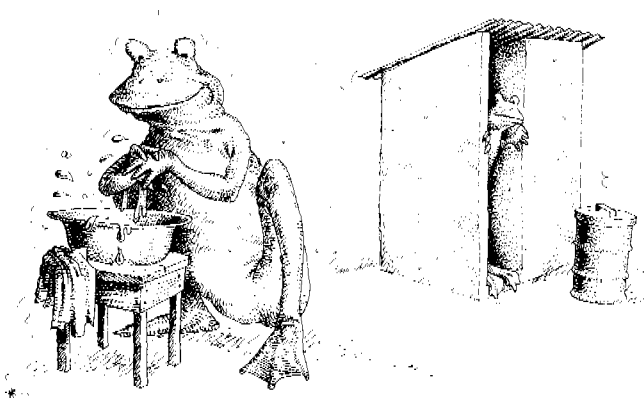
Conservation of the natural environment is becoming increasingly important in helping to protect the quality and reliability of water supply sources. Activities may include measures to: protect water supply intake areas from human, agricultural and industrial pollution; prevent over-extraction of ground water for agriculture, causing depletion or saline water intrusion of drinking water sources; combat deforestation and resulting deterioration of springs and streams used for water supplies. In this area, hygiene education can be

particularly helpful in creating broad awareness of the need for environmental protection and promoting a commitment to take appropriate measures.

In slum improvement or low cost housing projects, hygiene education on water supply and sanitation can readily be extended to include aspects related to housing and health. These include proper ventilation to help prevent chronic respiratory diseases, enough space to help prevent diseases caused by overcrowding, and measures to help control nuisance and disease transmission from flies, mosquitos and rodents (Appleton, 1987).

Solid waste disposal and surface drainage programmes are also related, as uncontrolled garbage disposal and poor drainage both are serious threats to health. Garbage provides food, nesting places and breeding sites for rats and disease-spreading insects. Discarded appliances, vehicles, bedding and toxic substances are death traps for unwary children. And bad drainage of surface water, including domestic wastewater, results in stagnant pools or muddy and marshy areas where mosquitos, flies and other insects breed (Appleton, 1987). Diseases which are easily transmitted in this way include malaria, dengue fever, yellow fever, and bancroftian filariasis, which can cause elephantiasis.

Surface water may also be contaminated with diarrhoea-causing germs from sources such as blocked sewers and overflowing septic tanks, and often from defecation in the open by livestock and by people who have no toilet. This contaminated surface water can then infect people in many ways. Children are particularly exposed to infection when playing or bathing in surface water. Schistosomiasis may sometimes be thought of as a rural disease, but in countries where it is endemic, poorly drained urban areas present ample opportunities for transmission of the disease (Cairncross, 1991, p. 3). All these problems are at the heart of hygiene education and therefore can readily be integrated.



Hand washing and safe excreta disposal are important practices to help prevent water and sanitation-related diseases.

1.3 About this book

The remaining chapters relate to various aspects of hygiene education planning and management. As hygiene education involves activities to encourage behaviour which helps to reduce water and sanitation-related diseases, Chapters 2 and 3 cover the process of behavioural change. In Chapter 2 this is approached from a more practical point of view, while Chapter 3 covers a more theoretical background to hygiene education planning and implementation and probably will be primarily of interest to project professionals in charge of hygiene education planning.

Chapter 4 discusses various options for organizational integration of a hygiene education component into a water supply and sanitation project. As careful consideration of the best form of integration is often neglected, there is not yet much reliable information available on this subject. Chapter 4 is thus meant more to stimulate the reader's thoughts than to provide clear-cut suggestions.

Chapter 5 provides an overview of hygiene education phases and approaches. From then on, the chapters follow the programme cycle. Identification of needs, objectives, targets and target groups are covered in Chapters 6 to 8. Here emphasis is put on making use of existing sources, information and experience, on active participation of both women and men in the target groups, and on the need for clarity in deciding on specific hygiene education objectives.

Chapter 9 continues with the development and implementation of a workplan for hygiene education. It is emphasized that the hygiene education workplan should be developed jointly with that for more technical activities, and that the workplan should provide sufficient guidance both at project level and at community level for implementation of the hygiene education programme. Related manpower and cost aspects are covered in Chapter 11.

Chapter 10 focuses on communication, the instrument the hygiene educator uses in implementing the programme. As with Chapter 3, it tends to be focused more on project professionals in charge of the hygiene education programme, as the process of communication is a rather specialized subject. The final chapter, Chapter 12, is devoted to monitoring and evaluation of the hygiene education programme, emphasizing that this can and should be done at various levels.

Although the chapters follow a deliberate sequence, readers may wish to read selectively, for example first going to Chapter 11 because of a special interest in manpower- and budget-related aspects. The chapters are written in such a way that this can be readily done, by including some overlap and by frequent references to other chapters.

In the book, use is made of illustrations in the text and examples at the end of the chapters. The illustrations in the text are meant to reinforce the issue under discussion. The examples are meant to show how other project staff dealt with the issue at hand.

Table 2: Overview of hygiene education

Phase	Purpose	Target groups/People involved	Intended outcomes
Planning	<ul style="list-style-type: none"> - Orientation in public health concepts and hygiene education philosophy. 	<ul style="list-style-type: none"> - Government representatives and policy makers at national and regional levels; - departmental engineers; - project engineers; - project managers; - social scientists inside and outside agencies. 	<ul style="list-style-type: none"> - a clear government commitment for integrated water supply, sanitation and hygiene education; - the health components of their work addressed by engineers and project managers; - co-operation and co-ordination between agencies responsible for water, sanitation and health.
Design	<ul style="list-style-type: none"> - Orientation on the relation between water, sanitation and health; - Orientation on the relation between technical and behavioural factors in reducing health risks. 	<ul style="list-style-type: none"> - communities (men, women, children; socio-economic groups); - public and private utilities staff (eg. school, health centre, market, bazaar, government office, workshop, factory); - project staff; - government staff at regional and district levels. 	<ul style="list-style-type: none"> - the selection of sound, acceptable and affordable facilities and their proper siting, thus increasing the chance of their use by everyone; - decision on the need for additional facilities for hand washing, bathing and washing clothes, and additional inputs for the safe disposal of wastewater, storm water and solid waste.
Implementation	<ul style="list-style-type: none"> - Training, guidance and support in hygiene education: participatory investigations, targets, plans, communication activities, monitoring, use of audio-visuals. 	<ul style="list-style-type: none"> - project extension staff; - health extension workers; - other extension workers (eg. agriculture, social development); - school teachers; - formal and informal community key persons; - religious leaders; - local government staff. 	<ul style="list-style-type: none"> - community-level workers and community key persons to take up hygiene education tasks; - provision of support to community-level workers and community key persons in their educational and promotional tasks.

Phase	Purpose	Target groups/People involved	Intended outcomes
Construction and functioning of facilities	<ul style="list-style-type: none"> - Orientation and training on technical aspects influencing potential health benefits of improved facilities. - Training in hygiene education related to the functioning, use and maintenance of improved facilities. 	<ul style="list-style-type: none"> - technicians - foremen; - masons; - plumbers; - caretakers; - maintenance workers; - water and sanitation committees. 	<ul style="list-style-type: none"> - awareness that quality of construction is a precondition for the safe and continuous functioning of facilities; - technical staff to utilize their stay in the community also for hygiene education activities; - proper functioning, and maintenance of improved facilities.
Use of facilities	<ul style="list-style-type: none"> - Hygiene education on the safe collection, storage and use of water; personal and domestic hygiene; safe handling of food; safe disposal of wastewater, human and solid waste; productive use of water and waste; control/reduction of fly and mosquito breeding places. 	<ul style="list-style-type: none"> - communities (men, women, children; households; socio-economic and voluntary groups); - users of facilities in public and private utilities. 	<ul style="list-style-type: none"> - safe and exclusive use of water supply and sanitation facilities; - use of sufficient quantities of water for personal, food and domestic hygiene; - prevention of new health risks; - productive use of water and waste, if possible and feasible.
Operation and maintenance of facilities	<ul style="list-style-type: none"> - Training and education on health related aspects of the operation and maintenance of facilities. 	<ul style="list-style-type: none"> - communities; - users of facilities in public and private utilities; - water and sanitation committees; - caretakers; - maintenance workers. 	<ul style="list-style-type: none"> - willingness to care for the facilities and to pay for their maintenance; - a viable maintenance system in place; - continuous proper functioning of the facilities.

2. Promoting Hygiene

Hygiene education is concerned with promoting hygienic behaviour, which largely relates to daily routines such as the collection, storage and use of water; relieving oneself; washing hands; and garbage disposal. Routines usually are taken for granted, and therefore not easily changed. What then makes people adapt their daily routines to help reduce water and sanitation-related health risks? In this chapter we will discuss this issue from a practical point of view. In the next chapter a more theoretical background will be given.

2.1 Making use of new opportunities

Reducing barriers

Behaviour is largely dictated by available resources, facilities, services, money, time, materials, and skills. It is easy to say that people should use ample water for personal hygiene, but when water is expensive or in short supply, this advice is hard to follow. It is easy to say that people should use a latrine, but when skills, materials or money are lacking, it may be impossible to get one constructed. So, a first requirement is to take away barriers to the adoption of improved hygiene behaviour. A water supply and sanitation project may provide opportunities previously beyond the means of large parts of the population.

Getting improved facilities used

Improvements in health can only be expected when new water supply and sanitation facilities are being used. Use of new facilities is more likely when people perceive them to be better than their old ones. For a water supply, this means that the new facilities are well-constructed and well-functioning, that they are easily accessible within a reasonable walking distance, that they are easy to operate, that they produce a reliable and continuous water flow, that colour and taste of the water are acceptable, and that people can afford their use. For new latrines it means that they are well-constructed and well-functioning, accessible and affordable, not smelling, not too light or too dark, providing privacy if required, easy to keep clean, and that it is easy to empty or replace the pit when it is full.

From this list, it may be clear that while health benefits are often important, they are not the immediate reasons why people change their behaviour. New facilities must appeal to people, otherwise it is unlikely that they will be used as intended.

To get improved facilities accepted and used, future users have to be involved in the process of selecting technical solutions. This is especially true when compromises have to be made between what people wish to have and what is possible. For example, a new handpump in the middle of a village was not used because women preferred to walk a bit further to their old pond where they could take water in one movement. The handpump required many strokes to get a bucket filled. To be able to make better choices and to support the change-over to new facilities, people need to know the implications of these facilities.

Linking new practices to new facilities

The switch-over to new facilities already implies a change in daily routines. In discussing this switch-over, there will be a lot of easy opportunities to discuss and introduce related hygiene behaviour. For example, provision of a safe water supply calls for promotion of its safe collection, transport and storage for drinking. Introduction of latrines provides ample opportunities to discuss the safe disposal of feces of babies and toddlers. Promotion of personal hygiene is easier when linked to construction of bathing and washing facilities. Therefore, the introduction of new water supply and sanitation facilities in communities provides an important momentum to change hygiene-related behaviour as well.

Linking new practices to products and benefits

Health risks may be reduced not only by promoting new behaviour, but by promoting possible new products or benefits. For example, a water supply project was very successful in solving the problem of stagnant wastewater around the houses by promoting the use of wastewater for growing firewood trees. In a latrine programme, the status of having a latrine and the protection it provides against rain while relieving oneself were used to encourage people to use the new facilities.

Motivation for latrine construction and use can be strengthened by providing more internal incentives or rewards. In a project in Thailand four types of incentives are recommended:

- * **Economic:** "You will spend less on health care and lose less time from work."
- * **Fashionable:** "It is modern, private, and convenient to own a latrine and use it."
- * **Religious (Buddhist):** "You can earn merit by helping to make the village environment clean and by teaching your children hygienic practices."
- * **Health:** "You will have fewer diarrhoeal and parasitic infections and your children will grow healthier and will suffer less."

Source: Simpson-Hebert, M. (1987) p. 16.

2.2 Building on local culture and priorities

Cultural values

Behaviour is not only influenced by available resources, but also by how people think and feel. Hygiene education that is not based on the local culture cannot possibly be effective in changing people's behaviour and practices. For example, frequent diarrhoea may be taken as a fact of life, rather than as a disease. In promoting hygiene behaviour it is important to start from an understanding of what disease means to people, what diseases they recognize, and what their notions of prevention and cause are. The more hygiene education builds on local cultural values, the more chance there is that it is attractive and effective. As a merchant would say, you have to speak the language of your customers to sell your products.

Cultural values and beliefs also largely determine what people consider right or appropriate behaviour and practices. When this is not taken into account it will cause project failures. For example, in a solid waste removal programme, the wheelbarrow was introduced to transport household waste to the dump site. However, as women were responsible for this task, and it was considered embarrassing for women to push a wheelbarrow because it would show their breasts and buttocks, the programme had to be revised. An example about beliefs and practices in relation to hand washing is given at the end of the chapter.

Cultural patterns are hardly ever nationwide. Specific cultural values may even differ between nearby villages and between the same social, ethnic and economic groups. It is always important to investigate cultural values, even when hygiene education is given by a person from the area.

Why women like to wash clothes in the canal:

"I prefer to wash in the canal because it is less strenuous. If I wash at home, I'll have to walk back and forth at least four times carrying the clean and dirty water, especially since I have no water at home."

"Thank God I have a water connection at home, nevertheless, I prefer to wash in the canal so as not to dirty my house, since the septic tank we have is small. Therefore, I don't want it overflowing at short intervals."

"Canal water washes a hundred times better than piped water; since it is always running, it is never cut off and thus is abundant. It makes soap suds easily, while the process of rinsing is much easier due to the abundance of water."

Source: El-Katsha et al (1989) p. 54.

Following respected persons

Behavioural change can gain an important impetus through the support and example of respected persons. If a respected key person is setting the example and promoting a certain behaviour, it is likely that more people will follow. The role models may be official leaders such as religious leaders and community representatives, but also individuals who are trusted and consulted for specific problems, or who live the life desired by many people. Which people are inclined to follow the example of which key persons, has to be investigated on a case-by-case basis (see Chapter 6). It is hardly ever the same for all community groups or for men and women.

The reverse is also true. When hygiene behaviour is promoted by people who have neither status nor influence, it is unlikely that the new behaviour will take root among many people.

Incentives and regulations

To encourage new behaviour, incentives may be used, such as little gifts or prizes when people switch over to new behaviour. Examples are prizes awarded to the cleanest village, the village with the best-protected water source, or to the family with the best-constructed latrine in each village. Status and prestige may also act as incentives to the adoption of new facilities and practices. However, experience shows that status and prestige considerations are more helpful in getting facilities (eg. latrines) constructed than in getting them properly used.

Behavioural change can also be promoted through formal and informal regulations and agreements. For example, it may be decided that households are only entitled to house connections when they make the necessary provisions for safe wastewater disposal. Social control can be an important mechanism for informally enforcing certain behaviour. For example, cleanliness around the tap site may be successfully based on social control principles.

Facilities and practices are more likely to be adopted when they:

- * *make life easier and solve felt problems;*
- * *are functionally appropriate;*
- * *are affordable, and materials easily available;*
- * *are based on people's practical understanding of how water and sanitation-related diseases are transmitted in their own environment;*
- * *are in line with the cultural values and behaviour of the users;*
- * *appeal to a sense of modernity and status;*
- * *are encouraged through incentives and regulations;*
- * *are promoted through the example of key persons in the community.*

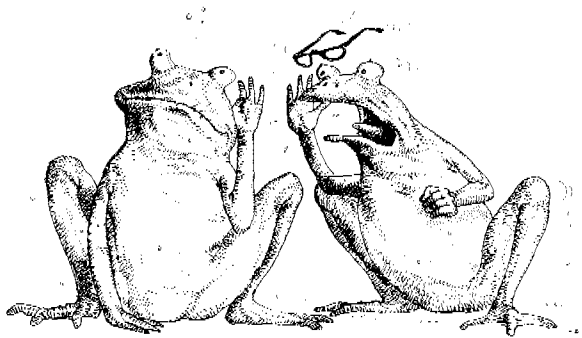
Source: Burgers, L.; Boot, M.; and Wijk, C. van (1988) p. 24.

2.3 Support from project staff and authorities

Promotion of new behaviour is not just telling people what to do. After all, why should they believe you, and why should they take the trouble when they do not see how it will make life casier or better. Changing behaviour requires active participation of both men and women in the community and the combined efforts of technical and social staff, supported by government authorities.

Changing practices through hygiene education and water and sanitation improvements requires a willingness in people to think about their ideas and behaviour and a willingness to take up new knowledge, to consider behavioural alternatives, to overcome reluctance and ingrained habits, and to decide and get used to new behaviour. This cannot be expected to happen overnight; it will necessarily take some time.

For project staff to facilitate behavioural change they have to understand why people act the way they do. For example, with a new water supply installed, the use of more water for personal and domestic hygiene is promoted through hygiene education. But this may be opposite to what many people have learned to practice. Especially in dry arcas, people usually have been brought up with the message that water is a precious and limited resource, and therefore they are used to taking as little water as possible. Changing from water-saving behaviour for survival to water-using behaviour to reduce water and sanitation-related diseases can only be facilitated when there is an appreciation what this means to people. Educational staff have to realize that this will require motivation and support over a longer period of time with results coming gradually.



..... More is needed to promote hygiene behaviour

Effective hygiene education at community level presupposes the sensitivity of project staff and government officials to finding appropriate solutions to reduce health risks from poor water supply and sanitation. Effective hygiene education also requires an intimate knowledge and understanding of possible barriers and resistance to behavioural change and factors that may facilitate the adoption of new behaviour. This cannot occur without careful hygiene education planning and implementation, giving due attention to the various levels of influence. This requires the set-up of a participatory hygiene education programme in a suitable organizational setting. These subjects will be taken up in later chapters.

2.4 Action points for hygiene education

As there are many transmission routes of water and sanitation-related diseases, hygiene education may cover a wide range of action points. Burgers et al (1988) made a shortlist of questions for identifying action points, from which the following is adapted:

WATER SOURCE

- Do all children, women and men in the community use safe water sources for drinking, clothes washing and bathing?
- Is water used efficiently (not wasted), and is wastewater properly drained?
- Are improved water sources used with care and well kept?
- Is there a risk of contamination of water sources from nearby latrines, wastewater drainage, free ranging cattle or land cultivation?

WATER COLLECTION

- Is drinking water collected in clean vessels, without coming into contact with hands?
- Is water transported in a covered container?

WATER STORAGE

- Is water stored in vessels which are covered and regularly cleaned?
- Is drinking water stored in a separate container, if possible?

WATER DRINKING

- Is drinking water taken from the storage vessel in such a way that hands, cups or other objects cannot contaminate the water?

WATER USE

- Are adequate amounts of water available, transported and used for personal and domestic hygiene? (It is estimated that some 30 to 40 litres per person per day are needed for personal and domestic hygiene.)

FOOD HANDLING

- Are hands washed with soap or ash before preparing and eating food?
- Are vegetables and fruits washed with safe water and is food properly covered?
- Are kitchen utensils washed with safe water and left in a clean place?

EXCRETA DISPOSAL

- Do all men, women and children use hygienic means of excreta disposal at home, at work and at school?
- Are stools of infants and young children safely disposed of?
- Are household latrines used by all family members throughout the year and are these regularly cleaned and maintained?
- Are latrines sited in such a way that the pit contents cannot wash into water sources or enter the groundwater table?
- Are hand washing facilities and soap or ash available and are hands always washed after defecation, and after helping babies and little children?

WASTEWATER DISPOSAL

- Is household wastewater disposed of or re-used properly? Are measures taken to ensure that wastewater is not left to create breeding places for mosquitoes and other disease transmission vectors, or to contaminate the safe water?

Although not related to hygiene education in a narrow sense, health care for babies and little children should be a regular issue of attention, as these little ones are especially prone to diarrhoeas and other diseases. For example, preparation of weaning foods could be included on a regular basis in discussing the safe handling of food. Hygienic preparation of weaning foods is not much different from safe handling of food, except that it should be done with even more care, including: hand washing before food preparation and before feeding the child; only using clean utensils; using safe water for making weaning foods, and if possible preparing the weaning foods immediately before they will be eaten; storing the foods in a cool shady place, and covered; if kept for more than two hours reheating the weaning food thoroughly so that it boils (but let it cool again before giving it to the baby). It may also be emphasized that, just as at any other age, the weanling with diarrhoea must be given plenty of appropriate fluids and continue to eat plenty of nourishing food to help recovery and ensure that there is no growth retardation (AHR TAG, 1988, no. 32).

In deciding on actual adaptations in behaviour and practices to reduce health risks, the men and women in the community may be in need of some sound knowledge and considerations of what are the most beneficial measures. For example, in a Zambian community, the water committee noticed the problem of

people from outside the village using their own bucket instead of the community bucket to draw water from the improved well, thus contaminating the water source. Therefore the committee decided that the well should be continuously locked to prevent this happening. However, the implication was that the village women had to fetch the key from the caretaker before they could draw water from the well. As this was rather inconvenient and time-consuming, women tended to collect less water or to revert to old, unimproved water sources. When the health educator visited the village, this problem was taken up with her, and a discussion evolved about the relative importance of quality of water compared to water quantity, and what could be the best measures in this particular situation.

In cases where it is not entirely clear what are the best behavioural measures, it should be possible for the health educator to consult a health specialist on behalf of the community, either directly or through his or her supervisor, to obtain expert advice in order to prevent inappropriate adaptation in hygiene behaviour and practices.

Example: Why Do Mothers Wash Their Hands?

We need to understand why, when and how people normally wash their hands, before we can promote improved hand washing. In ten shanty towns surrounding the capital city of Lima in Peru, beliefs and practices in relation to hand washing were investigated.

To save money, mothers in the shanty towns reuse water for different domestic chores. For example, the same water that is used to wash vegetables is afterwards used to wash dishes, clothes and hands. In addition, cultural beliefs and social prestige are also important in determining how water is used.

Beliefs about 'dirtiness'

Mothers perceive three kinds of 'dirtiness' that may lead to hand washing:

- **Perceived 'dirtiness':** when the hands look, feel or smell dirty to the mother. She washes her hands when they are visibly soiled, smell strongly, for example of kerosene, or when they feel sticky. This is the most common type of hand washing. Essentially the hands are washed because they feel uncomfortable.
- **Contaminating 'dirtiness':** when the hands have been in contact with anything considered dirty, such as money, garbage or adult human feces. All of these are felt to be vehicles of different illnesses. Although mothers report that they wash their hands on these occasions, observation shows that this is not always the case. Baby stools are also not considered to be dirty or contaminating.
- **Social 'dirtiness':** when mothers wish to improve their general physical appearance. This type of hand washing is very common and occurs before going out, or receiving guests at home. It is associated with aesthetic or social values.

Since many household chores involve the mother having her hands in water, she feels that most of the time her hands are clean and that there is no necessity for additional washing with clean water and soap. As far as she is concerned, she is 'washing' her hands when she is cooking, and washing dishes and clothes. Consequently, most hand washing is very superficial and is done with the water in which vegetables, dishes or clothes, including dirty nappies, have previously been soaked or rinsed.

Methods of hand washing

How mothers wash their hands depends on the kind of 'dirtiness'. For perceived dirtiness, water alone or water with detergent remaining from pervious use is usually considered adequate. For contaminating 'dirtiness',

Example continued

previously used water with detergent, clean water and detergent, or clean water and washing soap is used. Hand washing for social purposes is done with cosmetic soap. However, the water mothers use to wash on these occasions has generally been previously used by the husband and/or the children. Mothers usually dry their hands on their clothes. They may also use drying-up cloths, nappies or any reasonably clean clothes.

Hygiene education is more effective when the existing behaviour is understood and the educational activities can be designed so that it reinforces cultural beliefs and practices. Thus, in our educational intervention to promote hand washing, the concept of contaminating 'dirtiness' has been emphasized with the addition of the idea that children's feces should also be included in this category.

Source: Fukumoto, M. and Aguila, R. del (1989).

3. *Influencing Health Behaviour*

This chapter provides a short theoretical background on ways of influencing behaviour through hygiene education planning and implementation. The reader will recognize many aspects discussed in the previous chapter, but this time it is put in a systematic framework. The text is largely summarized from Green et al (1980) *Health education planning: a diagnostic approach*, and the interested reader is referred to this book to study this subject further.

3.1 Basic characteristics of health education

Hygiene education is a specific form of the wider health education. Whereas hygiene education is solely confined to water and sanitation-related health problems, health education concerns all activities that promote health and reduce health risks, as for example adoption of a sound diet or prevention of Aids.

Health education is commonly defined as: '*any combination of learning experiences designed to facilitate voluntary adaptations of behaviour conducive to health*' (Green et al, 1980, p. 7). This definition shows the two basic characteristics of health education:

- Health education is a planned activity. It must be properly designed and conducted if it is to be effective.
- Health education is based on voluntary participation. Only if people want to change, can adaptations in behaviour be expected; forcing will not help and health education without participation runs the risk of being rejected because it is felt to be propagandistic, politically directed, or threatening (Green et al, 1980, p. 8-9).

3.2 Framework for health education planning

Green et al (1980) provide us with a framework for health education planning. The framework includes seven phases and starts from the 'outcome' end: first we have to decide where we want to get, before a proper intervention (combination of learning experiences) can be designed. The framework is summarized in Figure 1. To visualize starting from the "outcome" end, the phases in the figure run from right to left. The more these phases are carried through with full participation of the men, women and children in the target population, the greater the chance for successful health education. We will come back to this point in later chapters. At the end of this chapter an example is given how this framework for health education planning is used in a pour-flush latrine programme in Malaysia.

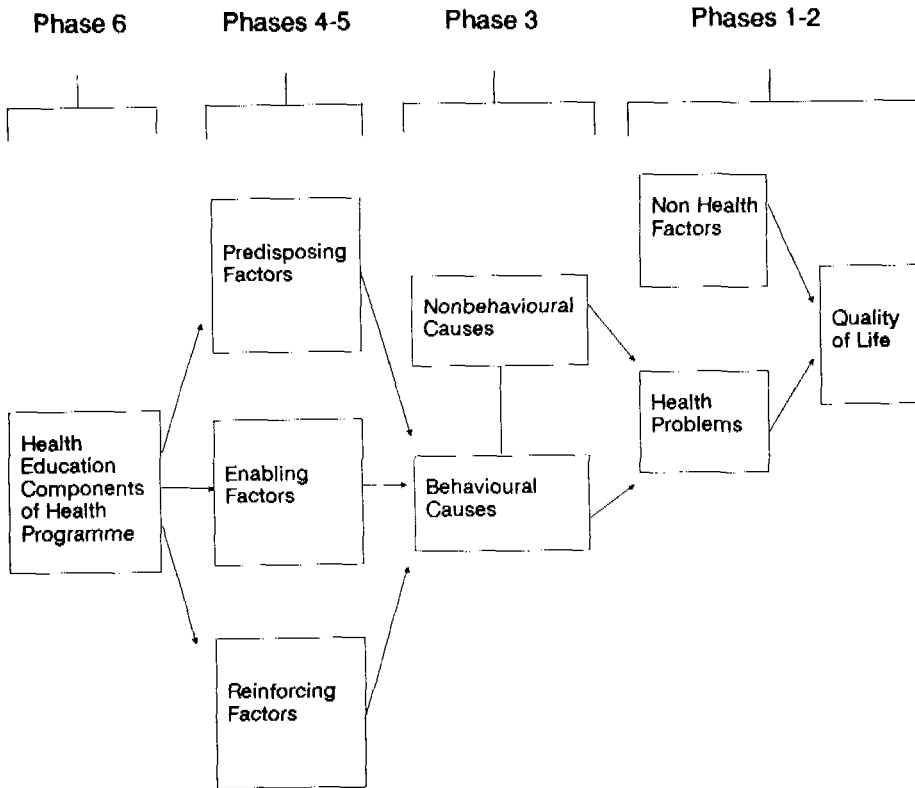


Figure 1: Phases in health education planning (Green et al, 1980, p. 3). (Phase 7: Evaluation is not illustrated, as it is seen as part of all the other phases.)

Phases 1 and 2

Ultimately health education is concerned with an improvement in the quality of life (phase 1). The first question is: *What are the general problems of concern to people in the target population?* These problems can be health related and non-health related, and that is further assessed in phase 2. Based on this assessment a decision is made as to what health problems deserve most attention. Programme and project objectives are based on this assessment.

In the case of water supply and sanitation projects this assessment process will already have taken place in an earlier stage, with the decision taken that the health problem deserving special attention is water and sanitation-related diseases. So, to a certain extent, phases 1 and 2 are only reminders for us. Usually it will not be necessary to re-do the assessment, but we should be aware of why this health problem was selected, and more importantly we should make sure that the target population is interested in tackling it, although that may be for reasons other than health.

Phase 3

Phase 3 involves identifying specific behaviours which appear to be linked to the chosen health problem. In our case, we should identify behaviours linked to water and sanitation-related diseases (eg. using the toilet without regular cleaning). As these are the behaviours that will be the focus of the educational intervention, it is essential that they be identified very specifically and then carefully ranked according to importance and changeability. This process may be facilitated by using a matrix of health behaviours (Figure 2).

	Important	Not/Less Important
Changeable	1. High priority for programme focus	3. Low priority except to demonstrate change for "political" purposes
Not/Less Changeable	2. Priority for innovative programme; evaluation crucial	4. No programme

Figure 2: Matrix of health behaviours (Green et al, 1980, p. 63).

In quadrant 1 of Figure 2 we find behaviour that is both important and relatively easy to influence. Therefore, behaviour in this quadrant has a high priority as a target for health education. Sometimes however, this quadrant will remain empty, and then we have to focus on behaviour listed in quadrant 2. This behaviour is less easy to influence, and it is important to keep this in mind to prevent unrealistic expectations. If quadrant 1 and/or 2 carry a whole list of behaviours, it will be necessary to make a balanced choice, to avoid the risk that the health education efforts will become unfocused and too thinly spread.

Behaviours found in quadrant 3 are unlikely to become targets for change, unless there is a 'political' reason to show that change is possible. When such a need exists, the behaviours should be given only temporary priority. Behaviours listed in quadrant 4 will not require our attention, as these behaviours are neither important nor easy to influence.

Once target health behaviours have been identified, we can formulate *immediate (behavioural) objectives*. These objectives should be stated precisely to prevent educational efforts being scattered rather than focused. Each objective should answer the question: *Who* is expected to achieve *how much* of *what* behaviour by *when*. Reference is made to Chapter 8 for a further discussion of formulating objectives.

In carrying through this third phase it should be borne in mind that health problems have both behavioural and non-behavioural causes. Although the focus for health education is on behavioural causes, it is important also to consider the non-behavioural causes. Non-behavioural causes are personal (eg. age, gender), socio-economic, technological (eg. adequacy of facilities), political and environmental (eg. climate, residence, water quality) factors that contribute to health problems, but that are not controlled by the behaviour of the target population. In water supply and sanitation projects with integrated hygiene education, both behavioural and non-behavioural causes are attacked at the same time, increasing the potential for full benefits, as discussed in Chapter 1.

Phase 4

In phase 4 we sort out the factors that contribute to the health behaviours selected in phase 3. These factors provide the reasons why people behave in the way they do. Many factors contribute to an actual behaviour and if we know what these factors are, we can address them in the health education programme to stimulate adaptations in behaviour. For convenience, the factors are grouped in three categories: predisposing factors, enabling factors and reinforcing factors (Figure 3).

Predisposing factors relate to a person's knowledge, attitudes, beliefs, values and perceptions. In addition, a variety of demographic factors also belong to this group, such as socio-economic status, age, gender, and present family size. Although demographic characteristics are beyond the direct influence of a health education programme, they are important to remember. Together this group of factors provide the *motivation* for an individual or group to act in a certain way.

There is an ongoing debate about the relation between knowledge and attitudes on the one hand and behaviour on the other. Studies have found much evidence that an increase in knowledge is an important but not a sufficient factor in changing health behaviour. The relationship between attitudes and behaviour is more complicated and not fully understood. Nonetheless it is safe to say that a change in attitude may influence behaviour and, vice versa, that change in behaviour may influence attitudes.

Enabling factors include personal skills and resources as well as community resources necessary to perform a health behaviour. Resources include, among

others, personnel, community organization, money, time, water supply and sanitation facilities, health care facilities, transportation facilities, a special container for drinking water storage, space to construct a latrine.

It is important to investigate these enabling factors for developing a health education programme, because it is unrealistic to expect people to adapt their behaviours if resources and skills are lacking.

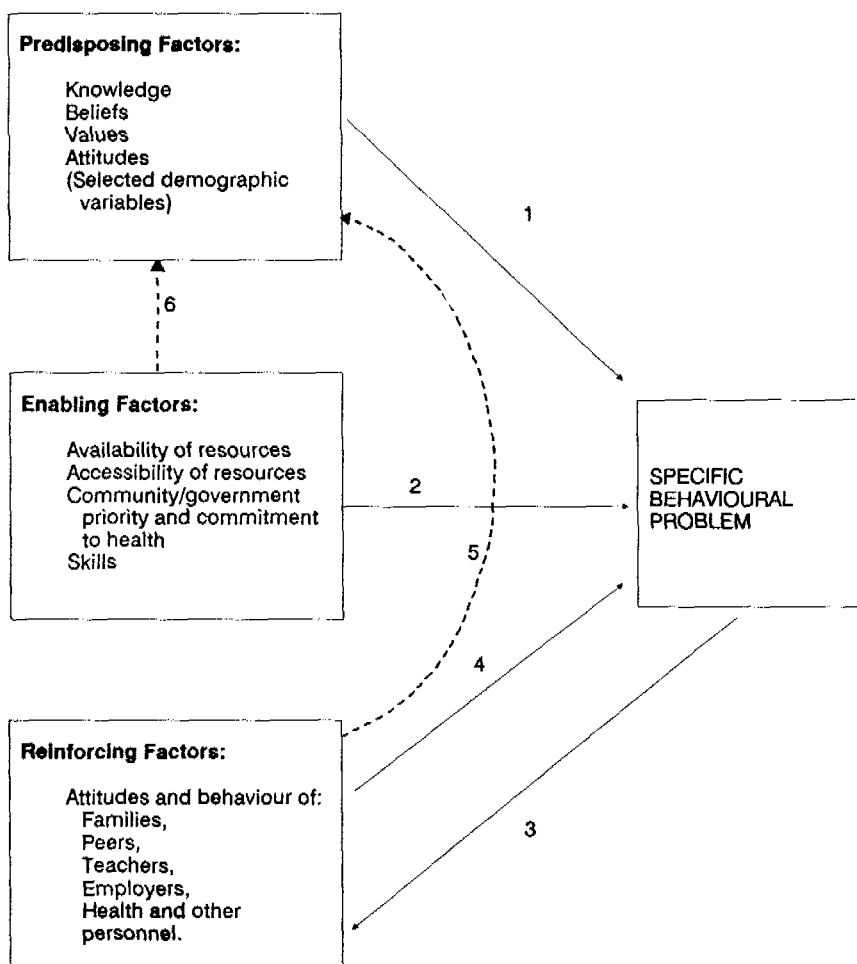


Figure 3: Three categories of factors contributing to health behaviour (Green et al, 1980, p. 71).
 Note: Solid lines imply contributing influence, and dotted lines imply secondary effects.
 Numerals indicate the approximate order in which the actions usually occur.

Reinforcing factors relate to the approval or disapproval of a certain behaviour by people who are important to us. For example, if our best friend only accepts drinking water from a protected source we are more likely to adopt this behaviour as well. Which person or group of persons are significant in encouraging or discouraging behavioural change may differ from one target group to another. A careful assessment and involvement of these people may greatly facilitate the adoption of behaviour conducive to health.

A simplified example of the interplay of the three groups of factors is the following: In an urban community many women suffered from schistosomiasis. The behaviour identified as main cause for their health problem was that they were used to washing clothes while standing in schistosomiasis-infected water. Factors contributing to this behaviour included a long and generally accepted habit of washing clothes in this way (reinforcing factor), limited knowledge about the causes of this disease (predisposing factor), and no alternative washing facilities (enabling factor). Encouraging a change in clothes-washing behaviour to reduce contact with schistosomiasis-infected water will be dependent on how well all these factors are covered in the health education programme.



Changing health behaviour is more than increasing people's knowledge.

Phase 5

When many factors are identified as contributing to a behaviour, as usually will be the case, decisions have to be made about which factors are to be attacked first and which can be attacked simultaneously. In some cases, predisposing factors will come first: people will not adopt a set of behaviours to reduce a health risk if they are not aware that there is a risk. In other cases, enabling factors will come first: people cannot adopt a set of behaviours to reduce a

health risk if they have not the resources to do so. Within the three categories the specific factors to be selected for intervention can be based on the same criteria as were used in selecting the initial behaviours: importance and changability (see above, phase 3).

Phase 6

Once specific factors for intervention have been selected, we are ready to develop a health education strategy. A health education strategy is a plan of action which includes a combination of educational methods and materials that may be used to affect the predisposing, reinforcing and enabling factors which directly or indirectly influence behaviours.

There is a wide variety of educational methods and materials, including lecture-discussion, small-group discussion, person-to-person communication, household visits, role playing, simulations and games, skill development, programmed learning, inquiry learning, audio-visual aids, educational television, videos and video clips, films, slides, demonstrations, radio-listening groups, etc. In addition a number of organizational methods encompass this list of educational methods and materials. These include: community development, social action, social planning, and organizational development. Chapter 10 discusses these points further.

For effective health education, the best possible mix of methods should be selected. However, even with the best combination of methods the promotion of changes in behaviour is still very much dependent on the quality of the health educator and on the participatory process itself. This point is further addressed in Chapters 10 and 11.

In deciding on a health education strategy, manpower, budget and time availability should be taken into account, and realistic allocations made. Organizational aspects should also be considered, especially working relations within the health education programme, between the programme and the water supply and sanitation project, and between the project and other organizations involved in water, sanitation and health. To a certain extent these aspects should be in focus from the very beginning of the planning process, but at this stage they are given more specific and detailed attention. Chapters 4 and 11 will address these aspects further.

Phase 7

Evaluation is an integral and continuous part of the whole planning and implementation process, and so this phase is not mentioned separately in Figure 1, phases in health education planning. But whereas for phases 1 to 6 we are working from right to left, for phase 7 the order of attention is from left to right: from immediate activities and resources to ultimate health benefits and an improved quality of life.

Health education programmes can be evaluated in terms of process, in terms of impact, and in terms of outcome (Figure 4).

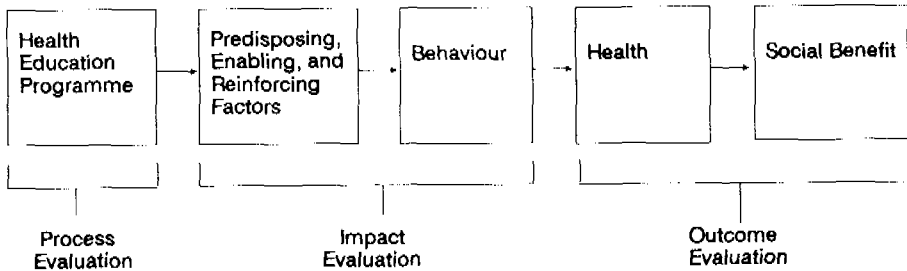


Figure 4. Three levels of evaluation in relation to the health education planning framework. (Note that Green et al use the term 'outcome evaluation' for what in the water and sanitation sector is commonly known as 'impact evaluation' and vice versa - see Chapter 12).

A process evaluation assesses how well a health education programme is being planned and implemented. Basic questions are: *What is being done compared to time, budget and manpower allocations? and How well is it being done, using professional standards?*

The second level is impact evaluation. Evaluation here focuses on the immediate impact of the health education programme (or some aspect of it). It involves an assessment of the changes in knowledge, attitudes, beliefs, and especially behaviour that come about as a result of the educational programme. Questions to be answered are: *Have the predisposing, enabling and reinforcing factors that influence the health-related behaviour been altered? Have the immediate objectives of the programme been met? Is there an increase in health-enhancing behaviour? Has exposure to risk been reduced?*

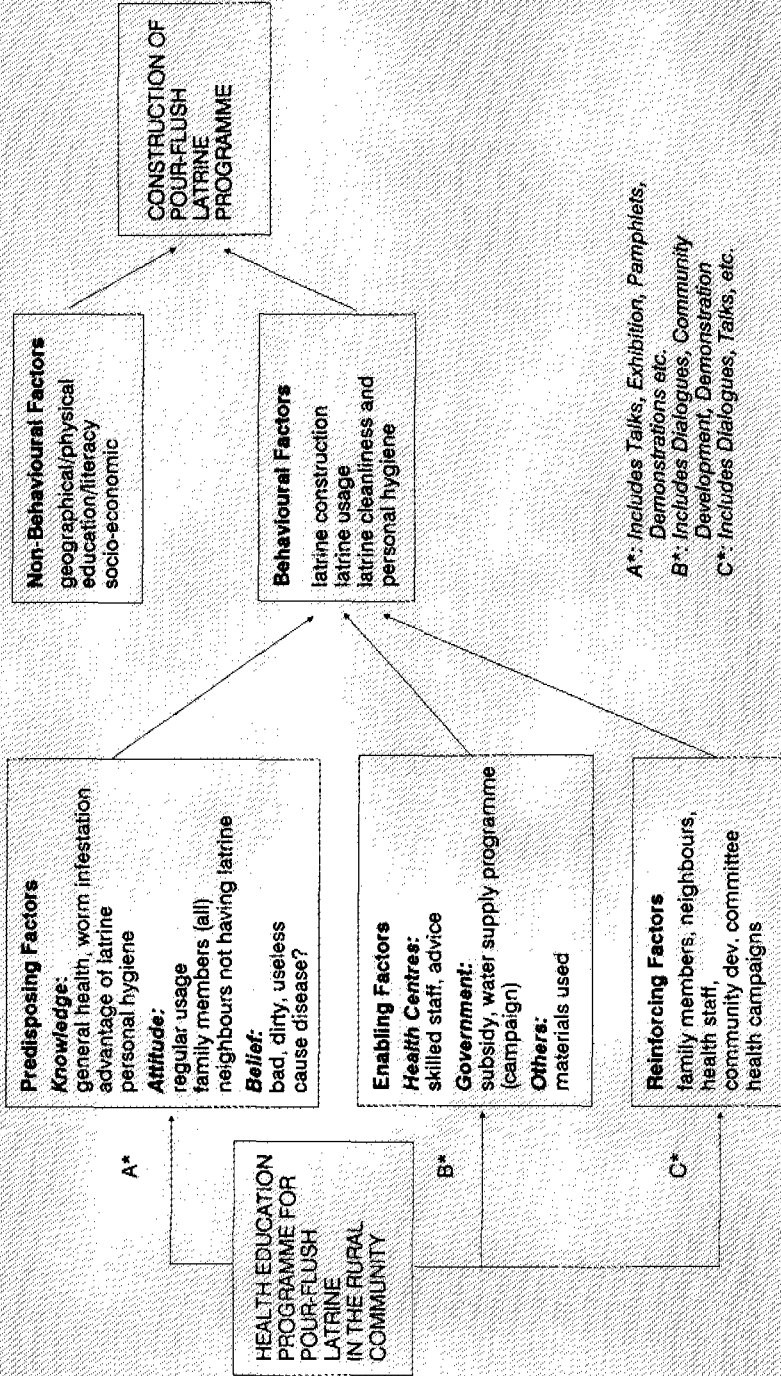
At the level of outcome evaluation, benefits of the health education programme are measured in terms of increased survival and reduced mortality and morbidity. This type of evaluation is a long-term undertaking requiring large population samples, and therefore needing well-qualified staff and a considerable budget. Evaluation of health education programmes is further discussed in Chapter 12.

3.3 Common traps in hygiene education

The framework for health education planning that has been described should not be seen as a rigid formula, but as a means of avoiding some common traps in hygiene education. These traps are briefly summarized below, to help hygiene educators to avoid them (Green et al, 1980, p. 5-6):

- ***The trap of 'doing without thinking'***. This happens when hygiene educators lose themselves in designing, planning and spreading messages without really thinking out why. Invariably this leads to being busy all the time and very tired at the end of the day, without working towards successful results.
- ***The 'empty vessel' fallacy***. This relates to the wrong idea that all you need for a successful health education programme is to pour health information into the empty minds of an eagerly waiting target population.
- ***The fallacy of the 'inherent superiority or inferiority'*** of some educational methods. This comes into play when hygiene educators propagate only one or two methods, while rejecting the others. Thus, some educators may be enthusiastic about group processes, whereas others swear by video-clips or person-to-person communication. In fact there is nothing inherently superior or inferior about any method of education. Each has a potential, and a choice has to be made about the best mix in a particular situation.
- ***The fallacy of 'the more, the better'***. This fallacy relates to the misconception that positive outcomes of health education will increase proportionately with more audio-visual tools, more time, more contacts, more radio coverage, etc.

Example: Green's Framework Adapted to a Latrine Programme in Malaysia



A*: Includes Talks, Exhibition, Pamphlets, Demonstrations etc.
 B*: Includes Dialogues, Community Development, Demonstration
 C*: Includes Dialogues, Talks, etc.

Source: Bohari et al (1989) p. 16.

4. Organizational Set-up

Integration of a hygiene education component into a water supply and sanitation project will require an adapted project organization. Someone will have to take responsibility for the development and implementation of the hygiene education programme. Coordination and cooperation will be necessary between educational and technical staff and their activities.

What organizational structure is needed to meet these requirements? There are several options, each with its own advantages and disadvantages. The best option for a particular situation has to be selected in the formulation and planning stages of the project (see also Chapters 5 and 6). In this chapter the most common options are briefly compared.

The most common options are:

- the water supply and sanitation project directly employs staff to cover the hygiene education component;
- the Ministry of Health provides staff seconded to the project to cover the hygiene education component;
- the Ministry of Health covers the hygiene education component of the project through its existing health structure and services in the area.
- other ministries and/or NGOs cover the hygiene education component through their field level staff.

4.1 Deciding on the organizational structure

In deciding on the best organizational structure for the integration of hygiene education into a water supply and sanitation project, several requirements have to be taken into account.

Staff responsible for hygiene education

One of the first requirements is to have staff appointed with responsibility for the development and implementation of an integrated hygiene education component.

Sometimes it is decided that technical staff will perform all these duties. Without denying that this might be possible in specific cases, this book takes the stand that at least one person with a social-educational or health-educational background will be needed for hygiene education programme development and coordination. To emphasize the closeness of education and participation, this person will be referred to as *Education/Participation Coordinator* throughout the book.

At implementation or field level, the choice is either for technical staff to take up hygiene educational activities, or to work with and through special health educators. There are advantages and disadvantages in each option. In this chapter this issue will be touched upon only obliquely. It will receive further attention in Chapter 11. Throughout the book we will use the term *hygiene educator* for the person carrying out hygiene education activities, irrespective of his or her educational background.

At project management level, there is a clear advantage when the project manager has a favourable attitude towards the integration of hygiene education. Often in smaller projects, the project manager is also the project engineer. Alternatively, when such a project has a large community participation and hygiene education component, it is worth considering combining the post of project manager with that of Education/Participation Coordinator. In the following sections, when we discuss the various options for organizational project set-up, somewhat bigger projects with a full time project manager will be taken as examples, without referring back to the alternative of combined positions for smaller projects.

Link between technical and educational activities

To integrate water supply, sanitation and hygiene education it is necessary that technical and educational activities be matched and adapted to each other. This is especially important during the planning and early implementation phases of the water supply and sanitation improvements (see Chapter 5), and can only materialize when sufficient value is given to technical, social and health considerations. The organizational structure has to be such that technical and educational activities can be linked.

Link between educator and community

Hygiene education requires good communication and rapport between the hygiene educator and the various community groups. This will be easier when the educator is well-known to the communities and is respected and trusted. It is often an advantage when the educator is from the same area (same language, ethnic group, urban/rural background, etc.) and has frequent contacts with the community groups. This implies that the organizational structure should enable the active involvement of community-level hygiene educators in one way or another.

Continuity of educational activities

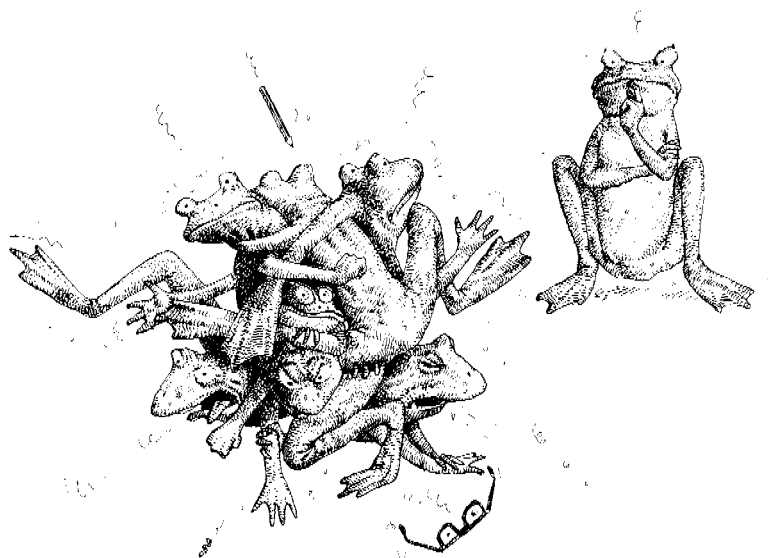
People do not change their habits overnight (see Chapter 2). And even when they do, there may be many reasons for slipping back to old behaviour that is more risky to health. Hygiene education therefore requires some continuity, to reinforce hygiene behaviour over time. This means that the organizational

set-up of the hygiene education programme should allow for longer term hygiene education opportunities, after completion of the water supply and sanitation improvements.

This characteristic of successful hygiene education used to be considered as one of the disadvantages of integrating hygiene education into water supply and sanitation projects. However, with more and more emphasis being put on sustainability and long term operation and maintenance of improved facilities, this problem more or less solved itself, because a phasing out period is necessary once construction is completed for technical and financial management reasons, as well as for continuing hygiene education.

Coordination of educational activities

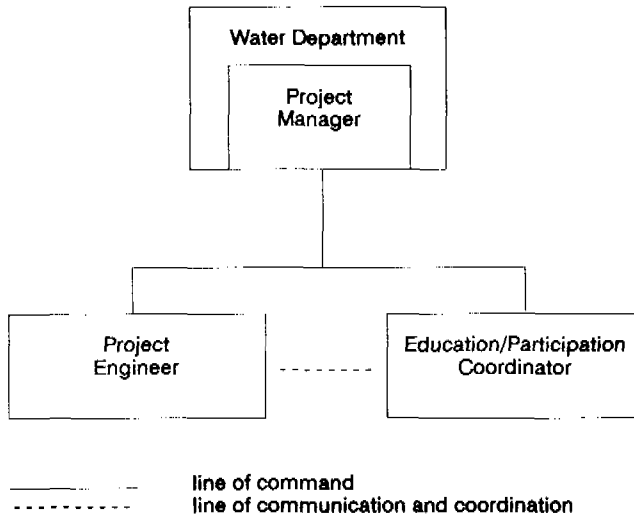
Coordination of hygiene education activities with other ongoing health education activities in the area is necessary for an economic use of available resources such as manpower, money and transport. Coordination is also necessary to help prevent confusion among educators and community groups when hygiene education is given through different services in different ways. The organizational set-up of the project should make it possible that hygiene education activities in the area are either combined or tuned in to each other. Of course this is not only dependent on the project organization and attitude, but also on those of the other agencies.



How are we going to organize ourselves?

4.2 Option one: directly through the project

The most simple option for the integration of hygiene education is that the project directly employs staff to cover this component. This is shown in Organogram: example 1.



Organogram: example 1.

In this set-up, an Education/Participation Coordinator comes under the Project Manager, while the hygiene educators either come under the Education/Participation Coordinator or the Project Engineer. If technical staff will be functioning as hygiene educators, the obvious choice will be for them to be responsible to the Project Engineer, while receiving hygiene education supervision and support from the Education/Participation Coordinator. If special hygiene educators are appointed, it may be a matter of choice whether they will be under the Education/Participation Coordinator or under the Project Engineer, who often carries out general coordinating tasks.

Advantages

Advantages of this option are that the lines of command are clear and that planning, communication and coordination between technical staff and education/participation staff can be organized quite easily, because all are part of the same project under the same project manager. A further advantage is that technical and educational activities may be easier matched and adapted to one another than when another agency such as the health department is actively involved.

Disadvantages

A disadvantage is that often the number of specific education/participation staff directly employed by the project will be limited to one or a few persons, mainly for budget reasons. This makes it more difficult to establish good rapport with the communities and to provide for continuity in the hygiene education activities.

Another disadvantage may be that a new channel for hygiene education is created. For communities who are then visited by staff from various health services on the same hygiene subjects this can create confusion. It may cause conflict, competition or demotivation for educational staff from the various services, when they have to work with the same people on the same hygiene subjects.

A further disadvantage may be that, although the education/participation project staff will have more opportunities to plan and organize activities in their own way, independent of the regular health services, they will lack supervision and support from their own disciplines. A common problem is that participation/education project staff feel insufficiently supported by the project manager, who usually has an engineering background.

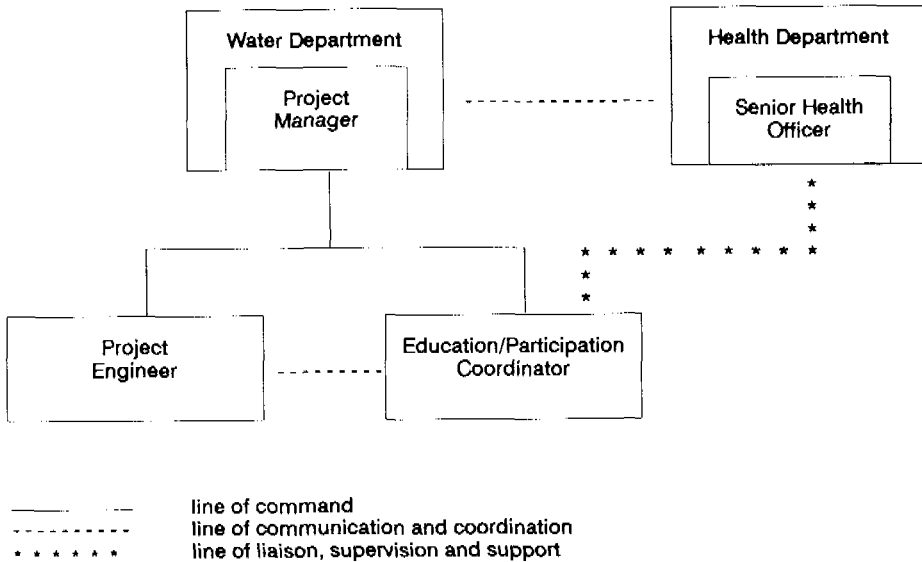
Assessment

If this option is going to work, it is necessary to have an Education/Participation Coordinator appointed of sufficiently high educational background to be on equal terms with engineering staff and to ensure sufficient back-up and support from the project manager.

It also will be necessary to look for opportunities and ways to work with and through community-level workers of the regular health services in the area, which can also provide for continuity. Where regular health services do not exist or do not function well at community level, an alternative would be to work with hygiene education volunteers trained by the project. This could be a suitable solution during the planning and implementation of water and sanitation improvements, but it will not solve the problem of sustainability of hygiene education efforts after project completion (see also Chapter 11).

4.3 Option two: through health staff seconded to the project

In this option, the hygiene education component is covered by education/participation staff seconded to the project by the Ministry of Health. This is shown in the Organogram: example 2. The Education/Participation Coordinator will be responsible to the Project Manager, but liaise on a regular basis with his or her superiors and colleagues at the Ministry of Health. The situation of the hygiene educators may be the same as in option one.



Organogram: example 2.

Advantages

For this option the same advantages apply as for option one. Additional advantages are that there is more likely to be a link between the project educational activities and educational activities organized through the regular health services, and that the education/participation staff may get supervision and backstopping from the health department.

Disadvantages

If secondment is limited to one or a few education/participation staff, this organizational set-up may suffer from the same problems as in option one - a lack of hygiene educators for field level activities and a lack of continuity once the project is over.

Another disadvantage could be that the project does not control the selection procedure of the person(s) to be seconded, and thus is dependent on the choice of the health department. This may not take into account sufficiently the needs of the project for a particular type of person or persons. Also the timing and type of staff replacement will be largely out of the project's control.

Assessment

If this option is going to work, it is necessary for the project to establish good communication with the health department, especially on the secondment of staff and the mutual obligations. The educational background and position of seconded staff need to be such that they can work on equal terms with engineering project staff and that they can maintain good liaisons with the health department. Other considerations are the same as for option one, especially the need to look for opportunities and ways to work with and through the regular health services.

4.4 Option three: through regular health services

A third option is to have the hygiene education component covered through health workers of the regular health services in the area. This requires considerable coordination between the water department and the health department, for example through a coordinating body or steering committee. The organizational structure is shown in Organogram: example 3.

Advantages

The clear advantage of this option is that the existing health infrastructure can be used, and thus that the integration of a hygiene education component can be built on the use of trained health staff spread over the area. A precondition of course is that the health services are established down to the community level.

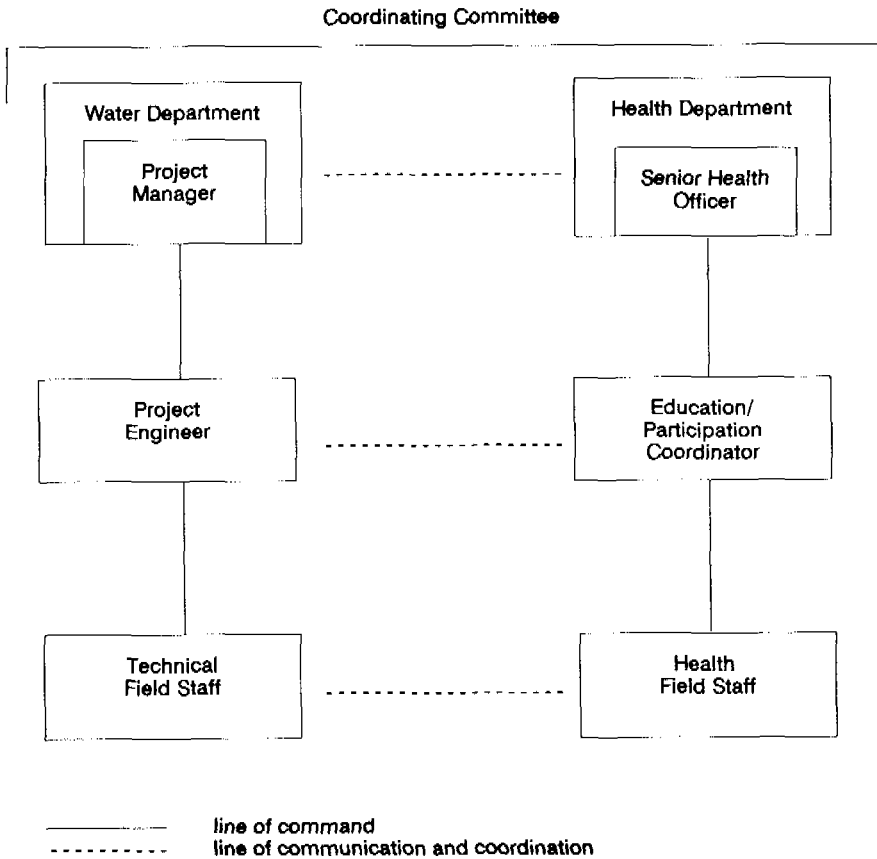
Integrating hygiene education through existing health services is often cheaper, as less manpower costs are involved. It can also provide more opportunities for continuous and close relationships with local population groups, through which hygiene education usually is more effective. Another advantage is that confusion will be prevented, as the hygiene education in the framework of the water and sanitation improvement will be carried out by the same health workers who visit the communities for other health services.

Disadvantages

A possible disadvantage will be that the matching of technical and educational activities is more difficult to organize and that communication between technical and health staff requires more attention and will cause more frustration. Also, there may be rivalry between the water department and the health department, hampering a smooth running of activities. A common problem is that a water department has more influence, more funds, and more visible results. A health department may be or feel weaker and therefore be in a disadvantaged position. However, the opposite may be true. A health department may very much welcome the opportunity to contribute to water

and sanitation improvements as it will provide more possibilities to carry out its regular tasks with more tangible results and usually with extra resources for transport and materials.

Field-level health workers may face additional burdens. It is not uncommon for numerous health programmes to be run at the same time, or for a particular health programme to be launched which requires full time involvement of the health workers at short notice. Immunization and family planning programmes are examples in this respect.



Organogram: example 3.

Working through the existing health infrastructure means working with another bureaucracy. It can be hard enough to work through the bureaucracy of the water department, without adding a second one. Channeling and guiding activities create an extra challenge for project management staff.

Assessment

This option requires that the health department is active in the project area down to community level, and that field level health staff are given sufficient time and opportunity for hygiene education activities. If this option is going to work, both the water department and the health department need to be flexible and to have a strong will to make it work. Much will depend on the functioning of a coordinating body, and the extent to which decisions can be implemented in practice. An example of a terms of reference of such a coordinating body is provided at the end of the chapter.

It is necessary in all the options that technical staff have a good understanding of the importance of hygiene education in relation to improved water supply and sanitation facilities, but this aspect is especially important for this option. Otherwise, there is a great risk that the water and the health department will each have their own programmes, without integration.

4.5 Option four: mixed organizational set-up

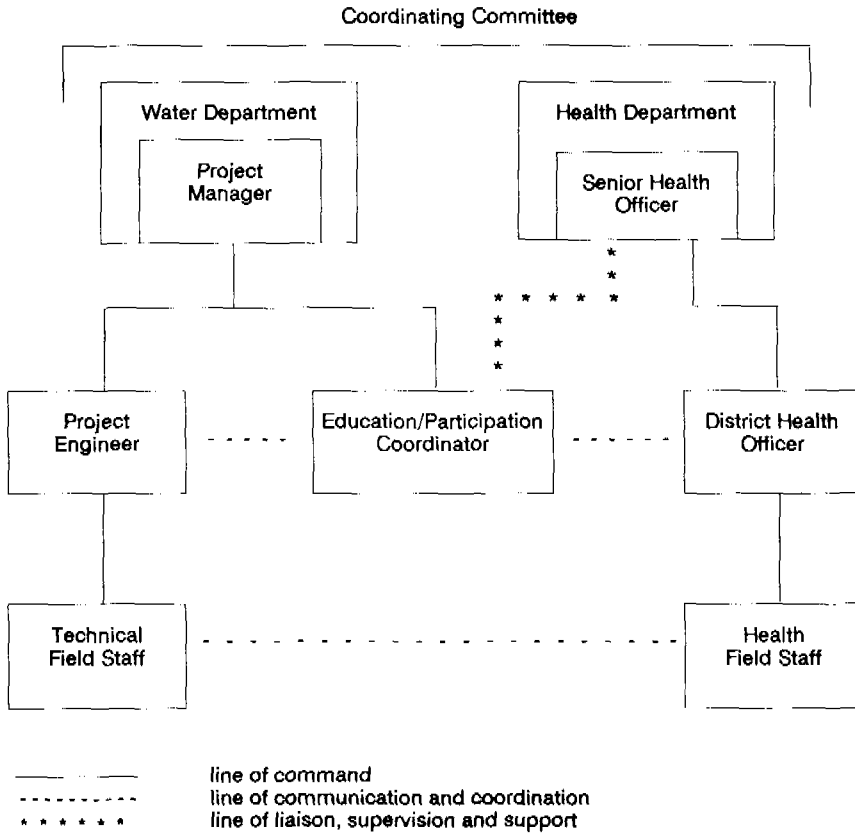
This option combines options two and three and is meant to enhance effective cooperation between the water department and the health department by having an Education/Participation Coordinator seconded to the water and sanitation project, while field-level activities are carried out by regular field staff of the Ministry of Health. It might also be possible to work it the other way round, with a technical coordinator seconded to a health department project. This may be suitable, for example, when the water and sanitation activities concern simple low-cost improvements for which the health department has first responsibility. Organogram: example 4 shows what this mixed organizational set-up may look like.

Advantage and disadvantage

The main advantage of this option compared with the other options is that there is a clear person assigned who can take care of integration, coordination and cooperation. With one foot in the water supply and sanitation project and the other in the health department, he or she is in the unique position of representing both sides. This advantage can easily turn into a weak point, as the position is difficult and sensitive.

Assessment

Obviously this option will not work without a capable person, able to form the day-to-day link between the two departments. An equally important precondition is a well-functioning coordinating committee and strong support from higher ministerial levels.



Organogram: example 4.

4.6 Involvement of other agencies

Involvement of other government departments

In addition to integrating hygiene education through the health department, there may be other departments which can provide valuable opportunities for cooperation and coordination. For example, in a number of countries there are departments for rural or urban development, social/community development or a special department for women and development. Cooperation and coordination may be organized in the same way as with the health department.

Involvement of NGOs

An additional possibility is to invite an NGO to take responsibility for the integration of a hygiene education component. Larger NGOs with sufficient

field level staff may be in a position to carry out effective hygiene education in the framework of a water supply and sanitation project. NGO field staff are usually very committed to working with the poorer sections of a community; they are experienced in working through a participatory approach; and they have long term relationships with the communities continuing over time.

Advantage and disadvantage

If an NGO is involved, it is often on the basis of the water supply and sanitation project contracting out the hygiene education component to the NGO. The advantage for the project is that it is easy to manage, as the responsibility for hygiene education is just handed over to the NGO.

Disadvantages are that the NGO may lack authority to influence technical staff with respect to the planning, implementation and maintenance of water supply and sanitation activities, and that the NGO may have to discontinue its hygiene education activities once the project is over, due to lack of funds.

Assessment

For the effective involvement of an NGO it is important for the project to have a clear idea about what the NGO should achieve in what period of time. If this is not possible at the beginning, a phased contract may be the solution. Terms of Reference should be carefully worked out and regular follow-up will be needed in most cases. As in all the options, effective involvement of NGOs needs a supportive attitude from project management and technical staff committed to making integrated hygiene education work.

Example: Terms of Reference for Steering Committees on Water Supply, Sanitation and Health Education (WASHE)

1. Organizational Status

1.1 The Provincial Steering Committee is a policy advisory body under the Provincial Council, on all aspects relating to water supply, sanitation and health education programmes in the province. The Committee will operate within the framework of development co-operation agreements between Zambia and donor agencies operating in the province, and within the framework of national policies relating to water supply, sanitation and health education.

1.2 The Steering Committee at provincial level will be called P-WASHE, which stands for Provincial Water, Sanitation and Health Education. At the district level the committee will be called D-WASHE.

2. Role and Responsibility

The Steering Committee will have overall responsibility for coordinating and monitoring the implementation of water supply, sanitation and health education programmes in the province. The Committee will guide the executing agencies during implementation of water supply, sanitation, and health education programmes, so as to bring about smooth integration of these activities.

Specifically the Committee will have the following terms of reference:

- (i) To plan, coordinate and monitor implementation of water supply, sanitation and health education programmes within the framework of national policies.
- (ii) To appraise all projects relating to water supply, sanitation, and health education with a view to bring about coordinated development.
- (iii) To collaborate with the National Action Committee and other local and national agencies to promote the integration of water, sanitation and health with other development activities.

3. Composition of the Committees

3.1 Provincial Committee (P-WASHE)

3.1.1 The Provincial Steering Committee will consist of representatives of Central and Provincial Government Offices.

- Permanent Secretary of the Province (Chairman)
- Provincial Water Engineer
- Provincial Medical Officer
- Provincial Commissioner of Works
- Provincial Social Development Officer

Example continued

- Provincial Agricultural Officer
- Chief Education Officer
- Provincial Planning Officer (Secretary)

Central Government Authorities, including the National Action Committee, shall be invited to participate in meetings of the Steering Committee.

3.1.2 Representatives of donor agencies engaged in water supply, sanitation, health and related sectors will participate in the Committee meetings as observers. They may make proposals and participate in discussions, but shall not take part in any formal decisions.

3.1.3 The Steering Committee will normally meet at the Permanent Secretary's Office, unless otherwise decided by the Committee. The meetings will be held every quarter year, and the meetings will be called by the Secretary. All members of the Committee, including observers shall have the right to request ad-hoc meetings to be convened as deemed necessary.

Executing authorities for on-going projects shall submit half-yearly progress reports to the Committee in advance of meetings. The reports and any other relevant matters shall form the basis for the agenda of meetings.

The minutes of the meeting shall be kept by the Secretary or otherwise as decided by the Committee. The minutes shall be formally approved at the consecutive meeting or else as the Committee may decide.

3.2 *District Committee (D-WASHE)*

The D-WASHE will be composed of Government and other representatives directly involved with implementation of project activities. Specifically the membership will be:

- District Executive Secretary (Chairman)
- District Development Secretary
- District Medical Officer
- Officer in Charge, District Water Authority
- District Social Development Officer
- District Education Officer
- District Health Inspector
- District Planning Officer (Secretary)

Source: Government of Zambia (unpublished).

5. Programme Development

Development of a hygiene education component does not differ basically from development of water supply and sanitation components. Both need formulation, planning, preparation, implementation, monitoring and evaluation. This chapter provides a general overview; specific aspects are discussed in greater detail in later chapters.

5.1 Phases

Overview of phases

Development of any hygiene education programme will run through the following phases:

- I Formulation and planning
 - Identification of needs and objectives
 - * assessment of present hygiene education activities and experience
 - * learning about local practices, problems, and conditions
 - Identification of specific target groups
 - Identification of specific targets
- II Design and implementation
 - Development of a workplan
 - Implementation of workplan
- III Monitoring and evaluation

In reality the order of the phases and the division between them will not be very strict, and this overview is primarily meant as a guide to making decisions at the right time on important issues and actions for the development of a hygiene education component. Parties in this decision-making process are both project staff and communities. Readers who went through Chapter 3 will notice that this overview of phases for programme development is very similar to the principles of hygiene education planning as discussed in that chapter.

Needs and objectives

Starting points for any integrated hygiene education programme are the general objectives of the water supply and sanitation project. These general objectives have already been discussed in Chapter 1, but of course any individual project will have its own particularities. From there, the first step is to have a closer look at the needs to be addressed and the problems to be alleviated in the project area. Based on this identification of needs and problems, hygiene

education objectives have to be defined, including a basic assessment of the personnel and budget required.



Hygiene education requires proper preparation.

Usually, the formulation of broad hygiene education objectives forms part of general project formulation and appraisal. If not, it should be one of the first project activities, and if the water supply and sanitation project has already started, a catching up manoeuvre will be required.

After a first definition of hygiene education objectives, more specific and immediate objectives will have to be formulated, based on an assessment of local hygiene education experience and local problems and priorities for action.

Present activities and experience

In most countries and/or project areas, there will be already some kind(s) of hygiene education activities. Before jumping into the development of a hygiene education component for a water supply and sanitation project, it is important to review these present activities, both to learn from their experience and to find out to what extent efforts can be combined. It will also be important to know what the formal responsibilities are of the various ministries and ministerial departments, to explore their interest and possibilities for joint development of programme activities. Coordination and cooperation in hygiene education will make efforts more cost-effective (see also Chapter 4). Review of present activities and experiences and their use for hygiene education development is the subject of Chapter 6.

Local conditions, practices, problems

A thorough understanding of the local situation is a precondition for a meaningful hygiene education programme at community level. Just as one has to carry out topographical and other surveys for the design of a piped water supply, it is also necessary to carry out a social and health survey for the design of a hygiene education programme. The information needed and the methods used for this investigation may differ according to the situation, as will be further discussed in Chapter 7.

Specific target groups

In fact the entire population in the project area and all staff and authorities who may influence the success of the project activities can be considered as target groups for hygiene education (see Chapter 1). However, hygiene education cannot be directed indiscriminately at everybody. A project manager will need different skills and capabilities than a mother, or a teenage boy, or a primary school teacher, or a policy maker. The more hygiene education is tailor-made for specific target groups, the more effective it can be. Identification of specific target groups for hygiene education is elaborated in Chapter 8.

Specific targets/objectives

With an overview of ongoing hygiene education activities already undertaken, a better understanding gained of the local conditions, practices and problems, and more insight into critical target groups, specific hygiene education targets or objectives can be formulated. An example of a specific target or immediate objective could be: "90 percent of children aged six to ten are trained to use the latrine at all times".

Deciding on specific objectives is an important step, as it will have a direct bearing on the hygiene education workplan and the expected results of the hygiene education activities. Specific hygiene education objectives must be agreed by all relevant parties, to prevent misunderstandings and disappointments later on. Selection of specific targets or immediate objectives is the subject of Chapter 8.

Development and implementation of a workplan

Having decided on specific target groups and immediate objectives, a detailed plan of action can be prepared. This should be done to the extent possible in conjunction with the preparation of the detailed plan of action for the planning and construction of water supply and sanitation facilities.

The hygiene education plan should take into account available male and female manpower, time, money and materials, and address shortcomings in these respects, either by securing additional resources or by scaling down the

targets. Typically, it may be found that a project lacks adequate staff and funds for a realistic hygiene education programme. New projects should make sufficient provision for the integration of a hygiene education component in the overall budget. Ongoing projects should be prepared to reallocate a part of the budget to make hygiene education work. The development and implementation of a workplan is further addressed in Chapters 9 and 10; the inputs required in Chapter 11.

Monitoring and evaluation

An integrated hygiene education component requires careful monitoring and evaluation for timely adaptations in programme implementation and for more realistic planning for future activities. Monitoring is important, as it will provide project management and staff with immediate feedback, not only about the hygiene education activities themselves, but also about the integration of hygiene education in the overall activities. Monitoring and evaluation is the subject of Chapter 12.

5.2 Approaches

In developing a hygiene education programme, an *approach* to hygiene education has to be selected. By *approach*, we mean a manner or method expected to lead to desired results. Thus, when our target is proper latrine use by children, the approach outlines how to get this accomplished. There are many approaches for hygiene education, going under names such as educational approach, teaching approach, social marketing approach, participatory approach, promotional approach, organizational approach, directive approach. These approaches all are found somewhere along the line between a fully community-based approach and a fully project-based approach.

Community-based approach

The community-based approach puts *people* in the centre of all actions. The hygiene educator acts as facilitator to help people to analyze their health problems and to define their own priorities for changing health conditions and practices. Through person-to-person discussions and group meetings, the hygiene educator stimulates people to take decisions and initiatives to improve their personal and environmental health. This means that people take on themselves hygiene education planning, implementing and evaluation.

The main advantage of this approach is that the hygiene education is fully based on people's immediate interests and needs, and that people feel committed to taking health improvements in their own hands. As discussed in Chapters 2 and 3, this will greatly influence the chance of long-lasting improvements in health conditions and practices.

The main constraint is that this approach requires a reservoir of well trained staff who have sufficient social and technical skills to work through dialogue and who are prepared to establish longer term relationships with community groups. This approach also requires considerable flexibility in project planning and management, as the people will be the main decision makers on the timing, type and content of activities.

Project-based approach

In the project-based approach, hygiene education planning, implementation and evaluation are largely determined by project staff and the people are simply recipients of what the project has to offer. The hygiene educator will decide on the needs and priorities for hygiene education, and what conditions and behaviour need to change, taking into account available manpower, budget and time. This implies that hygiene education will be mainly concerned with advocating changes desired by the project by trying to convince people of the benefits involved.

The advantage of this approach is that the hygiene education programme is easier to plan, manage, evaluate and integrate with technical activities, especially in the case of larger scale water and sanitation projects, as the project will have all main factors under its control.

One of the main limitations in using this approach is that it can only be successful when the changes advocated are relatively simple, correspond to the urgent needs of the people, and are easily within their means. However, as behavioural changes are usually more complicated, and as needs and available means are usually local, these conditions are rarely met.

"Many villagers continue to neglect hand washing after every defecation and before food handling and eating, do not use latrines for every defecation, do not always cover water jars, and continue to dip water from the tops of water jars, even when there is a spout, thereby contaminating the rainwater. Children are permitted to defecate around the village and in nearby fields, and farmers continue to use fields for defecation. The current program lacks a clear strategy for changing behaviour and has no system to measure behavioural change. It relies upon educational materials and mass media messages produced centrally by the Government to bring about better hygienic practices in the population, but this approach, despite its professional finish, is perhaps too passive to stimulate change."

Source: Simpson-Hebert, M. (1987) p. 18.

Also when people have the feeling that the changes in behaviour and conditions are imposed from outside, they may easily reject them. People frequently complain that they feel blamed by the hygiene educators for having an unhygienic way of living. Another problem is that this project-based approach is

directed to knowledge transfer about how to reduce health risks, whereas it has been argued already that knowledge is only one of the considerations through which people adapt their behaviour (see Chapters 2 and 3).

Mixed approaches

Most known approaches combine aspects of the community-based and the project-based models. It is the task of the project to arrive at a mix such that the advantages of both are used to the greatest extent possible, on the understanding that, as much as possible, the emphasis should be on community-based activities, to increase the chances of success of hygiene education as an integrated component of a water supply and sanitation project. This issue will come back in section 5.3 and we will take it up in greater detail in Chapter 10.

Often the name given to an approach does not provide sufficient indication of what is really meant. For example, a *participatory* approach may range from fully community-based to nearly totally project-based. The *social marketing* approach involves a lot of careful preparation and research, following the principles of the community-based approach, but is often abused and reduced to the mere production and spreading of slogans based on a full project-based approach. Sound decision making requires a short description of the proposed approach with an overview of main advantages, disadvantages and implications.

"The small size of the villages allowed us to address the whole community, rather than to work through community representatives. The procedure chosen was to take the community through a series of four meetings during which the topics were built up from making decision about the location of the well to the benefits of using more water and cleaner water. The technical aspects of maintenance and repair were dealt with by the installation team in the third meeting when the pump was installed. The other meetings were guided by the Community Participation and Hygiene Education (CEP) staff. Realizing that 'top-down' message delivery is ineffective and that messages should be relevant to the needs of the community, we decided on a participatory method in which the topics were introduced by the CEP team following a standardized approach, but the discussion was flexible and depended to a large extent on what was said by villagers during the meeting."

Source: Harnmeijer, J. (1988) p. 20.

5.3 Levels

The cycle of programme formulation, implementation, monitoring and evaluation takes place at project level, but repeats itself at community level (unless of course the two levels completely overlap, as in small rural and urban projects). At the programme level, the needs, objectives and target groups identified are broader, and provide guidance for identification of specific needs, objectives and target groups at the community level. Taking an example of a

project covering 45 communities per year, women aged 15-45 may have been identified as a primary target group, but at community level identification of actual members of this target group will be necessary.

Workplan development, implementation, monitoring and evaluation also take place at the two levels. Sticking to the example of a project covering 45 communities per year, we will need a clear hygiene education workplan covering the 45 communities, and a hygiene education workplan at community level covering the planning and implementation of the actual activities.

This book takes the position that a participatory, community-based approach should be preferred and promoted, because it is more effective than a project-based approach. Taking into account the two levels of work, we might say that this holds true especially at community level. At project level, other factors have to be taken into account. These include organizational factors and available resources. At community level the approach can and should be largely community-based.

6. *Review of Ongoing Activities*

A short review of present hygiene education activities and experience at the beginning of the project may save a lot of time, money and frustration in the long run. Taking time for a short review will help to prevent double work and previous mistakes, and may facilitate cooperation and coordination of future activities in the project area. This chapter provides background information on obtaining an overview of agencies and projects involved in hygiene education and of resource institutes providing practical information and audio-visual materials.

6.1 An overview

An investigation of present hygiene education activities and experience should focus on collecting practical information about:

- Who is doing what?
- How is it done?
- What are the lessons for the future?
- What are the possibilities for cooperation and coordination?

Unless the project already has such information, this investigation should also be used to:

- obtain a deeper understanding of the health infrastructure of the Ministry of Health to provide a basis for discussing cooperation possibilities and to prevent conflicting hygiene education activities;
- collect general health data and disease statistics for a preliminary assessment of important health issues to be addressed in the hygiene education programme.

This investigation should not take more than a couple of weeks in most cases, but may require a bit more time if information is not readily available or responsible staff are unfamiliar with the situation in the project area.

Any method of investigation may be used for getting a quick overview of organizations/agencies, activities and experience. Normally a combination of the following methods will suit the purpose.

Use of existing information

Existing documentation may provide readily available information and includes among others: annual and other reports of the Ministry of Health and other organizations involved in health or hygiene education; field reports from health staff; health data and disease statistics; special surveys and studies; job

descriptions of staff involved in hygiene education; training material for educational staff; and audio-visuals for use with specific target groups.

Interviews with individual key informants

Key informants are people with specific knowledge about the subject we are interested in. In this case they may include: senior staff in the Ministry of Health, educational training centres, and other organizations involved in health and hygiene education; health educators and their supervisors; doctors; school teachers; and so on. These persons can provide valuable information both about the organization they are working in and about their professional and personal experience with hygiene education in the project area. Interviews with key informants are best guided by a shortlist of open questions prepared before the meeting, to ensure that important points are not missed, while incorporating additional questions based on responses during the interview.

Small group interviews with key informants

In addition to interviews with individual key informants it can be a good idea to organize one or more small group interviews, to take advantage of the knowledge and experience, for example, of a group of health and hygiene educators. Small group interviews can greatly help to put experiences and problems with hygiene education into a realistic perspective and to discuss possibilities for new activities, cooperation and coordination of efforts. These small group interviews could be organized along the principles of focus group discussions, as discussed in the next chapter.



What is your experience with hygiene education?

Observations and conversations

For a good impression of ongoing hygiene education activities it can be very helpful to ask permission to follow a few hygiene education sessions carried out by active organizations and individuals in the project area. This can show which hygiene education subjects are covered, in what way, and with whom, and should provide ample opportunities to discuss with the hygiene educator and the people joining the hygiene education activity, their likes and dislikes about the sessions. Often, participation in actual activities is more revealing than interviews in offices about what is really happening, and what the day-to-day constraints are.

6.2 Activities of the Ministry of Health

Regular health services

The Ministry of Health usually has a mixture of curative, preventive and educational services through various departments and divisions. Health staff at provincial, district and community level may have specific curative or preventive roles, but often they are to some extent responsible for both. Also, one category of health staff may have overlapping roles with others. Mapping of regular health education activities may therefore involve quite a bit of effort, especially for people unfamiliar with the health infrastructure.

In reviewing regular health services, it is important to pay special attention to the number and types of female health staff and their main activities. This is to get an impression of the possibility of involving female health workers in hygiene education activities, especially at community level (see also Chapter 11).

Special health programmes

Whether or not they are integrated into the regular health services, the Ministry of Health often has a number of special health programmes, some of which may include aspects of health education related to water and sanitation. These programmes are often supported by international and/or bilateral donor organizations. As a result, they tend to have more personnel, more funds, more materials and more transport facilities than the regular health programmes.

Primary health care programmes exist in the vast majority of countries. These programmes aim to provide essential health care for the whole population in the area, at lowest cost. Primary health care programmes concentrate on eight elements:

1. Education concerning prevailing health problems and methods of preventing and controlling them.
2. Promotion of food supply and proper nutrition.
3. Adequate supply of safe water and basic sanitation.
4. Maternal and child health, including family planning.

5. Immunization against the major infectious diseases.
6. Prevention and control of locally endemic diseases.
7. Appropriate treatment of common diseases and injuries.
8. Provision of essential drugs.

One of the guiding principles of primary health care programmes is to work through Community Health Workers (CHWs) to: (a) extend health services to the places where the people live and work; (b) support communities in identifying their own health needs; and (c) help people to solve their own health problems. Community Health Workers in primary health care programmes are men and women chosen by the community and trained to deal with the health problems of individuals and the community, and to work in close relationship with the health services. CHWs are expected to have a level of primary education that enables them to read, write and do simple mathematical calculations.

Duties of CHWs differ from country to country, but often include: first aid, child care advice, nutrition motivation, environmental sanitation motivation, personal hygiene motivation, immunization motivation, communicable disease prevention, oral rehydration therapy, dispensing of drugs (WHO, 1987, p. 9-13). Other more or less common programmes are:

- *Control of Diarrhoeal Diseases Programmes* aim to decrease morbidity and mortality among young children aged 0-5 through the promotion of personal hygiene, food hygiene and the use of oral rehydration solution (ORS) when the child has diarrhoea.
- *Mother and Child Health Programmes* give health guidance especially to pregnant women, young mothers and mothers of little children up to 5 years of age.
- *Malaria Control Programmes and/or Schistosomiasis Control Programmes* aim to eradicate diseases such as malaria and schistosomiasis through a set of environmental and curative actions.
- *Extended Programmes for Immunization (EPI)* aim to protect children against diseases such as measles, polio, typhus.

Common problems

It is not only important to learn about the formal health structure and division of tasks and activities of various health staff responsible for health education, but also what is happening in practice, and what problems these agencies and staff face. A common problem is that curative health activities are more visible and derive more status than health education activities. At the higher levels, the health educator may suffer from a low status compared with his/her curative health colleagues. At the community level, health workers may feel tempted to pay more attention to their curative tasks, because these give them more prestige in the eyes of the people they serve.

A related problem is that training of district- and community-level workers is often more directed to increasing their health knowledge than to improving their communication skills to carry out health education. Health workers may consequently feel incapable or insecure in setting up health education activities at community level.

A third common problem may be that community-level workers face poor salaries, poor transport facilities and/or poor supervision. This may limit the time spent on health education and the number of people reached. It also may create motivation problems.

New opportunities

The start of special programmes, such as integration of a hygiene education component into a water supply and sanitation project, can tackle a number of these problems, at least during the project period, by providing more training opportunities, more transport facilities and more supervision. This can then also lead to more prestige derived from educational activities, and will at the same time contribute to human resource development. At the end of this chapter, an example is given of a village water supply project embarking on joint activities.

6.3 Activities of other ministries and projects

Other ministries and other projects often have health or hygiene education activities that may provide valuable information on experience and opportunities for cooperation.

Other water supply and sanitation projects

There may be other water supply and sanitation projects in the project area or the country, with experience in integrating hygiene education in overall activities. This experience will be of particular interest for your own project, as it allows a direct comparison to be made of possibilities and constraints.

Materials developed by other projects also may be very useful, although they often need adaptation to suit the particular circumstances of your project (see also Chapter 10).

School health education

Primary and secondary schools usually have health education as part of their curriculum. Sometimes this health education is given by teachers, sometimes by health staff assigned to visit the school. In some countries, school hygiene education is already receiving plenty of attention, in other countries it is still virgin territory. One of the constraints in many countries is a lack of teachers trained in more participatory training methods, which are important when the aim is to encourage health behaviour.

Non-formal education

Adult education and other forms of non-formal education may include health and hygiene education, especially when the programmes are directed to women. Non-formal education is often more participatory and focused on the daily concerns of the people. It may thus provide useful information and examples for development of the hygiene education component.

Other development projects and activities

Ministries concerned with rural development, social development, women's participation, and housing may well have projects and activities with a health or hygiene education component that may be worth reviewing. For example: in one country, the Ministry of Housing was very active in developing and distributing video films about environmental health issues; in another country health education was part of an integrated rural development project. There may also be non-government organizations with important experience to share.

National or regional campaigns

Some countries have radio and/or television programmes covering water and sanitation-related subjects, sometimes as a regular feature, sometimes in response to an emergency such as a flood or an outbreak of diarrhoea. It is always worthwhile to review these programmes and to see to what extent the project could catch up with such a national or regional campaign or whether parts of these programme could usefully be repeated (using an audio cassette or a video) as part of the project activities.

6.4 Activities of resource institutions

A number of institutions offer audio-visual materials, guidelines and resource documents, training, or technical assistance in support of health and hygiene education. Some of these institutions are local or national, others provide international support. In-country organizations are usually found by asking around; sometimes international organizations and bilateral donors have this information available. A few examples of more widely operating resource institutions are:

- AMREF: African Medical and Research Foundation, Wilson Airport, P.O. Box 30125, Nairobi, Kenya.
- AHRTAG: Appropriate Health Resources and Technology Action Group, 1 London Bridge Street, London, SE1 9SG, United Kingdom.
- AMA: L'Atelier de Material pour l'Animation, P.O. Box 267, Yaounde, Cameroon.

- American Public Health Association. International Health Programmes, 1015 15th Street, NW, Washington D.C. 20005, USA.
- Bureau d'Etudes et de Recherches pour la Promotion de la Santé, B.P. 1977, Kangu-Mayumbe, Zaire.
- CEMAT: Centro de Estudios Mesoamericanos Sobre Tecnologia Apropriada, 1 a Av. 32-21, Zona 12, Apartado 1160, Guatemala City, Guatemala.
- Child-to-Child Programme, Room 833, Institute of Education, 20 Bedford Way, London WC1H 0AL, United Kingdom.
- GRAAP: Groupe de Recherche et d'Appui pour l'Autopromotion Paysanne, B.P. 305, Bobo-Dioulasso, Burkina Faso.
- Health Education Unit, Leeds Polytechnic (WHO collaborating centre for research and training in psychosocial and economic aspects of health), Calverley Street, Leeds LS1 3HE, United Kingdom.
- INADES: African Institute for Economic and Social Development, B.P. 8, Abidjan 08, Ivory Coast; or B.P. 5717, Kinshasa/Gombe, Zaire.
- IRC International Water and Sanitation Centre, P.O. Box 93190, 2509 AD The Hague, The Netherlands.
- OXFAM, 274 Banbury Road, Oxford OX2 7DZ, United Kingdom.
- Save the Children Federation, 48 Wilton Road, Westport, CT 06880, USA.
- TALC: Teaching Aids at Low Cost, P.O. Box 49. St. Albans Hertfordshire, AL2 4AX, United Kingdom.
- UNICEF: United Nations Children's Fund, 3 United Nations Plaza, New York, NY 10017, USA.
- VHAI: Voluntary Health Association of India, 40, Institutional Area, South of I.I.T., New Delhi, 110016, India.
- WASH: Water and Sanitation for Health Project, 1611 N. Kent Street, Room 1002, Arlington, VA 22209, USA.
- World Education, 210 Lincoln Street, Boston, MA 02111, USA.
- WHO: World Health Organization, Community Water Supply and Sanitation Unit, Division of Environmental Health, 20 Avenue Appia, CH-1211 Geneva 27, Switzerland.
- World Neighbours, 5116 North Portland Ave., Oklahoma City, OK 73112, USA.

Example: Joining Hands on Hygiene Education

In October, representatives of the district level of the Ministry of Health, the NGO Health Team and the Animation Team of the water supply project agreed to work together towards the setting up of a water supply maintenance programme. The maintenance programme of the water supply project has many similarities with the Primary Health Care (PHC) Programme of the Ministry of Health. Both intend to train selected villagers to promote health messages in the village and to try to organize their fellow villagers to propagate activities to improve their health by using safe water, building latrines, etc. Both programmes educate their trainees on water-related diseases. In some villages the same people are selected to become PHC workers and to be members of the Maintenance Teams. Both programmes have to deal with the problems inherent in stimulating volunteers to carry out these jobs and need regular follow-ups. Experience shows that the PHC workers do not find it easy to interest their fellow villagers in health education. They complain that they are not listened to. Many PHC workers lecture the villagers, but in the hierarchially-structured villages a young man or woman cannot just tell an elderly person what to do. Other complaints include the lack of support, both from the villages and the health institutions. The health posts do not have the manpower, transport or money to visit the villages often. The Village Health Committees do not function.

Therefore, representatives of the different health bodies and the water supply project felt it would be worthwhile to see whether joint efforts could tackle some of these problems. As a first step a joint training programme was prepared for the PHC workers and the Maintenance Teams on several issues. The Maintenance Teams now are joining that part of the PHC training that teaches about the causes and prevention of water-related diseases. The PHC workers are taking part in that part of the project maintenance training programme that deals with different communication methods and ways of community organization.

This latter training includes:

1. Communication and organization skills training - different ways of bringing messages, of mobilizing a community to take action.
2. Discussion of the tasks of the maintenance teams and PHC workers, their activities, main problems and possible solutions.
3. Design of action plans for the different maintenance teams and PHC workers to tackle the specific needs/wishes of their village.
4. Discussion of the ways the teams and the PHC workers feel the village, the health bodies and the water supply project can support their activities.

Source: Murre, T. (1990) p. 9-10.

7. Preparatory Investigations

A successful hygiene education programme cannot be developed and implemented without a clear understanding of the local situation and people's perceptions of health problems and solutions, as has been discussed before in Chapters 2 and 3. The reasons for an investigation into social and health-related aspects do not differ basically from the reasons for technical surveys. Who is going to waste money on borehole drilling without hydrogeological investigation? The same applies to the integration of a hygiene education component. It is no use wasting efforts on unproductive hygiene education activities. Another reason for investigating social and health aspects is that they have an important influence on successful development of the technical component. For example, in an urban sanitation programme information on population densities and latrine coverage will be needed both for the development of a hygiene education plan and for technical design.

7.1 Type of information

The type and depth of information required depends on the project phase and the reason why the information is needed. In an early stage of the project, when basic decisions have to be made about the scope of the hygiene education programme and the inputs required, it may be sufficient to have a tentative assessment of people's health problems related to water and sanitation and of possible ways to reduce these problems. For a detailed hygiene education action plan however, it will be necessary to know more about how people behave, why people behave the way they do, what difficulties people face when trying to make improvements, and what openings there are for the project to help overcome these difficulties. This information should also help to define specific target groups and targets. A shortlist of possible useful information on social and health-related aspects is presented in Table 3 at the end of the chapter.

People generally used mud for hand washing after defecation. As soap was considered beyond the financial means of many households, ash was recommended in the hygiene education programme as cleansing material when washing hands after defecation.

Source: Aziz, K.M.A. et al (1990) p. 6.

7.2 Type of investigation

Collection of information on social and health related aspects in the first phases of a project is known by several names. These different names only partly reflect different types of investigation, as will be clear from the short descriptions below. All are a sort of baseline study or "formative evaluation" and aim to help the hygiene education programme to take shape and to provide a baseline for monitoring and evaluation.

Situation analysis

A situation analysis is usually a rather broad undertaking to collect data necessary for rational planning and programming. It seeks to identify the main problems affecting health related to water and sanitation and the opportunities for action for improvements. Often it is a rather distant activity, more oriented to getting the project informed than to getting the community motivated and involved. It often results in a series of quantitative data (for example population figures) together with broad qualitative impressions (for example on the general health situation or the need for improved water supply and users practices).

KAP study

A *KAP* study is a *Knowledge, Attitudes and Practices* study. It aims to provide project staff with a more intimate understanding of people's knowledge, attitudes and practices with regard to water, sanitation and health. Some people tend to use this type of study on the wrong assumption that proper knowledge will lead to proper attitudes and then to proper behaviour. For example, the *KAP* study may reveal that hand washing after disposal of babies' feces is not a common practice because babies' feces are not seen as a possible cause of disease transmission. It is wrong then to assume that people simply will start hand washing when it is explained that babies' feces are as harmful as those of adults, and that they therefore should wash their hands afterwards. Transfer of information does not lead automatically to change of behaviour (see also Chapters 2 and 3). However, when knowledge, attitudes and practices are not put in a causal sequence but regarded as three important influencing factors, such a *KAP* study may be very valuable for the design of a hygiene education programme.

Baseline study

A baseline study goes beyond a *KAP* study, in the sense that it often includes more information on the socio-economic situation and local water and sanitation conditions. Also, whereas a *KAP* study is mainly directed at the individual and household level, a baseline study also covers the community level. This may be very important, especially for an investigation into environmental health aspects.

The word baseline is very appropriate, as it clearly indicates that the information collected is to be used as a basis for the design of the hygiene education programme and as a basis for the evaluation of the programme later on.

Popular definition of "good drinking water" is water that is visually clear, tastes sweet (free of unpleasant flavours and odours) and cooks food well/quickly. Conversely, bad water or water unfit for drinking is that which is visually unclear, has tinge of colour, salt/metallic taste or smell and water in which grains/pulses take a long time to cook. Thus, popular definition of good drinking water covers both safe and unsafe sources. The criteria people presently use to distinguish "good" drinking water from "bad" can at times cause classification of water from certain safe sources as "unfit for drinking" e.g. deepwell handpump water which may have a metallic/mineralized taste or rusty appearance. The study indicates that faced with a choice between a handpump and an unprotected well, people often opt for the well water for drinking and cooking.

Source: Mukherjee, N. (1990) p. 10.

7.3 Methods of investigation

Observation and communication

Basically there are two ways of collecting information on social and health aspects:

- observation (seeing, smelling, touching, hearing, tasting); and
- communication (interviewing, discussing, reading, writing).

Observation and communication methods can be used for collecting both quantitative and qualitative information. For example, the community representative who reports that people reject the new water supply because of its taste provides qualitative information, whereas counting the number of people rejecting the water for drinking because of its taste provides quantitative information.

Qualitative versus quantitative information

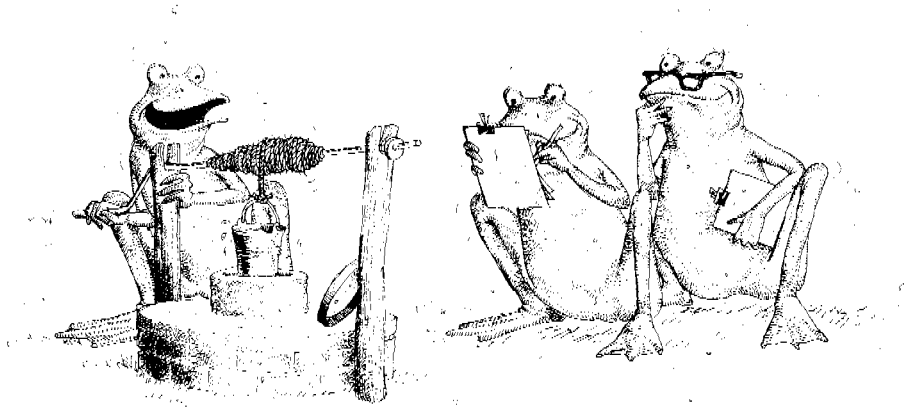
Quantitative information is collected through surveys by asking a number of individuals or groups the same set of questions, or by observing the same items in a number of situations. Questionnaires and observation sheets are used to gather this information, which after tabulation and analysis provides statistical information. Qualitative data on the other hand are collected in a less structured and predetermined way, using checklists only.

Whether qualitative or quantitative information is needed depends primarily on the purpose of information collection. Qualitative studies produce more

insights into why people think and behave as they do. Quantitative studies reveal the extent of a certain situation or behaviour. The first will primarily help to form the hygiene education activities, the second to decide on personnel and money required and to serve as a baseline for monitoring and evaluation.

Other considerations also may need to be taken into account. When manpower and time are limited, a qualitative study may be indicated. Also, some information may be regarded as too political, too personal or too sensitive to be collected in a quantitative way. When officials who are important for the success of the hygiene education programme have very strong feelings about the need for either quantitative or qualitative information this problem should be addressed properly, to increase the chance that the results of the investigation will be used.

Whatever decision is made, a good quantitative study such as a questionnaire survey requires a qualitative investigation first, because one has to know what questions to ask in what way to be able to get useful results. Too often project staff are tempted to jump at the implementation of a questionnaire, resulting in poor results or lack of information on crucial aspects.



Observation and communication for sharing of information.

Sources of information

Information can be collected in a variety of ways, such as:

- *informal discussions* with individuals and groups;
- *interviews* (discussions based on checklists) with individuals, such as a household member, primary school teacher, community representative, health worker, women's leader;

- *group interviews* (joint discussions based on checklists), for example with mothers of small children, members of a local organization, neighbourhood groups, school-aged children;
- *focus group interviews*, in which a homogeneous group freely exchanges on a specific subject;
- *household surveys using a questionnaire*, in which care should be taken that not only either male or female household members are included to prevent getting a distorted picture;
- *observation at household and community level* for example through visiting water and sanitation sites during environmental walks;
- *participant observation* in which the investigator remains some weeks or months in the community, observing and recording the activities and events of daily life;
- *screening* of available documentation and statistical data.

Often a mix will be best, depending on what information is needed for what reason and at what stage of the project. As a rule of thumb, one should start with a quick screening of available information from documents and key persons (key persons are knowledgeable people on a relevant subject, such as a doctor on health problems). Often there is much more information readily available than expected. After that, a choice can be made as to what additional information is needed from whom, to allow for decision making and programme development.

Many books provide valuable tools and guidelines on the collection of information on social and health aspects, and the reader is referred to these references if he or she wants to carry out a study. Focus group discussions have been heavily promoted recently, and an example is provided at the end of this chapter.

7.4 Frequency, manpower and time required

Frequency and time required

Although it is often claimed that social and health studies require more time than technical studies, experience shows that this is usually not the case. The problem is more that social and health studies give the impression of being time consuming, because of a lack of familiarity with what is needed for such a study, or due to a delayed start.

A preparatory study in the first phase of the project can usually be done in the same time as available for the technical investigations planned for that phase. Although there are extreme cases where such preparatory studies may take a whole year or only a couple of weeks, a more general estimate is that a few months are needed. Such a first investigation is usually a one-off affair, only repeated for evaluation or for preparation of a new project period.

There is no rule as to the frequency for more specific or detailed preparatory studies. The important thing is to be timely, in response to a problem or an information need for project planning. It is better to have more small studies, which can be integrated easily in ongoing activities, than to have one big study taking a lot of time and delaying results that can be fed into the project activities. For example, a specific social and health study for the development of a hygiene education plan may take some three months all in. Then in each community to be covered by the project a short to-the-point study may be carried out, taking one or two days to a couple of weeks, as a start-up of specific project activities with specific target groups.

Manpower and support required

These preparatory studies are best carried out by staff responsible for the hygiene education component together with community groups. It is a good opportunity to get acquainted with the local situation and the people in the area and it is easier to link outcomes of the studies to the preparation of a health education action plan. In carrying out the study, often very useful contributions can be made by all kinds of field level staff, not only as providers but also as collectors of information and as contributors to the development of a hygiene education action plan.

Staff and communities inexperienced with studies will need guidance and support in setting up the study, in analyzing the study findings and in sticking to the time frame set. This guidance may be given by any experienced research person from inside or outside the project.



We can do better with more participatory investigations.

Community participation

People's involvement in investigations can range from passive information providers to active participants. At one extreme, project staff decide what information is collected from whom, by whom, where and when; at the other, community groups and local workers participate actively in all activities. The highest form of community participation is community self-study, in which the project only provides advice on request. The various degrees of community participation in local studies are illustrated in the following figure.

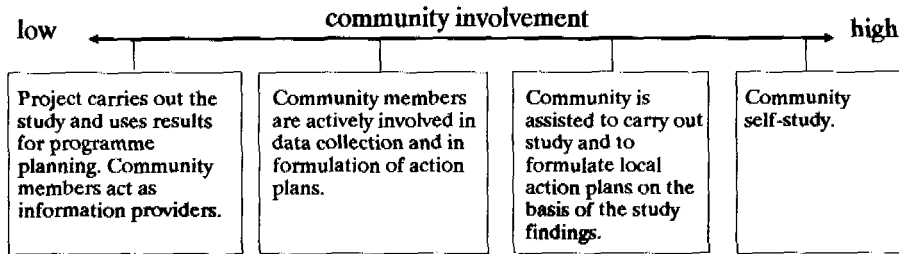


Figure 5: Degree of community participation in local studies.

The more the study has to be directed to the development and implementation of practical hygiene education activities, the more important it is to carry out the study in close partnership with community groups and community-level workers. Current experience suggests a relationship between the extent to which community groups are involved in identifying priorities for action and the adoption of new facilities and practices. An investigation with active participation of community groups and local workers can be seen as an educational activity in itself. People are investigating their own situation and possibilities and priorities for improvement.

7.5 Avoiding problems and under-use of results

In addition to the suggestions provided above to make a preparatory study as useful as possible, the following should be kept in mind:

- Have the investigation planned and implemented with a maximum of community participation.
- Have one person appointed as coordinator of the investigation.
- Have not more than two to three staff responsible for the investigation.
- Have an investigation plan prepared showing the objectives of the investigation, the methods of investigation and the people, time, budget and logistics required. Such a plan does not need to take more than a few pages.

- Have the investigation plan briefly checked before carrying it out:
 - Objectives of the investigation should be in line with project objectives and with identified problems or information needs.
 - Total time indicated for the investigation should follow the fifty/fifty rule. That is, preparation and collection of information should not consume more than 50% of the total time. Analysis of collected information, reporting and using the information findings for the hygiene education plan will take an equal amount of time, although this is seldom realized.
 - Methods of investigation should be as simple as possible but allow for useful results (use section 7.3).
 - Manpower, time, budget and logistics required for the collection of information should be calculated on the basis of the selected investigation methods (eg. time needed for one interview, number of interviews, number of interviewers, training of interviewers, day/night out allowance, transport, stationery). If more time, money or manpower would be involved than available, the selected methods of investigation would require revision.
- Have the investigation plan discussed with technical staff, not only to explain the investigation but also to get their feedback and where necessary their cooperation and support.
- Have regular short meetings to discuss the progress of the investigation, not only for briefings but also for timely adaptations and for an early reflection on the development of the hygiene education plan.
- Have the draft findings discussed with technical staff. It may be important not only for their own work, but also to get their appreciation of the work of educational staff, and the interests and priorities of community groups.
- Have the hygiene education plan developed in close consultation with technical staff.

Table 3: Range of possible useful social and health information

1. *Demography*
 - population size, density, growth rate, mobility (males, females);
 - population groups (social, economic, ethnic, religious);
 - household size and composition (special features such as women heads of households, multi-family households);
 - division of tasks and responsibilities in households, role of women.

2. *Housing*
 - settlement structure;
 - types of houses, their physical condition and layout;
 - types of building materials used;
 - space available inside and outside the house;
 - in-house water and sanitation facilities.

3. *Physical infrastructure*
 - road, road conditions/public transport;
 - primary school for girls/boys, secondary school for girls/boys;
 - primary health care centre, health clinic;
 - shops, market, post office;
 - religious centres (mosque, church, temple), community centres;
 - small scale industries, industrial plants;
 - water supply and sanitation facilities (public, private);
 - needs/obstacles to improve present facilities.

4. *Health*
 - major health problems and relative importance of water and sanitation-related diseases (related to gender, age and socio-economic groups);
 - seasonal variations;
 - knowledge and perceptions about diseases and health (related to gender, age and socio-economic groups);
 - use of government and non-government health services (related to gender, age and socio-economic groups);
 - availability of health personnel (gender, level of education and training);
 - ongoing formal and informal health education activities; target groups;
 - specific environmental health dangers.

5. *Water availability*
 - water source(s), water point(s), distance, accessibility, reliability, quantity, quality (related to socio-economic characteristics);
 - seasonal variations;
 - cost of water, water vending;

Table 3 continued

- protective measures/health risks at water sources/points;
 - water rights and water source management.
6. *Water use practices (related to gender, age and socio-economic groups)*
- preferred sources of water by purposes;
 - water collection, transport and storage practices;
 - personal and domestic use of water (drinking, hand washing, bathing, clothes washing, dish washing, vegetable washing, cleaning, anal cleansing);
 - water use for animals, gardening and other productive activities;
 - quantity of water by purpose, reuse of water;
 - criteria applied to decide on suitability of water for different purposes;
 - obstacles to adoption of improved practices.
7. *Sanitation practices (related to gender, age and socio-economic groups)*
- existing defecation practices;
 - cleansing and ablution materials and practices (also prevalence of bathing in latrines);
 - beliefs and restrictions related to latrine use (eg. location, sharing);
 - latrine cleaning and maintenance practices;
 - latrine emptying and sludge reuse practices;
 - wastewater and solid waste disposal practices;
 - food storage, handling and preparation practices;
 - household/kitchen hygiene;
 - availability and use of soap for personal hygiene;
 - obstacles to adoption of improved practices.
8. *Occupation*
- major occupations and approximate distribution (males, females);
 - seasonality of employment.
9. *Organization and participation*
- local organizations and type of membership;
 - local leaders (males, females) and leadership structures, local decision-making;
 - informal leaders and key-persons (males, females);
 - major local political or social factors which might affect participation;
 - previous interest and participation in water and sanitation or other development activities (related to gender, age and socio-economic characteristics);
 - important characteristics that would determine the acceptability of outsiders working on projects in the area;

Table 3 continued

- local traditions and practices for operation, maintenance and repair of water supply, sanitation and other structures.
10. *Level of interest*
- evidence of popular interest (males, females) in improving water supply and sanitation, compared to other potential improvements in the community;
 - evidence of leadership commitment to improvements;
 - evidence of equal access to project resources and activities.
11. *Willingness and ability to pay (related to gender and socio-economic characteristics)*
- ownership of land, house, personal property;
 - income;
 - expenditure patterns;
 - borrowing and saving customs.
12. *Local technology and resource availability*
- local availability of building materials;
 - availability of skilled and unskilled labour (males, females, noting seasonal variations);
 - availability of technology-related inputs (such as water for pour-flush latrines).
13. *Education and communication (related to gender and socio-economic characteristics)*
- education and literacy levels;
 - numbers of school-going children (boys, girls), dropouts;
 - numbers of teachers, level of education and training;
 - adult education and vocational training;
 - availability and relative importance of communication channels (from mouth-to-mouth to television).

Adapted from: Simpson-Hebert, M. (1983).

Example: Description of Focus Group Interview

A focus group interview offers a small homogeneous group the opportunity to exchange freely on a specific subject. As such, a focus group interview is in fact not an interview, but an interchange between the group. The responsibility of the facilitator or moderator (notice, not the interviewer) is to let this exchange happen and neither to restrict nor direct it. The experience is that under such circumstances the participants in the group are apt to unravel more of the twists and turns in their attitudes and perceptions than they would under a direct interview. Thus, the focus group discussion aims to gain a deeper understanding of attitudes, perceptions, beliefs and wishes of a more specific group of people to arrive at a relevant hygiene education programme.

Usually 6 to 12 persons participate in a focus group interview. However it may be done also with a fewer number of participants without endangering the quality of the interchange. However, it is important that the group is more or less homogeneous to be able to gain deeper insights. To be sure that the participants in the focus group are representative for the larger target group (see Chapter 8), it may be necessary to briefly check the outcomes of the focus group interview with a number of people using quantitative methods.

General guidelines for conducting a focus group interview can be summarized as follows:

1. Elaborate a question guide to be used by the moderator in stimulating response and discussion.
2. Phrase the questions so that they will allow for more than merely yes-or-no answers and will be directed more to what people do, how they feel, and what they think than to factual responses.
3. Listen to the answers, for the way things are said may be as important as the answers themselves in that nuances of expression, mood, and word choice may stimulate new directions for the exchange or reveal richer attitudinal information.
4. Formulate new questions stemming from the responses, or to stimulate others to react.
5. In the face of reluctance or hesitation, employ the indirect device of a third person about whom the question is asked rather than of the respondent directly.
6. (Tape) record the entire session so that the exchange may be reviewed to capture gems of insight that can be overlooked during the session.

Source: Manoff, R.K. (1985) p. 124-126.

8. Objectives, Targets and Target Groups

8.1 Setting objectives and targets

Objectives and targets of a hygiene education programme flow from:

- the general project objectives (see Chapter 1);
- the results of the review of ongoing health and/or hygiene education activities in the project area (see Chapter 6);
- the results of the preparatory community level studies (see Chapter 7).

General project objectives

General project objectives will provide the broad framework for deciding on more specific hygiene education objectives. Although this may seem obvious, it is often forgotten. Thus, there are numerous water supply projects where the hygiene education component is also expected to take up latrine promotion, although this is not stated in the general objectives and there is no provision of adequate manpower and funds. In such cases the question is whether the general project objectives should be broadened or the hygiene education objectives scaled down.

The opposite may also occur. For example, an urban sanitation project did have hygiene education objectives for its solid waste disposal programme, but not for its latrine programme intended to start half a year later. As project management failed to recognize this problem in time, the project ended with a lack of funds and manpower for the promotion of latrine construction and use.

Review ongoing hygiene education activities

Review of ongoing hygiene education activities combined with basic assessments of personnel and budgets from various sources provides useful information on which to focus the hygiene education programme. For example, where school hygiene education is still virgin territory, it may be decided not to focus on schools, or instead to give it special attention. It will be clear that in the second case a great deal of work is implied for project educational staff. Or, where the Primary Health Care Programme is running well, specific hygiene education objectives could focus on establishing close links between the PHC activities and the water supply and sanitation project activities, thus requiring fewer project staff and funds.

Community-level studies

Preparatory community-level studies also provide essential information for setting practical objectives and targets. For example, a baseline study may show that wastewater from households with a yard connection is a serious problem; that people have little knowledge about latrine options that would suit both their wishes and their means; that community organization is weak; that people have specific preferences with regard to different water sources for different water needs; that washing hands is generally considered an important practice but that children in particular tend to forget it.

A phased process

Setting objectives and targets is usually a phased process. At the start of a project, when only general information is available, objectives of the hygiene education component will be primarily based on the general project objectives. During the first phases of the project, when more information and experience becomes available, more specific objectives and targets can be set.

At community level, realistic targets can only be set in cooperation with the population, as local priorities, conditions and practices may vary considerably. For example, a study showed that in one place conditions were favourable for latrine promotion while in another place they were not. The first place was densely populated and most households already had some type of latrine, although generally not yet a sanitary type. In the other place, population density was low and only open field defecation was practised while soil conditions were adverse for construction of pit latrines. Clearly, in those two places targets for sanitation improvements cannot be the same, especially not over the same period of time.

8.2 Need for clear objectives

A common problem in an integrated hygiene education programme is that its objectives are ill-defined, if they are defined at all. Lack of clear objectives implies lack of clarity for both technical and educational staff as to what should be accomplished by the hygiene education programme in what period of time.

Without clear hygiene education objectives, technical staff often tend to have too high expectations about what difference hygiene education can make to the success of the overall project. It has to be restated here that hygiene education can make a difference, but only a realistic one. For example, hygiene education can be instrumental in increasing a willingness to contribute to the maintenance costs of a piped supply, but not when the required contribution is beyond the means of the users, when the water points are badly located or when the supply is unreliable (see Chapter 2).

Poor hygiene education objectives also increase the chance that educational staff will jump into the implementation of hygiene educational activities without giving due consideration to priorities and timing. This can easily result in a lot of work being done with little or no tangible benefits.



Hygiene education will be more effective with a clear focus.

Requirements of clear objectives

It is important to arrive at practical hygiene education objectives which provide:

- clarity to both technical and educational staff as to what should be accomplished by the hygiene education programme in what period of time;
- guidance on the integration of technical and non-technical project components;
- a basis to formulate a workplan, with time, money and manpower inputs;
- criteria for monitoring and evaluation of progress and results.

Some examples of hygiene education programme objectives are given at the end of the chapter. They are included only as illustrations, and show that there are no strict rules in setting objectives.

8.3 Deciding on target groups

Direct target groups

The direct target groups for hygiene education are all people in the project communities. Community and family health will only improve if everyone has access to and makes hygienic use of water supply and sanitation facilities.

However, not all people in a community are the same, living the same lives. There will be socio-economic differences, differences in housing, and differences in political, cultural and religious backgrounds. Also the roles and behaviour of men and women will differ, and so will those of children.

In a sanitation promotion programme, one of the reasons identified for its limited success was that not enough attention was given to the various target groups. Activities had been mainly focused on the men, ignoring the women, children and youth groups. Also, insufficient account was taken of households not owning the property they occupy and thus unwilling to make improvements, and households too impoverished even to repay a sanitation loan.

Source: Simpson-Hebert, M. (1987) p. 13.

Differences between people reflect differences in health and hygiene problems, and differences in priorities and possibilities for reducing health risks from water and sanitation. These differences have to be recognized by identifying specific target groups. The preparatory community-level studies provide valuable information on local differences between people.

Where time, money and manpower is limited, priority target groups have to be selected. Usually, women from lower socio-economic sections, or women with children under five will be among the first choices. In focusing on women, three things should be kept in mind:

- women's time during the day may be limited because of their many duties to provide for their families and to manage their household tasks, requiring flexible working hours for the hygiene educators;
- women should not be addressed only in their roles as wives, mothers and home caretakers; they have much to say about technology choices, siting of facilities, contributions in cash and kind to implementation, operation and maintenance of facilities;
- in focusing on women, men should not be left out completely, not only because most men are husbands and fathers and thus are involved in family matters, but also because men have their own water and sanitation needs and responsibilities.

It is not easy to decide where the water reservoir (dam) should be located. Different groups: men, old and young women, different villages etc. may and indeed often do have different interests and motives. For example, men want abundant water for their cattle and a cattle dam enhances the prestige of the village. Young women, the actual water carriers, want to have water as close to the house as possible, and if the reservoir is located further away than an unimproved pond, they most likely will fetch water from this pond as long as this water is considered clean. However, the project knows that the pond water is infected with guinea worm and thus unsuitable for drinking purposes, but the people are not convinced that guinea worm disease comes from the water.

In spite of these difficulties, by a step-by-step communication between village groups and the project, and building on hygiene education through group discussions, most of the time it is possible to come to a solution that satisfies all parties.

Source: Murre, T. (1990) p. 3.

Indirect target groups

At the community level, we may find a number of persons who could play a key role in hygiene promotion by acting as local motivators and educators for the various community groups. Identification of these persons should be based on selections made by the communities themselves and be guided by the preparatory investigations. Chapters 2 and 3 indicated how respected community members can play a valuable role in promoting hygiene behaviour. To make this happen, they need special training and support, and the hygiene education programme should provide for this. The role and training of local motivators and educators will be further discussed in Chapter 11.

In many water supply and sanitation projects, community water supply and sanitation committees or community health committees are established for the planning, implementation, operation and maintenance of improved facilities. In these cases, it may be jointly decided to have a local hygiene education programme carried out with and through members of the committees. Committee members then get special training to act as hygiene promoters among their neighbours and fellow community members.

Intermediate target groups

Target groups for hygiene education are not only found at community level. To reduce health risks from water and sanitation, intermediate target groups also may have to be addressed. An overall picture has already been provided in Table 2, at the end of Chapter 1. A few main intermediate target groups are:

- technical project staff who need a clear idea about social and health aspects related to water supply and sanitation and who have to act as partners in the hygiene education programme;
- local extension workers of government and non-government organizations who may play an active role in hygiene education activities at community level during the various phases of the project;
- regional and district level staff from various government and non-government organizations, to create commitment and support for integrated hygiene education cooperation;
- government representatives and policy makers, to arrive at a clear commitment for integrated water supply, sanitation and hygiene education.

For these intermediate target groups too, it is important to set the right priorities and to be sure to address the right people with the right communications. For example, technical staff involved in operating drilling rigs are a different target group from technical staff involved in low-cost sanitation at household level.

Example: Objectives and Target Groups of a Project in Lesotho

The hygiene education objectives of the urban sanitation programme (single and twin pit Ventilated Improved Pit latrines) already include a focus on specific target groups and they read as follows:

- a. motivation of groups with no sanitation to build VIP latrines, especially householders, landlords of rented properties, school governing bodies, local authorities responsible for public places, hospital administrators;
- b. motivation of groups with existing sanitation such as bucket and pit latrines to upgrade them to VIP latrines;
- c. encouraging full use of latrines by all members of the household, especially children;
- d. ensuring that latrines are cleaned and maintained, flyscreens checked for damage, and refuse or toxic materials and disinfectants not poured down the pit;
- e. encouraging hygiene practices such as hand washing with soap, disposal of infant feces, cleanliness of food preparation and clean storage of drinking water;
- f. promotion of child health practices such as oral rehydration therapy for children with diarrhoea and breast-feeding in preference to bottle feeding.

At the intermediate level many different target groups are identified such as: health workers, local urban council officials, latrine builders, and primary school teachers to support the work of the urban sanitation programme and to carry out specific hygiene education activities.

Source: Hubley, J., Jackson, B. and Khaketla T. (1987).

Example: Objectives and Target Groups of a Project in Thailand

1. The general objectives of the rural water supply and sanitation programme are (a) to supply 50% of the rural population with at least two liters/capita/day of drinking water through the production of rainwater jars made of cement and (b) to provide 75% of all rural households with sanitary water-seal (pour-flush) latrines, in order to reduce the incidence of diarrhoeal and parasitic diseases in all age groups.
2. Specific hygiene education objectives are, among others:
 - a. to encourage people to build latrines and use them daily;
 - b. to encourage people to use safe water for drinking, cooking and washing utensils;
 - c. to promote good solid waste and liquid waste disposal facilities and household and environmental cleanliness;
 - d. to promote food sanitation in households, restaurants, markets, and school canteens;
 - e. to promote insect and rodent control.
3. Two levels of target groups are recognized:

At the intermediate level we find:

- local midwives
- sanitarians
- male and female village sanitarian craftsmen
- male and female village health volunteers
- schoolteachers
- monks
- community development agents
- agricultural extension agents

They are asked to be members of the village hygiene education team and are provided with training and support to give a few hygiene education messages to specific target groups.

At the village level the following target groups are identified:

- mothers of toddlers (age one to three) and preschool children (aged four to six) to teach toilet training, hand washing, and sanitation in food preparation;
- women's groups, youth groups, and farmers' groups to communicate basic hygiene practices;

Example continued

- households without latrines and/or sources of clean drinking water, to help them achieve access to these basic services;
 - school children; and
 - nutrition centres, to teach toilet training and hand washing to preschool children (nutrition centres are government-sponsored centres that provide daycare for children aged two to five of working parents).
4. The ten targets for a hygienic village are as follows:
- 100 percent of the village population has access to a latrine for use every day. (All household heads, whether or not they own a latrine, will be asked if all members of their family have access to a latrine for everyday use. If not, efforts will be made by the sanitarian, monk, midwife, and community development agents to provide access.)
 - 90 percent of the households with latrines keep them clean on a regular basis. (The sanitarian will make spot checks of household latrines on a schedule suggested by the Region 1 Sanitation Centre. At the visit, he will motivate the household to keep their latrine clean.)
 - 100 percent of school latrines are kept clean every day (including no smell). (The sanitarian will make spot checks throughout the school year and motivate schoolteachers to establish a system of cleaning latrines daily.)
 - 100 percent of school and household latrines have water and a dipper inside the latrine for flushing. (The sanitarian will make spot checks.)
 - 100 percent of the households and schools have soap or detergent available for washing hands. (The sanitarian will make spot checks.)
 - 100 percent of the households and school latrines have new picture stickers inside. (The sanitarian will survey.)
 - 100 percent of rainwater jars have covers. (The sanitarian will survey.)
 - 100 percent of rainwater jars are covered at all times. (The sanitarian will make spot checks.)
 - 90 percent of the households and village schools have access to clean drinking water. (The sanitarian will survey.)
 - 50 percent of children aged four and five and 90 percent of children aged six are trained to use the latrine at all times. (The sanitarian will interview the mothers of these children.)

Source: Simpson-Hebert, M. (1987).

Example: Objectives and Target Groups of a Project in Bangladesh

1. The general objectives of the project are to test a new type of handpump and an experimental design of pour-flush latrine and to develop and test the efficacy of an integrated hygiene education programme.
2. The immediate objectives of the hygiene education programme are to improve local practices regarding water use, latrine use and personal hygiene practices, and more specifically to:
 - a. promote the exclusive use of handpump water for all personal and domestic purposes;
 - b. increase the quantitative consumption of handpump water;
 - c. encourage hygienic storage and use of handpump water;
 - d. ensure the acceptance, use, cleanliness and maintenance of water-sealed latrines;
 - e. promote the disposal of feces of small children in the water-sealed latrines;
 - f. impart knowledge and awareness about the need for improving personal hygiene.
3. On the basis of these objectives nine key messages were developed and used:

Water

- Use only handpump water for all personal and domestic purposes.
- Wash vegetable and fruit before cooking or eating, and bathe directly at the handpump site.
- After washing pots and pans, plates, glasses and spoons with adequate amounts of handpump water, store them on a platform.
- When water is collected the fetching pitcher and other containers should be washed well at the handpump site. Always keep the collected water covered. Keep the container of drinking water on a platform.
- Wash hands well with handpump water before eating or serving food to others.

Sanitation

- The use of sanitary latrines is one of the important ways of preventing the spread of diarrhoeal diseases and worms.
- Dispose of the feces of small children in the sanitary latrine.
- Keep the sanitary latrine clean following use by flushing with 1 or 2 pots of water.

Example continued

- Following defecation, wash hands well using ash and adequate amounts of handpump water.
4. Target group is all the households affected by the water supply and sanitation activities. Specific target groups are the women in the project area both at household and at neighbourhood levels.

Source: Aziz, K.M.A. et al (1990).

9. Workplan Development and Implementation

A workplan for the planning and implementation of a hygiene education component is basically no different from a workplan for a technical component. In fact, both components should be part of one overall project workplan and be set-up in a comparable and easy to integrate way. The plan should contain all important activities to meet the specific hygiene education objectives with the identified target groups, and include a time schedule. Of course, the workplan may need to change with time, as more information becomes available from monitoring and evaluation.

Development and implementation of a workplan will be influenced by manpower and budget considerations. In this chapter these manpower and budget issues are touched on only briefly. They will get full attention in Chapter 11.

9.1 Hygiene education work planning

Introduction

A hygiene education programme usually requires a workplan at two levels: project level and community level (see also Chapter 5). At project level, the plan is developed in close consultation with technical project staff and includes all general activities related to programme development and implementation, such as planning, training, studies, community hygiene education, development of audio-visuials, monitoring and evaluation. At community level, the plan is developed with close community participation and includes all hygiene education activities on the project site with the various target groups. Whereas the project may cover, for example, 60 sites per year with one overall hygiene education workplan, each of the 60 sites will require a community-based workplan for effective hygiene education.

Project level workplan

At project level, the workplan includes all activities necessary to make the hygiene education programme work. The programme phases as outlined in Chapter 5 will usually figure in the plan, but more specifically linked to the actual phase(s) of the project. Common activities on the workplan are:

- review of ongoing hygiene education activities in the project area;
- community baseline studies;

- identification and selection of project sites (usually through a social, health and technical survey);
- identification of targets and target groups;
- preparation of a community-level hygiene education programme;
- training of hygiene educators;
- implementation of a community-level hygiene education programme;
- preparation of training courses for various target groups (at community, project, and district level);
- implementation of training courses for various target groups;
- preparation of audio-visual support materials;
- testing of audio-visual support materials;
- on-the-job training and supervision of hygiene educators;
- internal organization and meetings;
- cooperation and liaison with other agencies;
- reporting, monitoring and evaluation.

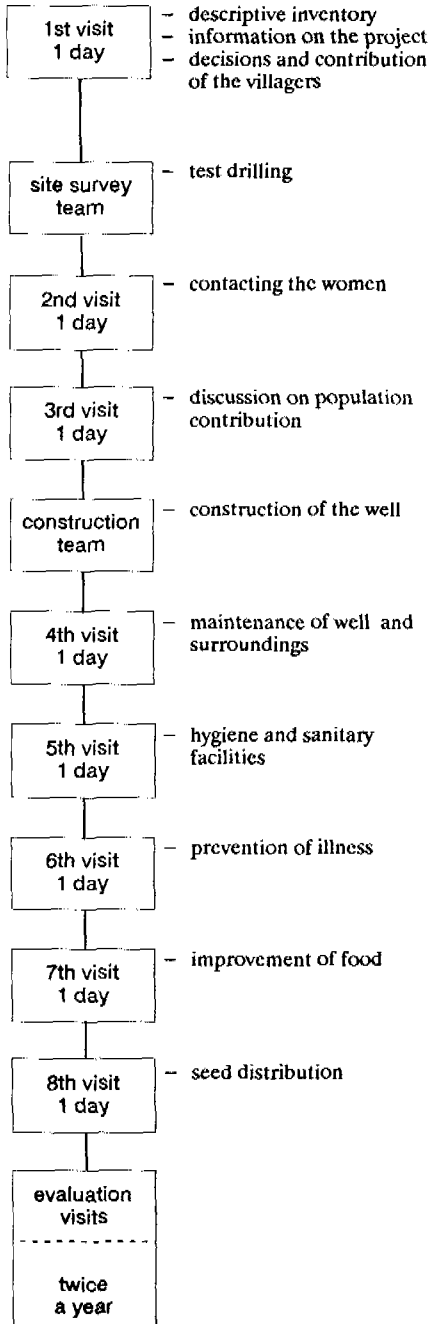
Community-level workplan

In developing and implementing a hygiene education workplan at community level, special care needs to be taken that the technical and educational sequence and content of activities match. Although matching involves making allowance for each other's possibilities and limitations, this does not mean that no flexibility or variation is possible. An example is given in Figure 6. In the initial plan, education and participation activities were based on one day's visits, but after testing and evaluation the workplan was modified into clusters of visits, to increase impact and job satisfaction.

Community level workplans may differ a lot from each other, depending on the type of project, the education and extension agencies involved, and budget and manpower available. In an urban sanitation project in Nepal, the workplan progressed on the basis of a monthly cycle: the community workers each month received training for four days and then practised what they had learned for the remainder of the month. The next training always integrated progress and experience with educational and technical activities of the previous month. In a rural project in Thailand all types of community-level workers were stimulated to integrate hygiene education as a standing part of their day-to-day activities with occasional training and back-up from the government agency. In a rural project in Zambia, the community-level workplan consists of a sequence of community visits in which the educational activities are related to the technical implementation activities. Some examples are given at the end of the chapter.

There is no best type of community-level workplan. The discussions about communication in Chapter 10 and personnel and costs in Chapter 11 should be taken into account in determining what is best in a particular project. Other considerations may include availability and workloads of the target groups,

Initial plan of action



Modified plan of action

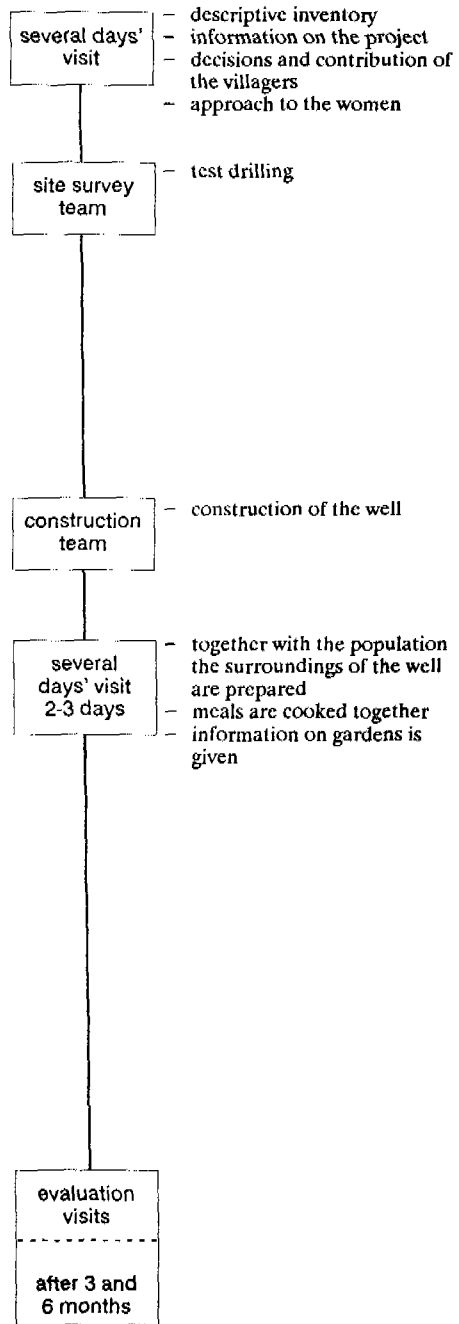


Figure 6: Initial workplan and modified workplan after evaluation. Source: Visscher, J.T. and Hofkes, E. (1982).

religious duties and calendar, agricultural seasons and climate (eg. monsoons), and peaks in water and sanitation-related diseases or fly and mosquito breeding.

Community-based hygiene education

Although the community-level hygiene education workplan will have been based on preliminary investigations and communications in communities, one of the first steps in the actual implementation of the workplan at community level will be to strive for community participation, and to arrive at a community-based hygiene education programme, with a community-adapted and -supported plan.

Common problems

Common problems in the implementation of a community-level workplan relate to the "unpredictable". Logistics is one example; material supply is another. Also, in the community there may be illness, a marriage or funeral, a serious conflict. These all require attention and skilful management both from educational staff and general project management.

9.2 Integration of technical and educational activities

For integrated projects to be successful, technical and educational activities should match, not only in time but also in content (see Chapter 2). The hygiene education workplan should be developed through interaction between technical and educational staff, with a focus on combination and coordination of activities. This is especially important during the first phases of a project, when decisions have to be made about technical design, and options for operation and maintenance evaluated. Cooperation is also vital during crucial phases of implementation.

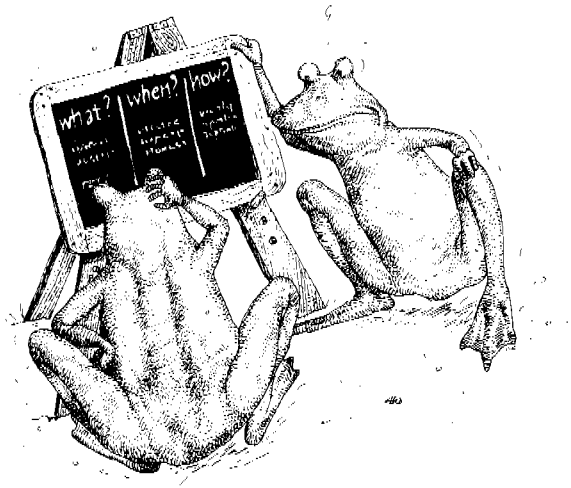
Integration of technical and educational activities requires flexibility and understanding from both technical and educational staff. This may be far from easy, and frustration is easily created. To start on the right footing, it may be wise to have an internal workshop for technical and educational staff to provide each other with a basic knowledge of technical and hygiene education issues, including explanations of terminology. Joint meetings will also be required at regular intervals.

The project manager will have the important task of organizing coordination and cooperation in workplan development and implementation between technical and educational staff. As the project manager often has a technical background, he or she may need to put a special effort into appreciating hygiene education requirements and constraints. He or she will also need sensitivity and creativity to prevent and solve possible problems at an early stage. If not, cooperation and coordination may suffer a lot, with a significant impact on the progress of the project.

Integrated workplan development and implementation may be facilitated by keeping in mind the following:

Develop the workplan in consultation

An integrated workplan will be more easily developed when technical and educational staff jointly start from the general project objectives and then consider what should be done by whom (which discipline) and when. If joint meetings are held for this purpose, it is best done on the basis of a thorough preparation of the points to be discussed, to increase clarity about technical and educational requirements and constraints and to allow for decision making without delays. A participatory training exercise may also be of great help in this respect (see example at the end of the chapter).



Work planning together.

Try to use one overall time frame

It is often argued that a hygiene education component needs a longer time frame than the technical component. Thus, it is argued that the hygiene education component should start anything from several weeks up to a year before the technical component and should end at least one year after construction of facilities has been completed. The reasoning behind this argument is that changing people's behaviour takes time.

Without denying that changing behaviour takes time, it is questionable whether this has to have a bearing on the overall time frame. Especially with an

increasing focus on the need for sustainable water supply and sanitation facilities, both the technical and the educational components need a proper start-up and phasing-out period, both at project and at community level. Hence, an integrated approach is best going together from beginning to end.

At community level, on the other hand, it may be true that there is a difference in rhythm of work of technical and educational activities. In piped schemes, design and construction may take one to two years, or even longer. There will then be plenty of time for all kinds of hygiene education. However, in a shallow well handpump project, or in a latrine programme, construction may take only a couple of days or a few weeks. In those cases, hygiene education at community level will certainly need a longer time span than the technical activities.

Unfortunately, the reality is often that a hygiene education component starts much later than the technical component and is not granted long to live. One of the reasons is a lack of good and timely provision of manpower and money. Compounding problems are that technical staff expect hygiene education activities to follow technical decisions and to provide justification for those decisions at community level. It is these factors that create problems for educational staff and for successful implementation of their programme, not the invalid assumption that hygiene education is time-consuming.

Show the same consideration for both components

It often happens, if only in the eyes of educational staff, that technical delays are excused, whereas educational delays are blamed. It should be recognized that both components face constraints which may require a rescheduling of activities at project and/or at community level and these need to be communicated in as timely a way as possible. For example, timely communication that cement is out of stock may enable the timely rescheduling of the hygiene education activities, just as the timely communication that a community is not yet ready for start-up construction works may permit timely rescheduling of the technical activities.

Experiment with the best form of coordination of activities

Basically there are two options for the coordination of water supply, sanitation and hygiene education activities at community level. In one, the work is organized through the technical and participation/education divisions (or agencies, see Chapter 4). In the other, technical staff and educational staff form working teams within one division. (Of course, when educational activities are performed by technical staff only, this point does not apply. See Chapter 11.)

Both options have advantages and disadvantages. Working through separate divisions (or agencies) will give staff with the same professional background more job security and more opportunities for support and on-the-job training.

Working with mixed teams will allow for more day-to-day cooperation and coordination at community level. There is no clear rule as to which option or mix of options is the best in what circumstances. Whatever option is selected, reconsideration will be indicated when combination and coordination of technical and educational activities is facing serious problems.

Use the workplan as a working tool

A clear workplan can do a lot to prevent problems and confusion between the various staff involved in project implementation. However, it should not become an inflexible tool. Instead it should be used for progress meetings and for monitoring and evaluation, to make adjustments according to findings.

Example: Integration of Participation and Hygiene Education Exercise

Purpose: to make participants aware of the value of accommodating "software" concerns in "hardware" plans and vice versa, so as to reconcile the need for people's participation and hygiene education with the need to meet hardware deadlines.

Time: 1 1/2 - 2 hours.

Materials: newspaper, scissors, markers, masking tape.

NOTE TO THE TRAINER:

The exercise is a challenging assignment as the groups work together in developing an integrated plan. But, much mutual understanding can be developed about each group's distinctive needs and the complementary aspects of those needs.

Procedures:

- Divide the participants into two groups, of which one is composed of people knowledgeable about "hardware" and the other one about "software".
- Ask the "hardware" group to prepare a list with "hardware" tasks and activities (for example: conduct geological survey; select site for a pump; borehole drilling; arrange for supply of spare parts etc.) in logical order, showing the sequence in which each task would be undertaken in an actual village setting. Ask the "software" group to do the same for "software" tasks and activities (for example: conduct participatory baseline study; select site for a pump; establish water and sanitation committee; train health workers; conduct hygiene education etc.).
- Ask the group to write their list with tasks and activities on a large piece of paper and tape it to the wall.
- Facilitate a plenary discussion in which both lists are explained, compared and integrated as much as possible.
- Ask participants to identify items which they believe would be appropriate for planning jointly with community members; as well as those which are considered to be the primary responsibility of the community alone or the agency alone. This should result in useful insights for policy work planning and management.

Adapted from: Srinivasan, L. (1990) p. 143-145.

Example: Workplan of a Project in Nepal

The gravity piped water supply and sanitation programme has an integrated hygiene education component with emphasis on women's involvement. Due to an adverse manpower situation, the hygiene education programme is divided into:

- a. A two-year intensive hygiene education programme for a limited number of project sites. This programme is coordinated by the Education/Participation Coordinator and carried out by female extension agents who work in pairs. In the selected communities the extension agents channel their activities through a Community Water and Sanitation Committee, consisting of one representative of each of the public tapstands. The members of the Committee disseminate what they have gained from the training and meetings with the extension agents to the households they represent around the tapstands.
- b. A six-week hygiene campaign for all other project sites, organized by the technician responsible for the construction of the water supply system. To carry out this campaign, the technician has received training and information material, and he is supported and supervised by the Education/Participation Coordinator.

Apart from these two hygiene education programmes, educational staff are involved in the technical and social feasibility studies and detailed studies, before site selection. The following page shows the sequence and timing of activities.

Source: Bolt, E. (1989).

(Example continued)
WORKPLAN 1989 - 1990

Activity	1989				1990			
	1	2	3	4	1	2	3	4
A. Before general site selections								
Participation in technical and social feasibility studies			————				————	
Participation in detailed surveys				————				————
B. After general site selections								
Briefing and guidance of technicians for short campaigns at non-intensive hygiene education sites	——							
Training of extension staff	————				————			
Selection of sites and planning for intensive hygiene education	————							
First introductions and meetings in all neighbourhoods and at all schools of selected sites	————							
Baseline surveys		————						
Formation water and sanitation committees (WSCs)		————						
Needs assessment			————					
Monthly meetings with WSCs				-----				-----
Monthly classes at schools				-----				-----
Four-day WSC training courses			————				————	
Two-day caretakers training								————
Monitoring	-----	-----	-----	-----	-----	-----	-----	-----
Progress reporting	-----	-----	-----	-----	-----	-----	-----	-----
Evaluation and decision on follow-up								————

Example: Workplan Implementation in a Project in Bangladesh

The hygiene education programme of a rural water supply and sanitation project in Bangladesh was implemented between February and December 1987 as shown in the following figure:

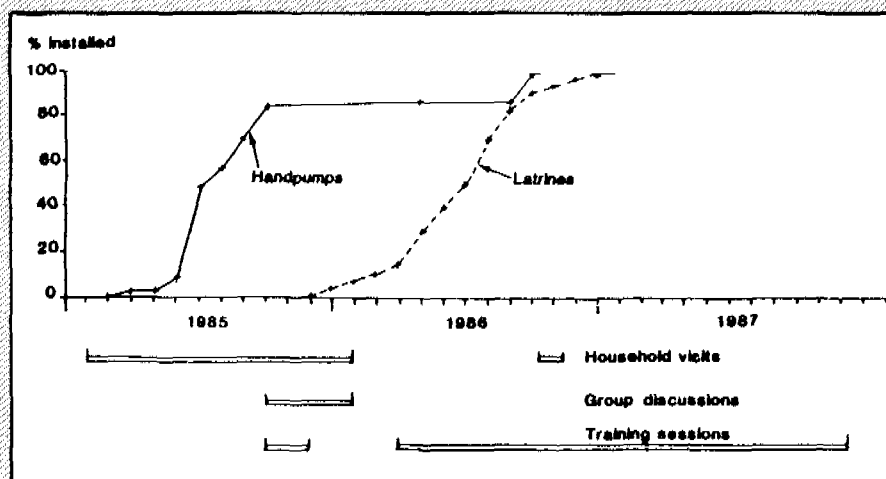


Figure: Progressive installation of handpumps ($n = 148$) and latrines ($n = 754$), and the phasing of the hygiene education interventions.

a. Household visits

During handpump installation a female health worker visited each household for about half an hour to discuss hygiene education messages related to water use. Seven follow-up visits were made, making a total of eight rounds. It took one month to cover all households in the area with one round. During the first three rounds, messages were limited to water use only, but during the last five rounds messages related to water use and sanitation practices were combined. During the last two visits some postcard-size photographs highlighting key hygiene education messages were shown to the women, and these were found to be useful for maintaining their interest. An extra round was made during the monsoon in late 1986 to motivate women not to use surface water - omnipresent in the floods of that time - for any personal or domestic purposes.

b. Group discussions

Group discussion meetings on hygiene education were arranged following the rounds of household visits. Eighty meetings were organized, with 25 participants

Example continued

on average, at the neighbourhood level. All the neighbourhood women were invited and they were the chief attenders, although a few men and children also came. About three rounds of these meetings were held, so that many women attended more than once. The meetings lasted for about 45 minutes.

Considering the traditional seclusion of women it was important to hold the meetings in the inner part of the homestead. Meetings were addressed by project staff, usually male, and by female health workers recruited from within the community. During the meetings, health education messages were elaborately discussed and key points were demonstrated using water pitchers and utensils. The participants were encouraged to ask questions.

c. Training sessions

The final and most intense phase of health education consisted of a two-day training course offered to one woman from every household. The training was organized in the project office and in the neighbourhood of the women participating in the course. The first course was attended by only 8 women, but groups of 25 to 30 participated in the later ones. Almost all the trainees had children below 5 years of age, but a few were elderly women and their participation contributed a great deal in attracting new participants for the next course. In the beginning the participants were from the comparatively low socio-economic level households. Gradually, however, women from all levels took part. Transportation and a small honorarium of just under \$1.00 were provided during the training period as an incentive to attend. The trainers were senior field personnel from the project, but female health workers from the community were also present. A course lasted six hours on each of two days, and involved discussion followed by demonstration.

The first day of training started in a classroom at the project office and made special reference to the nine hygiene education messages (see example at end of Chapter 8) with which the trainees were already familiar from the earlier phases of the hygiene education programme. The messages were further discussed in depth, and flip charts illustrating them were shown to the participants. Discussions were reinforced by demonstrations, such as actual hand washing before eating. All the trainees were asked to wash their hands before taking refreshments served in the classroom. The method of hand washing by the participants was observed by the trainers. Whenever the method did not fulfill the criteria laid down in the messages, the trainers intervened and provided necessary guidance.

Example continued

On the second day of the training, demonstration of practices related to hygiene education messages was undertaken around the household. Groups of participants visited one another's homes, and discussed what they found. At the handpump site, the participants were asked to demonstrate the best methods of handling water. The use, maintenance and cleanliness of water-sealed latrines, and the procedure for the disposal of children's feces were explained and demonstrated at a latrine. At the household level, the demonstration centred on the procedure of storing water and utensils. Observations were made in and around the household to identify and discuss any irregularities regarding water use and sanitation practices.

A total of 785 women participated in these sessions, covering 90% of households in the intervention area, and all of those with children under 5 years.

Adapted from: Aziz, K.M.A. et al (1990).

10. Communication

Hygiene education works through communication. Communication is the sharing of information (including ideas, emotions, knowledge and skills) among two or more persons. As everybody communicates every day with a number of people, communication may seem to be an obvious, easy thing to achieve. However, when the aim is to influence knowledge, attitudes and behaviour conducive to health, it is the quality of the communication which comes into focus.

10.1 Communication: basic characteristics

Communication is a complex process, not easy to understand in all its details. There are various simplified models trying to describe communication and the one we present below is a very simple one indeed, showing only the basic characteristics. The aim of the model is to highlight the basic factors influencing successful communication.

Communication involves at least two persons. One person is telling or showing something to the other, who reacts by telling or showing something to the first. In technical terms, the first person is the SOURCE who is sending a MESSAGE to the RECEIVER. The receiver in turn now becomes the source, sending back a message to the first person, now becoming the receiver. Let's take an example. A hygiene educator (the source) is asking a group of women (the receiver): "Wouldn't it be better for us to use latrines?" (the message). When one of the women (one of the receivers, now becoming a source) answers "Why, isn't it only more work for us, as we will have to carry the water and clean the pan?" (the message), the health educator becomes a receiver instead. This simplified process of communication is shown in the following figure.

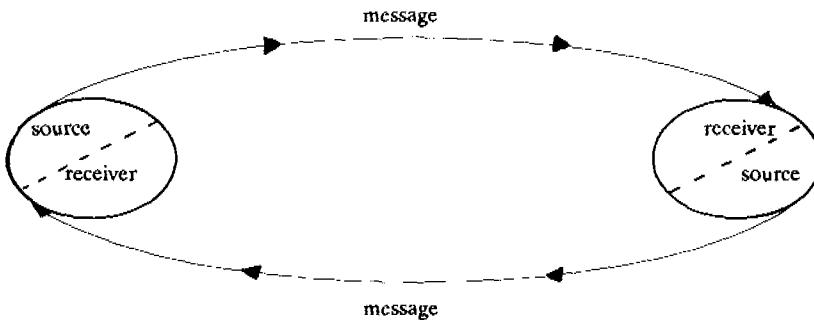


Figure 7: Simplified model of communication.

Source and receiver

Communication will be more effective when the source, in our case the hygiene educator:

- is trusted by the receiver, being the target group;
- has important characteristics such as sex, age, culture, education, experiences in common with the receiver;
- tries to understand what people feel, think and are motivated by;
- has sufficient status and is considered reliable by the receiver (Hubley, 1988b).

Thus, a hygiene educator from a similar background to the community is more likely to share the same language, ideas, and motivation and so be a more effective communicator. That is, unless other characteristics blur these positive ones. For example, a young male hygiene educator may lack trust by mothers to discuss child rearing, although they share similar backgrounds. This point will be further taken up in Chapter 11.

Messages

The message is the content of the communication. During one encounter, many messages will flow between source and receiver. But for effective hygiene education these messages should centre around one main message only during a single discussion or activity, for example hand washing, or latrine maintenance. The main message should be relevant, precise, and appealing to the target group (receiver). What makes a message relevant and appealing is very much dependent on the target group (receiver), and this always requires investigation (see Chapter 7).

Messages may be framed through factual information, humour, or emotions. Many hygiene education messages tend to say "avoid...." or "don't do...." a particular action. However, it is better to promote beneficial behaviour rather than telling people not to perform a harmful one. For example: "use tap water for drinking" rather than "don't use surface water". In general, messages are more effective when:

- only one or a few are discussed at one time;
- they are target group oriented;
- they are positively oriented;
- they are repeated, preferably in different ways and in different settings (Hubley, 1988b).

We will come back to the issue of message development and use in the following sections.

Methods and materials

In the example above illustrating the model of communication, in which the hygiene educator is talking with a group of women, a group discussion is used to bring across the message. This group discussion is called a channel, or method of communication. Basically there are two broad categories of METHODS to channel messages between source and receiver: interpersonal methods and mass media. These methods of communication are further discussed in section 10.2. To support the communication process often use is made of communication MATERIALS such as drawings, posters, leaflets, models, songs, stories, slides, film, and video. This will be receiving further attention in section 10.4.

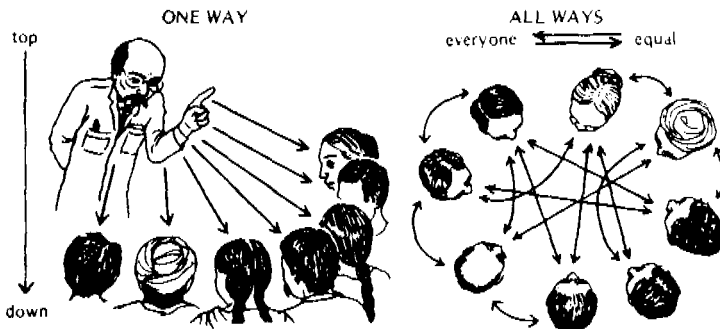
10.2 Methods of communication

A. Interpersonal methods

Interpersonal communication is characterized by direct contact between the hygiene educator and the target group. Examples are:

- person-to-person discussions, such as during home visits;
- small group discussions (up to 12 persons);
- large group discussions (between 12 and 30 persons);
- public meetings (above 30 persons).

The strength of interpersonal communication is that there is an opportunity for feedback, questions, clarifications, exchange of feelings and ideas, and joint action. As such, interpersonal communication can be a strong tool in influencing knowledge, attitudes and practices for health improvement. However, when interpersonal communication is used for one-way teaching with the hygiene educator telling the target group what to do, it will rarely be effective (see Chapters 2 and 11). Interpersonal communication should be



Source: Teaching Aids at Low Cost.

used as much as possible for participatory communication: dialogue, group discussions, sharing of experience, joint learning and joint problem-solving. The illustration on the previous page shows the difference between top-down teaching and participatory communication.

Person-to-person discussion

Person-to-person discussions usually take place during home visits or at public places such as health centres, but can also be part of walking around in the community, or visiting water supply and sanitation facilities. Opportunities for person-to-person discussions may also exist during breaks or at the end of group meetings.

Casual person-to-person discussions are important to create an atmosphere of trust and understanding between the hygiene educator and the members of a target group. They may also give the feeling of being accepted and supported, sometimes necessary to create self-reliance for adapting behaviour. More structured person-to-person discussions, such as in home visits, are particularly useful to discuss sensitive subjects or subjects requiring careful consideration or individual solutions. Where women cannot meet as a group for cultural reasons, home visits may be an acceptable alternative. Home visits have the additional advantage that the hygiene educator can get a fair impression of the living conditions of the target group, and integrate that immediately into the discussion.

A disadvantage of person-to-person discussions, if used as the single or most important communication method, is that they are rather time consuming, and so it is costly to reach all members in a target group. Another problem might be that it will be less easy to know whether the performance of the hygiene educator is up to standard (see also Chapter 11).

Casual person-to-person discussions don't need specific planning or preparation. We do though have to make sure that this valuable method of communication is used on a regular basis, with the information and experience gained fed back to the general hygiene education and project activities. On the other hand, for home visits and other more structured person-to-person discussions the hygiene educator has to be well prepared to make effective communication possible. He or she should clearly have in mind the specific purpose of the discussion, and the main message(s), and be thoroughly familiar with the subject, including the supporting material to be used during the discussion (see also section 10.3).

More structured person-to-person discussions will run through three phases. In the orientation phase, the hygiene educator and the participant will have to get to know each other to establish an atmosphere of openness and trust. The hygiene educator will clarify the purpose of the discussion and make sure that

this is in line with the expectations of the participant. If not, the purpose may be jointly adapted.

In the main phase of the discussion, the subject of discussion is jointly clarified and alternative solutions or options for improvement considered. Main tasks of the hygiene educator are to listen carefully and to go on asking questions for increased understanding. If necessary he or she should also provide clear information, for example on the transmission of diseases or on project procedures, to allow for realistic decision making. Every now and then, the hygiene educator will summarize the main discussion points to structure the discussion and to make sure both are on the same line. In discussing alternative solutions or options for improvement, he or she will help the participant to think through possible consequences. The final decision is always with the participant.

In the wrapping-up phase an action plan is made and follow-up discussed. Before rounding off the discussion, the hygiene educator should briefly evaluate the discussion to check whether the purpose has been met and whether the participant feels satisfied with the result (Wapenaar et al, 1989, p. 172-180).

Group discussions

Group discussions are often a most suitable method for hygiene education as they allow for a group process in which participants directly communicate with each other, and join hands. Group discussions are instrumental in influencing knowledge, but especially in influencing attitudes and practices. A group discussion basically runs through the same phases as a person-to-person discussion, with the addition that during the session the hygiene educator will take a special effort to stimulate direct communication between the participants. The specific characteristics of a focus group discussion, particularly helpful to get a deeper understanding of people's attitudes and perceptions, have already been discussed in Chapter 7.

For effective communication during the group discussion a number of tasks have to be fulfilled:

- taking initiative, for example to start the discussion, to give suggestions and to table proposals;
- providing structure to the discussion, by keeping track of the purpose of the discussion, keeping an eye on the time, giving interim summaries of the discussion to keep everybody on the same line;
- providing information and correcting wrong information;
- providing guidance to the group process and support to individual participants, for example to enable everybody to speak up, to stimulate shy persons to become active, to make sure people are listened to and taken seriously, to create an open atmosphere, to help create consensus and to make joint decisions;
- evaluating the discussion.

These tasks can be fulfilled fully or partly by the group participants. The hygiene educator will fill the gaps and particularly will take care of the group process and decision making. When a group comes together on a regular basis, group members may compete for influence, with resulting feelings of sympathy and antipathy leading to sub-groups. The hygiene educator will have to take care that this is not frustrating the success of the hygiene education. If worst comes to worst, groups may be better split up.

The composition of the group always requires careful consideration. If groups are composed of people with too different backgrounds, this may hamper a fruitful exchange, as perceived problems and realistic solutions may differ too much, or because in a mixed setting it may be difficult for women or lower status groups to speak up. Differences in background relate for example to cultural, ethnic, residential, social and economic differences or any combination. Age and gender are other considerations for group composition. Thus, there may be specific reasons to have women and men together in one group, or to have separate women's and men's groups. The same applies to the age factor. Main requirement for a good group discussion is that all participants in the group are allowed to speak up and indeed feel free to do so.

The following is a story which apparently has nothing to do with water supply - or has it?

THE GIFT

There once was a man living in a certain village, whose son was working in Lusaka. His son came to visit him and brought him a gift: A new shirt and trousers. The father was happy and thanked him profusely.

Six months later the son received a parcel containing the shirt and trousers. The accompanying note read: Please, the shirt and trousers need to be washed and mended. I am waiting for your action, since I have nothing to wear.

- * *What do you think of this?*
- * *What would you do if you received something?*

This is a gentle way to introduce the necessity of taking responsibility for new water supplies as well as for rehabilitations. People always react with understanding to this story - in fact they appreciate the wit of the extension worker.

Source: Zambia, Government of, (1987).

Group/public meetings

Larger group meetings, with more than 25 to 30 participants, are particularly useful for quick information dissemination, awareness raising and gaining initial support for hygiene education activities. As it is impossible to have a dialogue

with so many participants, these bigger group meetings tend to involve more one-way flows of information. This is not to imply that these meetings should be based on one-way teaching (see also section 10.1). All possible measures should be taken to get the participants involved and committed. The following suggestions may help to make communication in group meetings more effective:

- Clearly decide on your purpose and messages, and make sure that a group meeting is the best channel.
- Limit the group presentation to 20-30 minutes and make the presentation more interesting by using an overhead projector, blackboard, flipcharts, drama, demonstration, slides, video, etc..
- Make sure that the presentation is target group oriented. The information presented should be closely linked to the group's present knowledge and experiences, and new information should be relevant to them. As a rule of thumb, a presentation is more effective when it does not contain more than about 30% new information.
- Try out the presentation before the meeting, and make adaptations if necessary.
- Have the target group invited in good time, and indicate why you would appreciate their participation. Make sure both men and women are joining, and if necessary have a separate women's meeting organized. Make sure that the date and time are suitable for the invited participants.
- Have the meeting place ready in good time and pay special attention to seating arrangements.
- At the beginning of the meeting, have a short but clear introduction about the purpose, organization and expectations of the meeting, and about the participants.
- Take time for feedback, clarifications, answering questions.
- If feasible, have the presentation followed by small group discussions or a field visit, allowing for further informal discussions.
- Summarize main points at the end of the meeting, and give clear idea of follow-up, especially when/where participants are involved.
- Do not forget to evaluate the meeting (Wapenaar et al, 1989, p. 180-187).

B. Mass media

Mass media include wall posters, hoardings, radio, television, cinemas, magazines, newspapers, books, (mobile) loudspeakers, etc. The main characteristic they share is that they do not involve direct face-to-face interaction between the hygiene educator and the target group. Mass media are particularly useful for sharing simple facts and to influence opinion. They are less likely to help change attitudes and behaviour, unless combined with or reinforced by interpersonal communication (Hubley, 1988b).

For the use of mass media, communication materials have to be developed, such as a radio programme, a poster, a text, a video. Communication materials

are further discussed in section 10.4. As this book relates to hygiene education as part of water supply and sanitation projects, the emphasis will be on materials serving interpersonal communication between educators and target groups. Communication materials for mass media require different skills and expertise, as the educator is not around to stimulate people's interest and to discuss ambiguities and related issues. The interested reader is referred to books like Manoff (1985), especially to gain insights on the difficult process of message development for mass media use. Below the various characteristics of interpersonal communication and mass media are briefly compared.

<i>Characteristics</i>	<i>Mass Media</i>	<i>Interpersonal</i>
speed to cover large population	rapid	slow
accuracy and lack of distortion	high accuracy	easily distorted
ability to select particular audience	difficult to select audience	can be highly selective
direction	one-way	two-way
ability to respond to local needs of specific communities	only provides non-specific information	can fit to local needs
feedback	only indirect feedback from surveys	direct feedback possible
main effect	increased knowledge/ awareness	changes in attitudes and behaviour

Figure 8: Main characteristics of mass media and interpersonal methods. Source: Hubley, J. (1988b).

10.3 Additional attention points for effective communication

A number of additional points have to be kept in mind for effective communication:

Reaching the target group(s)

If we don't reach our target group(s) we cannot possibly be effective with our hygiene education activities. Therefore, reaching the intended target group(s)

should be a continuous concern. In some cultures it might be difficult to approach the main target groups immediately, without going through the hierarchy of formal and informal authorities. Then it will be necessary to first gain their positive involvement. In some cultures it might be difficult to reach women straight away and talk to them freely. In those cases some special effort needs to be made, and some suggestions are:

- Try to meet with women separately. Sometimes if men and women are together, it is much more difficult for women to talk.
- Get permission of the head of household to invite the women of the household to join the hygiene education activities by making your intentions clear.
- Permission of senior women might have to be secured to talk to younger women.
- Meet with women in places where they are likely to be found: at home, in the field, at the water points, at women's gatherings.
- Contact women's leaders, women's organizations and wives of local leaders right from the start. They can assist in reaching other women in the community (Diamanti and Heyn, 1985, p. 21).

Often, community members themselves can suggest the best ways to arrive at active women's participation. The hygiene educator's task is thus more to raise the point if necessary and to make sure it is happening, than to find a solution him/herself.

Location and hour

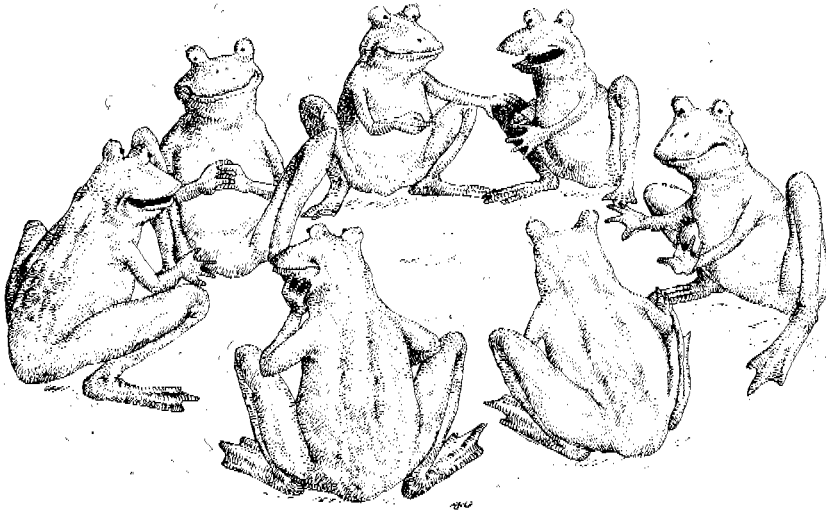
Effective communication is only possible when the location and hour for the encounter are suitable for the intended target group(s). In a number of societies there are restrictions as to where women can meet (see above). Places like religious centres, office premises, schools, markets, or health centres, may be convenient and accessible places for some, but not for others. It should always be verified that the location suits the target group. The same goes for the meeting time. In Nepal the women indicated that the best time for them was around seven in the morning before breakfast preparation and agricultural work. In a community in Bangladesh the men preferred the evenings as they were doing business during the day.

Frequency

Regular communication is needed before we can expect a change in health-related behaviour and conditions. This requires continuity in the hygiene education activities (see also Chapters 2 and 9).

Several programmes have tried to figure out what is the minimum number of times to be with a target group over what time span. For example, should a

community group be visited for hygiene education every fortnight for six months and then every two months for a year and a half? There does not seem to be an easy answer to this question, first because we do not have enough information, and more importantly because there are many influencing factors such as objectives set, types of target groups, types of hygiene educators, type of project. The point to keep in mind is that for any impact from hygiene education, continuity is required.



Hygiene education is a process of communication.

Guidance and support

Communication for health improvement is far from easy, as may be clear from the above and the other chapters. This implies that hygiene educators should be set realistic tasks, and be given sufficient guidance and support to carry them out. The lower the educational level and the more limited the job experience of the hygiene educator, the more important this is.

Guidance and support can be given by providing in-service training, on-the-job training and supervision. For sufficiently qualified hygiene educators periodic support will do; for community hygiene workers with little education and experience more intense guidance will be needed. They may get lost easily when they have to carry out participatory communication, because people may come up with questions, problems and suggestions they cannot handle. Also, the communication process itself is quite demanding, requiring trained skills and

sufficient self-reliance. Low-level community workers who cannot cope with it will tend either not to perform their tasks or to resort to one-way teaching - telling people what they should do. We have already seen that we cannot expect this to be effective.

In a new hygiene education programme in the Yemen a field trip serves several purposes:

- *hygiene education with the women in the village;*
- *training of the hygiene educators;*
- *training and guidance of the selected women leaders;*
- *further development of the hygiene education activity.*

The field day schedule is as follows:

- *collect the hygiene education materials at the office;*
- *travel to the village;*
- *contact the women leaders and discuss the proposed hygiene education activity;*
- *conduct the hygiene education activity with all the women in the village;*
- *review with the hygiene educators and the women leaders, the hygiene education activity;*
- *review with the hygiene educators and the women leaders, their performance and roles during the hygiene education activity;*
- *informally walk around in the village combined with short home visits;*
- *travel back to the office and fill out the village reporting form.*

Source: Derckx, M. (1989) p. 8.

Community workers with little education and experience can be helped to improve their communication in various ways:

- have hygiene education start from practical problems and concrete situations and not from general or abstract health problems;
- have practical visit plans the workers feel confident to carry out;
- have regular, say bi-weekly or monthly, feedback and planning meetings to discuss field experiences of the past period and to make practical planning of activities for the coming period;
- have communication support materials, such as audio-visuals, that are appealing for the target groups and easy to transport and use for the workers.

At the end of the chapter some examples are given.

10.4 Communication support materials

The communication process in hygiene education is often greatly supported by the use of communication materials. The best materials or audio-visual tools are those that clearly show the intended message, that stimulate participatory

communication and that make people active. Demonstrations, models with movable parts, poster series (see example at the end of the chapter), games, and community dramas are some of the tools that more easily meet these requirements. Other audiovisual materials are leaflets, posters, flashcards, cassette tapes, slides, videos, songs, stories, etc. An overview of commonly used visual tools is presented in Table 4 at the end of the chapter. Cassette tapes with pre-recorded little stories or for recording during visits are a much overlooked tool that may be promising.

A frequent problem in projects is that much more attention is devoted to the development of audio-visual materials, than to their testing and use. The best way to prevent this is to start with development of the hygiene education programme itself, down to preparation of implementation (see Chapter 9), and only then to decide on what types of materials are needed for what target groups. In considering the use of communication support materials, a few things should be kept in mind:

- A lot of materials have already been developed. It may be worthwhile to review easily accessible materials to consider their usefulness for the hygiene education programme, either as they are or in adapted form. Local and international organizations may be approached for this purpose (see also Chapter 6).
- Material development by the target population and/or local hygiene workers is often an effective hygiene education activity in itself, and can produce interesting materials and activities for participatory communication and learning.

"Experience showed that it is best to make our own extension materials which fit our hygiene education activities. The type of material did not prove to be important as in general any material used received a lot of attention and made discussions easier. Surprise increases attention. Therefore, we try to use a variety of materials, such as self made flannel graphs, photos, products bought from the shop, things women bring from their houses. The extension material we use most often consists of examples of daily life, such as a child having dirty nails, a child refusing to wear its shoes, chicken running around in a kitchen."

Source: Derckx, M. (1989) p. 28.

Except when material development is a hygiene education activity in itself, pre-testing will always be necessary before duplication and more widespread use. Usually testing of communication support materials does not need to take more than a few days to a couple of weeks. As pre-testing is a much neglected activity, we address this issue briefly below. Also often neglected is the fact that the materials will only be as helpful as the use that is made of them.

Communication materials seldom work on their own. They are usually designed

to be used by an educator. Community hygiene educators should be stimulated and trained to use developed materials effectively. This point will be further addressed in Chapter 11.

Pre-testing

Pre-testing means field testing communication materials before they are produced or printed. This is done by interviewing representatives of the intended target group, to find out whether they easily get the intended message, and whether they like the materials. Questions to answer are for example:

- Do they like the materials?
- Are the symbols (drawings, figures, words, arrows, etc.) understood?
- Do they get the intended message right away?
- If the material is built up from segments/units, eg. a series of pictures, do they interpret it as a whole, or separately? Is the overall message understood?
- Does the material have relevance for their own situation, lives, needs?
- Does any part of the material embarrass people?
- What significance is attached to the use of colours?

Testing can be done with individuals and/or with groups, depending on the type of materials and the purpose of the pre-test. Pre-testing in small homogeneous groups may have the advantage that people will feel freer to discuss the issue and/or the picture being tested. Also, people often will come up with suggestions for improvements, allowing the opportunity for immediate reactions to these suggestions by other group members.

The number of people involved in the test depends on their reactions. If reactions point in the same direction - either indicating that the material is ok or what should be adapted - then some 20 people are enough. If the answers differ a lot, the test may have to involve up to 50 people. It is always important to include people from the poorest section and with the least education of your target group in the test. They should understand and like the material, and it should be relevant to their lives, if the community as a whole is to profit from the hygiene education activities.

In testing the materials it is also prudent to test the ease and attractiveness of their use for the hygiene educators (Haaland, 1984).

Table 4: Overview of common visual tools

<i>VISUAL AID</i>	<i>GENERAL DESCRIPTION</i>	<i>RECOMMENDED AUDIENCE SIZE</i>
Chalkboard	A rigid surface painted green or black; on which one can write or draw with chalk.	Up to 30 people. If used with more, a large board is needed and careful audience placement is necessary.
Flannel Board	A piece of flannel, flannelette, terry cloth or felt cloth attached to a rigid surface on which cut-out figures will adhere if backed with flannel or felt cloth, sandpaper or glued sand.	Up to 20 people. Audience size depends on the size of the flannel board and the size of the figures that are being used.
Posters	A message on a large sheet of paper, with an illustration and a simple written message.	No limit, because it is not necessary for everyone to look at a poster at the same time.
Flip charts	Illustrations on paper or cloth, usually larger than 21cm by 27cm; bound together with rings or strings. They flip over in sequence.	Up to 30 people. Audience size depends on the size of the flip chart illustrations.
Flash cards	Illustrations made on heavy paper that is usually smaller than 21cm by 27cm. The illustrations are not bound, but may be arranged in sequence.	Up to 15 people. Because the illustrations are small, no more than 15 people should be in the audience.
Bulletin Boards	A surface, at least 3/4m by 1m, into which stick pins can be placed. Drawings, photos and lettering can be displayed on the board.	No limit, because it is not necessary for everyone to look at the bulletin board at the same time.
Demonstration	Using actual ingredients, tools, or land, the educator shows how something is done. Either at that time, or soon thereafter, each audience member displays an ability to do the demonstrated activity.	1 to 30 people. Because it is difficult for an educator to follow up on more than 30 persons, this is the recommended limit.
Slides	35mm film in plastic or cardboard mounts 5cm by 5cm. In color or black and white, they are projected on a screen or a wall.	Up to 30 people. Though slides can be used with more people, the educator can stimulate better discussion among a smaller group.
Filmstrips	Strip of 35mm film, color or black and white. Photographs in sequence. Filmstrip projected on screen or wall. Uses projector with filmstrip adapter. Filmstrips horizontal or vertical format.	Up to 30 people. Though filmstrips can be used with more people, the educator can stimulate better discussion with a group of this size.
Film	Color or black and white, 16mm or 8mm cinema film, with sound, projected on a screen or wall.	30 to 100 people. Group can be larger than 100 but it is difficult to have any discussion with larger groups.

Source: World Neighbours in Action, "Communication" in: Favin et al (1986) p. 20/21.

ADVANTAGES

Inexpensive, can be homemade, easily maintained, minimum of preparation. Enables audience participation. Used day or night.

Inexpensive, easily made from local materials. Easily maintained and transported in remote areas. Figures can be used in different presentations. Ideal for showing "sequence of events" and reviewing lessons, as figures can be brought back on the board.

Inexpensive, easy to make. Requires limited time to prepare and use. Easy to transport.

Inexpensive, can be homemade, and can be easily transported. Good way to discuss information in sequence. Because they are bound, illustrations stay in sequence.

Inexpensive, can be homemade, very easy to transport. Good way to give information in sequence to small groups.

Inexpensive, can be homemade from local materials. Useful for small group discussions.

Excellent way to use actual materials in real situation. Uses local materials. Easy to understand by people not used to looking at illustrations. Good way to get audience participation.

Dramatic, less expensive than cinema film, excellent way to bring distant things to audience and to show time sequence. Battery-operated projectors available. Local photos easily made.

Dramatic, less expensive than cinema film and slides. Once inserted correctly in projector, impossible to get out of sequence. Can show photos of the real thing and shows sequence in time. Battery-operated projectors available. Relatively easy to transport.

Dramatic and gets the audience's attention. Shows motion and therefore helps explain step-by-step, and time sequence very well.

DISADVANTAGES

Transport can be difficult in remote areas. Limited to the user's artistic ability.

Requires considerable advance preparation. Difficult to use out of doors if there is any wind. Some artistic ability is required if making homemade figures.

Deteriorate rapidly. Can confuse audience with too much or too little information. Need some artistic ability if making own posters.

Deteriorate with constant use. Some artistic ability required if making homemade flipcharts.

Deteriorate with constant use. Some artistic ability required if making homemade flashcards. Limited to small groups.

If out of doors, weather damages can occur. Constant supply of good educational material to put on the board is needed.

Takes some pre-planning and preparation.

Easy to damage, easy to get out of sequence and project upside down or sideways. Requires projection equipment, electrical outlets or batteries, and darkened projection area.

Can be damaged, requires projection equipment, requires either electrical outlets or battery-supplied electricity (Sometimes batteries are expensive). Requires darkened projection area. Limited appropriate filmstrips available.

Very expensive, requires expensive equipment, electricity and dark projection area. Difficult to transport and operate.

Example: Health Communication

At the oral rehydration therapy unit in a rural Nigerian clinic, small group discussions are held after the health worker in attendance makes sure that all children have been given fluids and the mothers are at ease. Introduction and greetings are exchanged. An initial discussion about cause of diarrhoeal disease might proceed as follows:

Health worker: Please tell me some of the reasons why children get diarrhoea.

Mother A: Most children get diarrhoea when they are teething.

Mother B: Diarrhoea happens when children have dirty stomach.

Health worker: Please explain more about dirty stomach.

Mother B: When the stomach is dirty, the diarrhoea helps wash out the dirt.

Health worker: What makes the stomach dirty?

Mother C: Bad or dirty food is one reason. Some food just does not agree with some children.

Health worker: Remember one of you said that diarrhoea happens during teething. What do you observe about your children's behaviour during teething?

Mother C: They cry a lot.

Mother D: The child picks up anything to put in his mouth to suck on.

Mother B: My child sucks on her fingers.

Mother E: My child will pick up anything from the floor and put it in his mouth. He was chewing on my sandals yesterday and even picked up an old maize cob yesterday.

Health worker: You are right, children will chew on almost anything when they are teething. You noted that they even pick up things from the floor to chew. Many of these things are probably dirty.

Example continued

Mother C: They surely are. I caught my child with an old bone the dog had dragged into the yard.

Health worker: What do you think happens when children put dirty things in their mouths?

Mother D: Well they must swallow some of the dirt.

Health worker: Then their stomachs become dirty and they get diarrhoea. So maybe this is why we see so much diarrhoea when children are teething. Now from what we have just said, do any of you have ideas on how to prevent diarrhoea?

The discussion continues with mothers giving suggestions based on their earlier contributions.

Note that the health worker did not criticize the mothers or the beliefs they mentioned. Instead she sought a link between the mothers' ideas and her own knowledge of disease transmission. The mothers were then guided to develop their own conclusions and suggested action.

Source: Brieger, W.R. (1988).

Example: Hygiene Education Plan for Community Visit of a Project in Sudan

MEETING NO. 2: Clean well

Participants during the day:

- Hygiene Education Team
- Village Health Committee
- Caretaker(s)
- Women using the improved well(s)

Purpose and activities:

- Monitor the topics discussed during previous meeting. Discuss strong and weak points pointed out through the monitoring exercise. Together analyze the problems and find solutions. Stress responsibilities of the Village Health Committee, caretaker(s) and well users.
- Try to make a link between diarrhoea and dirt, dirt and well site, well site and diarrhoea.
- Propagate a clean well site: stress responsibilities of Village Health Committee, caretaker(s), women, villagers in general:
 - clean the slab;
 - avoid spilling;
 - keep water containers on the slab;
 - clean the drainage system;
 - improve the direct environment (muddy/wet places);
 - make and maintain a strong fence;
 - keep animals outside the fence, also for watering;
 - try to do the washing outside the fence.
- Propagate clean water-fetching containers and ropes:
 - clean the water-fetching containers and ropes before throwing them into the well;
 - keep all the containers on the slab; do not put them off the cement.
- Appointment for and agenda of meeting no. 3.

*Example continued***Methods:**

1. Visit, observation, comparison, discussion, practical demonstration.
2. Group discussion, using flip-over posters.
3. Group discussion, using flip-over posters.

Location:

1. At traditional well sites, at improved well site(s).
2. At fixed Village Health Committee meeting place.
3. At a central place in the village-segment(s) using the improved well(s).

Participating groups:

1. Village Health Committee, caretaker(s), women using the wells.
2. Village Health Committee, caretaker(s).
3. Women from the village-segment using the improved well(s),
Village Health Committee members representing these segments.

Timetable:

1. Morning
2. Morning/Afternoon
3. Late afternoon/Evening

Note: The numbers relate to each other. Thus, method 1 is for location 1 with group participants 1 and timetable 1.

Source: Fernig, I. (1989).

Example: Hygiene Education Plan for School Session in Nepal

LESSON PLAN: HAND WASHING

Objectives:

- The students can explain why we should wash our hands, especially before handling food.
- The students can explain why hands should not be washed with soil.
- The students can mention at least two good alternatives to soil to wash their hands with.
- The students can explain why it is not sufficient always to wash their hands with water only.
- The students are motivated to wash their hands not with soil, but to use ash or soap.

- Materials needed:*
- These guidelines for the discussion.
 - Ash, soap and in case there is no tapstand in the neighbourhood, a container with water.
 - The song about hand washing.

- Time needed:*
- About 3/4 hours for the discussion.
 - About 1/4 hour for the practice.

Questions for the discussion:

1. Why do we have to wash our hands?
2. How do our hands get dirty?
3. How often do we have to wash our hands?
4. When do we have to wash our hands?
5. Are your hands clean now? Please show me.
6. What do you use to wash your hands?
7. Who washes his/her hands with soil?
8. Is soil clean or dirty?
9. How does it get dirty?
10. What happens if we get soil in our stomach?
11. What happens if we eat with hands that are not washed at all?
12. What can happen if we eat with hands that are not washed or washed with soil?
13. Can we get sick if we eat with hands that are not washed or washed with soil?
14. What should we use to wash our hands?
15. Is ash clean or dirty?

Example continued

16. Does your mother clean the cooking pot with ash?
17. Do our hands get clean if we wash them with ash?
18. Do our hands get clean if we wash them with soap?
19. Is soap available here?
20. How much does it cost?
21. Do we have to buy ash?
22. If we cannot buy soap, what should we then use to wash our hands?

Practice:

Take the students outside. Select 6 or more students with dirty hands and divide them into three groups. One group should wash their hands with water only, one group with ash and one group with soap. The results have to be shown to everybody and discussed.

Sing and teach the song about hand washing.

Source: Bolt, E. (1989).

Example: *Extension Activity of a Project in Zambia*

Title: At Home

Subject: Household hygiene practices

Setting: Classroom or village gathering

Duration: children: 15 minutes
adults: 20 minutes

Purpose: To investigate
knowledge of community on hygienic practices

To reinforce
sound practices in and around the home

To acquire
commitment of the men / boys where their assistance
is needed

Presentation: Use set of posters showing good and poor household hygiene practices. The posters are put on a mat or table so that everybody can see them. Participants are told that these posters depict either 'healthy living' or 'living leading to illness'. The posters are picked up one after another by participants and described after which they are assigned to either pile. Sometimes a third pile 'undecided' is needed when people cannot agree. The facilitator may decide to emphasize some points brought up by asking questions, but normally people give quite convincing explanations without being probed. Often participants talk themselves into the benefits of having pottracks and latrines. You can then make links to visible shortcomings in the village in a gentle or joking way.

Source: Zambia, Government of (1987).

11. Personnel and Costs

Personnel and costs of an integrated hygiene education programme are very much neglected aspects in many water supply and sanitation programmes. For a hygiene education programme to have any chance of being effective, much more attention is needed to provide enough qualified staff, appropriate manpower training and supervision, and adequate funding.

Personnel and costs considerations should be taken into account from the very start of a project, during identification and formulation. These factors are being discussed in greater detail now because of their interplay with project organization, project objectives and hygiene education programming.

11.1 Education/participation coordinator

There should be at least one person in the project who has overall responsibility for the planning, preparation, implementation and monitoring of the hygiene education programme. This person is referred to as Education/Participation Coordinator in Chapter 4. As was discussed in that chapter, it might be best to have responsibility for community participation and hygiene education coordination unified in one person, because of the close interrelationships between the two.

The education/participation coordinator should preferably have a degree in extension or social science. More importantly, she or he should have working experience at field level and above, have a sufficient education and age to establish equal working relations with the project manager and heads of cooperating agencies, have communication and management capabilities, and have affinity to work with technical staff.

Often it is argued that a woman is needed for this position, to increase the chance of women's involvement in the planning, implementation and follow up of the project activities. Without denying the importance of such influence, it would be wrong to select a person solely on the criterion of being a woman. More important is that the project creates conditions for women to participate in the programme on an equal basis.

For an education/participation coordinator to be able to do a good job she or he needs sufficient recognition for the importance of integrated hygiene education. Project management and technical staff who consider a hygiene education programme as a troublesome appendix will complicate the work and make it less efficient and effective. Often, special attention has to be given to this aspect. Orientation and training sessions may help, both for management and technical staff to become familiar with the integration of a hygiene

education component, and for education/participation staff to become familiar with the integration of a technical component (see also Chapter 9).

Another point to be appreciated is that the education/participation coordinator often has a position where interests of various organizations meet, or as easily may be the case, conflict (see Chapters 4 and 6). This is another reason why the work of the education/participation coordinator may be difficult and progress less than desirable. Also here, project management can play an active role to smooth problems. One of the mechanisms to be used for this may be a coordinating committee consisting of representatives of the various cooperating agencies, as already discussed in Chapter 4. Two example job descriptions of an education/participation coordinator are attached at the end of the Chapter.

11. 2 Community-level workers

Field-level staff responsible for the implementation of the hygiene education activities with the communities may come from the project, from cooperating organizations, or both. In addition, community representatives may act as hygiene educators for their fellow community members.

Technical staff

In some projects the choice is made to assign technicians responsible for the construction of the water supply and/or sanitation facilities, the task of also carrying out hygiene promotion. If well-trained and well-guided, these technicians can to a certain extent be effective hygiene promoters. However, there are many pitfalls. A good technician is not necessarily a good hygiene promoter. Technicians may be uninterested or incapable of acting as community hygiene promoters. Also, as technicians often are men, they may find it difficult to find ways to involve women. The community may be uninterested or unwilling to discuss their hygiene problems with a technician, because of his usually low educational background and low socio-economic status (see Chapters 2 and 10). In Bangladesh it was found that these problems could be overcome by having a very active supervising engineer who spends most of his time with the people in the communities. Another way to minimize the limitations is to recruit new technicians not only on the basis of their technical skills, but also their social interests and abilities.

The general advantage of having technicians responsible for communication and education tasks in the communities is that technical aspects and educational aspects are unified in one person. The disadvantage is, that the educational objectives and targets should be necessarily modest with plenty and obvious links to technical aspects, and that a rather strict and detailed community level workplan is needed (see Chapter 9 and 10) with much supervision and support. Without practical hooks for the technicians to build

their hygiene education activities on, and without motivation from their superiors this option cannot be expected to work.

A generalization about the role of the Tubewell Mechanic (TWM) as motivator for latrine construction and use is not easy to make. Thus, one TWM was very determined in getting latrines constructed and used, and he succeeded through constant motivation. Another felt uncomfortable and shy to carry out motivational activities because he was laughed at when he tried, and he generally failed to activate people. Or, to give another example, one TWM did not approach women because he did not feel it to be appropriate for a man to do so, whereas another TWM contacted a female field worker to call a gathering with all village women to provide him with an opportunity to discuss health and hygiene with the women. The impression is that the age of the TWM does not influence his effectiveness as a motivator, except that often it is easier for an older TWM to inspire confidence, to contact women and to motivate people to act.

Source: Abdullah, T. and Boot, M. (1989) p. 79.

Project educational staff

In other projects the choice is made to have educational field staff appointed to the project. From a project management point of view this may be the easiest arrangement, as it allows for in-house arrangements for all aspects related to the integration of the technical and educational components (see Chapter 4).

However, the drawback may be the manpower costs. Often then it is decided to only appoint a few educational staff, with the implication that they cannot cover all the project sites as the technical staff can. In Nepal for example it was therefore decided to have an intensive hygiene education programme by the educational staff in selected sites only, and to have a short hygiene education campaign carried out by the technicians at the remainder of the sites.

Another possibility is to have the project educational field staff assigned as area coordinators, thus that they act as coordinators of the hygiene education activities by technicians and/or other field-level workers in the assigned area under the education/participation coordinator. This might be a good solution, however a practical problem is often that this educational staff has limited professional and practical experience, making the satisfactory fulfilment of their task as area coordinators very difficult. Training and supervision of this staff therefore will be an essential supplement.

Extension staff of other agencies

A third option is to work through field-level workers of other agencies. The most obvious choice then is to work through the Ministry of Health, but of course also other ministries and NGOs may have a reservoir of community-

level workers who may provide important inputs in the hygiene education programme (see also Chapters 4 and 6).

This option may be the preferred one, especially when field-level workers of the Ministry of Health are taking charge of the hygiene education activities. Working through existing field extension staff has the advantage that effective use is made of an already existing (health) infrastructure, that overlap or conflicting activities can be prevented, and that the hygiene education activities can continue once the project is over.

However, this option also may be the most difficult one as there may be many reasons why cooperation with other agencies are constrained. Apart from the usual problems between cooperating agencies, there may be the problem of unrealistic expectations. For example, the Ministry of Health often is a ministry with serious budget constraints, whereas internal management constraints are also common. One of the reasons is that there are so many competing health priorities such as immunization programmes, anti-AIDS programmes, family planning programmes, etcetera. Therefore, working with other ministerial departments needs a long term view, flexibility and high level commitment to make it work. These problems may be less when involving NGOs, but their continuity after project termination may become an issue, especially when the NGO is largely dependent on outside funds (see Chapter 6).

Pre-testing trains field workers:

The project uses a system of community mobilization that recruits local men and women from the project area to become field extension workers. Often, they have only slightly better education than their neighbours, but are required to perform as educators. Without training and support, their activities are often met with resistance as their peers question their credibility. If these field workers are involved in the pre-testing exercises during the development of training material for their area, they become well grounded in the health issues they are supposed to cover. It gives their education activities a structure and sense of direction. During pre-testing they also learn to listen, and how to draw out answers from their audience. This is a radically new approach for most people who may have attended a dictatorial schooling system.

Source: Mwangola, M. and Waterkeyn, J. (1990) p. 4/5.

Community voluntary workers

In addition to community-level staff, from whatever organizational background, at community level, key persons may be selected to be assigned with special responsibilities to promote personal and environmental hygiene and to record hygiene education activities and changes in conditions and behaviour for monitoring purposes and follow up. Working with and through community representatives may be very efficient and effective. We have called these

community representatives intermediate target groups, as discussed in Chapter 8. However, it can not be expected that they will be active and continue to be so, unless appropriate training and regular support and back-up is provided.

11.3 Manpower characteristics, training and supervision

Valued characteristics

General characteristics of a good community hygiene educator are that he or she is considered by the men and women in the community to be:

- reliable and trustworthy;
- a skilful communicator;
- knowledgeable about water and sanitation;
- readily approachable by all community groups;
- liked because of his/her positive personality and motives to support the community;
- able to cooperate with technical staff and to voice the views and interests of the community to relevant organizations and authorities.

We have touched upon a number of these characteristics before in Chapters 9 and 10. It is important to keep these general characteristics in mind in selecting new community hygiene educators, and the more so in training development and implementation, and for supervision.



Participatory training is important for participatory hygiene education.

Training components

Based on the general characteristics of a good community hygiene educator, we can distinguish three related training components:

1. Knowledge skills training, such as:
 - how water and sanitation diseases are spread in a community, and what men and women themselves can do to cut off local transmission routes;
 - basic aspects of water supply and sanitation technology and their implications for the siting of facilities, service levels and maintenance demands, and their implications for costs, water source protection and hygiene practices;
 - cycles of water and waste, and their implication for water resources management and environmental protection;
 - why it is necessary to involve women as active participants, what are common problems to overcome, and what are ways and means to do so (IRC, 1991, Module III, p. 34).

Another example of a list of knowledge skills requirements is presented at the end of the chapter.

2. Communication skills training, such as:
 - how to introduce yourself in the community;
 - how to contact and identify specific target groups;
 - how to start up community-based hygiene education activities;
 - how to conduct a person-to-person discussion;
 - how to organize and conduct group discussions and group meetings;
 - how to cope with internal community conflicts or competitions;
 - how to create trust and reliability.
3. Special skills training, such as:
 - how to use communication skills for joint problem identification and joint problem solving;
 - how to use communication materials;
 - how to do a community-based study;
 - how to plan community-based hygiene education activities;
 - how to cooperate with technical staff;
 - how to monitor community-based hygiene education activities;
 - when and how to report back and how to benefit from supervision.

Training requirements

Often it will be necessary to have initial training organized in an early stage of the project to give hygiene educators the necessary skills to start up community-based hygiene education activities. As with all training, this training will be

more effective when:

- it is based on the skills and experience the trainees already have;
- it is based on community needs and priorities;
- it is directed to realistic and immediate improvements in carrying out hygiene education tasks (and thus directed to greater job satisfaction and self esteem);
- participatory learning methods are used;
- trainers have practical knowledge and experience they are able to share;
- the training has learning objectives that are specific and limited in number.

Role playing was used to sensitize the trainees on the day-to-day realities of men and women in the communities. First the trainers played a common scene, ending in disagreement and shouting. Then the trainees were asked to replay the same scene, now ending in harmony and joint action. Two scenes were used: (1) a man refusing to dig a rubbish pit for his wife; and (2) a female caretaker not taken seriously by a man who is mishandling the well.

Source: Kanyetta, P. and Docdens, A. (1990) p. 4 (unpublished).

Training will always require a training needs assessment, both from the point of view of the trainees, and the communities (see Chapters 6 and 7), and a careful selection of suitable trainers. The learning must be perceived to be relevant to the job of the hygiene education trainees and to the needs of the communities they are going to work with. During the training the hygiene education trainees should be given ample opportunities to play an active role in the learning process by formulating questions and then seeking the answers, by discussing what has been found, and by applying what has been learnt to the field situation (Abbatt and Mejia, 1988, p.11).

It is usually better to have a series of short training courses, alternated with practical fieldwork, than to have one long training course that might get too theoretical. Whether the initial training course is long or short, follow-up training will always be required at regular intervals, to build up skills further, to increase motivation, and to learn from experience.

Every training course should have a built-in evaluation, at least at the end of the course, and preferably one or more times during the training, to allow for timely adaptations, if required. Aspects to be evaluated may include:

- the training content, both the class work and the field work: what was learnt by the trainees;
- the methods of training, and the use of training materials;
- performance of the trainers;
- participation of the trainees;
- practical arrangements (food, accommodation, social activities) (Diamanti and Heyn, 1985, p. 139).

After the training, proper monitoring and supervision will help to assess the success of the training and to identify further training needs. The hygiene education trainees themselves should be actively involved in the process of evaluation and follow-up to increase the effectiveness of training and supervision, and also to act as a motivational tool.

Need to unlearn

Until now, many hygiene educators and trainers of hygiene educators have been educated in didactic teaching methods only, without being familiar with more participatory learning methods. It is not easy to switch over. Abbatt and Mcjia (1988) point to the fact that training and supervision should not only be focused on acquiring new knowledge and abilities, but also on modifying or revising existing methods of work through a process of 'unlearning'. For this it will be necessary to create a learning environment that is as unthreatening as possible, for the trainees to experiment and get familiar with participatory learning methods, and to gain confidence in giving up what have proved to be less effective teaching methods (see also Chapter 10).

Training of trainers and coordinators

Recently more attention is being paid to the training of trainers of hygiene educators and to the training of hygiene education coordinators, with emphasis on the development and use of participatory learning methods. For example the UNDP Project for the Promotion of the Roles of Women in Water and Environmental Sanitation (PROWWESS) is very active in this respect, and the manual on participatory techniques by Lyra Srinivasan (1990) provides nice examples. One of these examples has been attached at the end of Chapter 9. Of course the real impression can only be obtained by following such a course and obtaining practical experience.

Institutional/project support

Training can do a lot to make the work of hygiene educators more effective. However, institutional changes may also be needed. Frelick and Fry (1990, p.ix) point out the need for supervision of hygiene educators, the creation of incentives for acting differently on the job, clear job descriptions, and adequate provision of materials and transportation. The project or agency for which the hygiene educator works should take responsibility for supporting work in this area and must monitor the performance of each hygiene educator in working collaboratively with communities.

Institutional and/or project support will also be needed to facilitate women's involvement in training. Important measures to enhance women's involvement are:

- proportional recruitment of women for training;

- involvement of women in selection of suitable candidates;
- adaptation of training duration, venue, and facilities to women's conditions;
- provision of support after training (IRC, 1991, Module III, p. 27-29).

Supervision

Apart from training, supervision is an important tool to support hygiene educators in their work and to increase the effectiveness of the hygiene education programme. Supervision in hygiene education programmes seems to be a neglected factor. If supervision is carried out, it is often done infrequently or as a control measure rather than regularly and as a support measure. Supervision should help to develop the quality of work and job satisfaction through continuous education, guidance, encouragement, and motivation. In addition, supervision is a management tool for obtaining information on problems encountered in the process of hygiene education implementation and for finding quick and appropriate solutions (Abbatt and Mejia, 1988, p. 34 and 78).

In summary, supervision may help to:

- provide support to the hygiene educators in carrying out their tasks;
- resolve problems as they arise before they become obstacles to successful completion of the hygiene education programme;
- coordinate various activities;
- ensure that all elements of the hygiene education plan are happening when they should.

To this end, some of the tasks that a supervisor would carry out may include:

- visiting the hygiene educators in the communities during their work;
- encouraging the hygiene educators to carry out their tasks;
- providing the hygiene educators with positive feedback and suggestions for improvement;
- helping to identify and resolve problems quickly;
- holding group meetings with the hygiene educators, and if necessary other project staff, to discuss progress, problems and solutions, and future activities (Diamanti and Hcyn, 1985 p. 105-107).

Supervisors may be found within the project, in the person of the Education/ Participation Coordinator and his or her field educational staff, or within the cooperating agencies, such as the Ministry of Health or an NGO. Whatever arrangement is chosen, regular contact between the supervisor(s) and project management will always be necessary for good progress of the water supply and sanitation project.

11.4 Budget allocation

Budgetary decisions for integrated hygiene education have to be made in relation to project objectives, the set-up of the hygiene education programme, and the actual hygiene education workplan. Cost items predominantly consist of personnel, training, and necessary office equipment and hygiene education materials. Systematic information is scarce on what amount of money is needed for a successful hygiene education programme. It is better to make a safe guess, rather than ending up with a very tight budget.

In hygiene education the major consideration for the budget is personnel. *How much effort and time will be required? What kinds of skills and capabilities are needed? What, specifically, are the tasks?* Detailed answers to these questions will yield a basic outline of personnel requirements (Green et al, 1980, p. 118). The next steps then are to decide from where the personnel will be obtained and who is going to pay. For example, if technicians become hygiene educators as well, or when regular staff of the Ministry of Health become the hygiene educators, additional personnel costs for the project may be rather limited compared with the situation where the project assigns educational staff itself.

In estimating the number of personnel needed for implementation of the hygiene education programme, it is not only the time needed for the actual hygiene education activities which has to be taken into account, but also the time needed for duties such as staff meetings, training and supervision, liaison, reporting, and holidays. Training costs also need a careful estimate.

Other major cost categories usually are travel, field allowances, materials and supplies. Quite often the costs for consultants and specific subcontracts are considered separately, and a post for contingencies or indirect costs (eg. 15% of the total costs) should be added to allow for unexpected expenditures. Common budget items for an integrated hygiene education programme are summarized on the following page.

A common problem during project implementation is that the budget for hygiene education is the first one to be cut or used for other purposes such as the purchase of hardware or a workshop not related to hygiene education. Where the hygiene education budget proves to be too high compared with actual expenditure, this may be a realistic move, but often this will not be the case, leaving the hygiene education programme with insufficient funds. To make a hygiene education programme work, it will be clear that the project management should prevent the budget from being endangered.

<i>Budget item</i>	<i>Typical costs</i>
- personnel	1. coordinator: one person full time 2. secretary: one person half time 3. hygiene educators:
- office equipment	desks, chairs, stationery, telephone, photocopying, printing and postage, data processing
- transport	(capital costs and running costs)
- day/night out allowance	(specified for various staff)
- in-service training	(specified for various staff)
- special training courses	(number of courses, specified for various staff)
- orientations and workshops for higher level staff	(number of participants x number of orientations and workshops)
- orientations and training courses for field-level workers	(number of participants x number of orientations and training courses x number of days; costs related to trainers' allowances and to the preparation and location of the training)
- orientations and training courses for community representatives	(number of participants x number of orientations and training courses x number of days; costs related to trainers' allowances, and to the preparation and location of the training)
- implementation of community hygiene education activities	(per site x number of sites)
- (incentives for community hygiene education volunteers)	
- hygiene education materials/equipment	(eg. posters, leaflets, games, drawings, slides, slides projector, flennograph, cassette recorder)
- liaison and meetings	(representation costs)
- evaluation	(number of persons x time + additional costs)
- consultation	(fee per day x number of days, plus travel and per diem)
- indirect costs	(15% of above total costs)

Figure 9: Common budget items for an integrated hygiene education programme.

Example: Job Description Participation and Education Coordinator, Pakistan

Major duties and responsibilities of the Participation and Education Coordinator relate to the planning and coordination of the implementation, monitoring and evaluation of the hygiene education programme in the area.

More specifically, the Participation and Education Coordinator will under the supervision of the Project Manager, with technical support and in collaboration with the Government officials at provincial, district and city levels:

- 20% Assist in the development of a plan of action for sanitation improvement and hygiene education as an integral part of the Integrated Water, Sanitation and Hygiene Education Project and the Primary School Public Health Programme and the Urban Basic Services Programme.
- 20% Assist in the development of training materials on hygiene education and sanitation for use in the training of health workers, water and sanitation promoters, school teachers, and other volunteer workers.
- 20% Act as a resource person for training of water and sanitation promoters, school teachers and other government functionaries to educate and motivate family members, particularly women, regarding food hygiene, personal hygiene, domestic hygiene, and environmental sanitation.
- 15% Help the water and sanitation promoters and other field staff to promote sanitation activities in the project areas, including the organization of water and sanitation committees and selection of voluntary workers.
- 15% Assist in monitoring of sanitation/hygiene education programmes in the on-going projects, give feedback on first hand experience and suggest possible improvements.
- 5% Assist in conducting research on relevant health education components which will lead to the enhancement of the programme.
- 5% Any other duty assigned by the Project Manager.

NB. The percentages indicate approximate time allocation.

Source: UNICEF, Pakistan (unpublished).

Example: Job Description Participation and Education Staff, Zambia

Job description for Participation and Education Coordinator

The Participation and Education Coordinator is responsible to the Project Manager. For the detailed content and direction of the work she/he will work in close cooperation with the two Liaison Officers of the Ministry of Health and Social Development and the Hygiene Educators.

The overall task of the Participation and Education Coordinator is to support the development, application and coordination of the motivation and education activities. In particular the coordinator will:

- support and guide the day-to-day work of the Hygiene Educators;
- liaise with government staff at field, district and provincial level on the integration and coordination of motivation and education activities;
- coordinate and stimulate the further development of the motivation and education programme;
- coordinate and support the development and implementation of workshops and training sessions for project staff, and field and district level of cooperating government agencies;
- support the development and implementation of school hygiene and sanitation education;
- coordinate and support the selection of types of audio-visual aids and the development, production and use of guidelines, resource booklets, education, motivation and other supportive material;
- liaise with similar Zambian projects on the above mentioned activities and look for areas of cooperation and exchange of information and experience;
- work in close cooperation with project staff at project and district levels;
- contribute to the planned integral investigations for technical improvements;
- contribute to the selection of locations and the further development of general approaches and procedures for project implementation;
- participate in meetings and call meetings as required;
- prepare monthly, 6-monthly and annual reporting;
- develop and implement monitoring systems to monitor the progress and development of motivation, education and training activities and the integration of activities within the regular government structure;
- carry out any other duties and execute any other responsibilities consistent with the functions of a Participation and Education Coordinator.

Example continued

Job description for Hygiene Educator

The Hygiene Educator is responsible to the Project Supervisor. For the detailed content and direction of the work she/he will work in close cooperation with field level staff of the various ministries within the project area under general guidance of the Participation and Education Coordinator and the two Liaison Officers of the Ministries of Health and Social Development. In particular the Hygiene Educator will:

- discuss with the villagers their different water sources, water use patterns and water management practices;
- assist villagers to discuss their health problems related to water and sanitation and possible ways to reduce them;
- encourage the use of sufficient quantities of water from the protected well and responsibility for its daily upkeep and long term maintenance;
- discuss alternative sanitation options and encourage their implementation;
- stimulate exchange of ideas and experience between villagers on water use, hygiene, sanitation and maintenance;
- liaise with field-level staff of the Ministry of Health, Department of Social Development, Department of Agriculture and possible other agencies, and to actively involve these staff in the field-level project activities;
- assist in workshops and training sessions for these field-level staff;
- contribute to the further development of the motivation and hygiene education programme;
- contribute to the planned integral investigations for technical improvements;
- work in close cooperation with the more technical project staff;
- contribute to monitoring of process and development in motivation and education;
- write monthly reports and participate in meetings;
- carry out any other duties and execute any other responsibilities consistent with the functions of a Hygiene Educator.

Source: Project Document Rural Water for Health Project in North Western Province, Zambia (1988-1990) (unpublished).

Example: General Overview of Tasks in Which Personnel May Need to be Trained

The following lists suggest some of the tasks which community members, programme personnel and others may be trained to undertake. They are not exhaustive, nor is it suggested that each individual worker at the various levels needs to be trained in all the tasks listed.

For many of the teaching/promoting tasks, workers will have to be trained not only in the subject matter but also in communications techniques, the effective use of available teaching aids (e.g. flip charts), etc.

1. Village-based community health workers
e.g. health/hygiene promoters:
 - preventive maintenance of handpumps
 - safe collection of water (rising containers, etc.)
 - safe storage of water
 - increased utilization of water for personal/domestic hygiene
 - teach contamination risks from pit latrines, garbage disposal, pollution from animals, etc.
 - environmental sanitation in and around the house
 - promote and practise oral rehydration therapy
 - promote and motivate mothers for immunization
 - motivate to build, use and maintain latrines
 - organize communities to monitor their own health, identify health problems, ask for more health information, etc.
 - carry out participatory community techniques
 - teach nutrition, supervise nutrition at domiciliary level
 - teach about weaning foods
 - teach use of wastewater for gardens, etc.

2. Village/community-level extension workers
e.g. community development ("change") agents, health and environmental sanitation workers:
 - motivate community to participate in water and sanitation activities
 - collect cultural, behavioural, sociological data relating to water use, hygiene, sanitation and food handling
 - plan and help to implement relevant health education activities
 - supervise water supply and sanitation project activities
 - report on water supply and sanitation project activities
 - backstop village voluntary health workers by giving recognition, support and supervision.

Example continued

3. Government communications/health education staff:
 - supervise village-based worker/community health worker (VBW/CHW) in health education activities
 - assist VBW/CHW in health education activities
 - contact head office for assistance in conducting health education activities
 - work closely with the village water and sanitation committee in implementing health education activities.

Source: UNICEF (1987).

*Example: Training Exercise for Hygiene Educators***Making the longest line**

Purpose: Every person, and every group of people, possess abilities. It is important that every community worker is prepared to see and to recognize these abilities, and develop skills which help the community members realize their own potential. In addition, he or she must be able to encourage community people to use all the potential they have.

Objectives:

1. Participants realize that anyone, at all times, has abilities.
2. Participants understand that by using all the abilities available an activity is almost certain to be more successful.
3. Participants will be more creative.

Time: 30 minutes

Place: A place of sufficient size

Materials: None

The activity: *Introduction*
Even though we do not always realize it, every person and every group of persons possess abilities. We want to try to prove it.

Steps

1. Ask participants to form two groups.
2. Instruct each group to make a line as long as possible across the room using anything they have on their persons. They must not get anything from anywhere else. They are to be told that they have ten minutes to complete the task.
3. At the end of ten minutes the trainer judges the longest line.

Discussion and conclusions: *The trainer can ask the following questions:*

1. Which group made the longest line?
2. What factors made that group win?
3. What steps did that group take to win?, e.g. in order to make the longest line, someone may lie down, use a belt, etc.

Points which can be emphasized

1. A great deal of creativity is demanded to discover and put abilities to their maximum use.
2. The abilities of everyone can be used, as long as whoever has the ability is willing to participate.
3. A community worker must understand how to motivate the community so that they use the abilities that they have.

Source: Johnston, Mary P. and Rifkin, Susan (1987) p. 81/82.

12. Monitoring and Evaluation

Monitoring and evaluation are important tools for programme management and improvement. Though they are described here in the closing chapter, monitoring and evaluation are continuous processes, which should be built in from the very beginning. This was also discussed in Chapter 3.

12.1 Purpose and focus

Monitoring and evaluation of hygiene education involve:

- a. collection of data to assess:
 - inputs in terms of manpower, money and materials;
 - performance of manpower and materials;
 - integration of technical and non-technical project components;
 - participation of the population;
 - cooperation with other agencies;
 - whether activities conform to the workplan;
 - whether the workplan has been achieved;
 - whether the objectives have been met and are sustained over time.

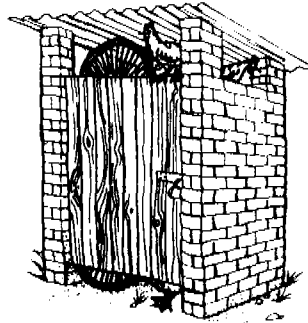
- b. the use of information gained to:
 - take timely action in case of any problems;
 - improve planning, implementation and sustainability;
 - improve supervision and training of manpower;
 - improve organization and management;
 - increase efficiency;
 - increase effectiveness;
 - set new or adapted objectives;
 - learn more about hygiene education requirements.

Monitoring is an ongoing activity, to provide a continuous oversight on whether a programme is proceeding according to plan. Evaluation is carried out at intervals, either in response to a problem or when a project phase or project period is completed. Monitoring is always an internal project activity, whereas evaluation may be carried out either internally or externally, with the main aim to draw lessons from experience.

Monitoring and evaluation are important tools, as any project needs management and guidance, and also because any project should be interested in how to improve performance (quality and efficiency of activities) and results (effectiveness). In hygiene education programmes monitoring and evaluation

are especially important, as there is still a lot to learn about what makes a hygiene education programme successful and how it is best integrated into water supply and sanitation programmes.

In a programme in a very poor area, latrines were built of bricks and had locks on their doors. However, the houses did not have locks on their doors, so people used the latrines, not for sanitary purposes, but to store their valuables, such as bicycles and chickens. As far as the people were concerned the latrines were a great success - for storing valuables.



Source: Feuerstein, M. (1986) p. 6.

Monitoring and evaluation efforts in hygiene education programmes tend to be focused more on results (ie whether or not behaviour was changed) than on inputs and performance, that is the process leading to change in behaviour. Monitoring and evaluation of inputs and performance are also important as:

- a lot can be learned from the process of planning and implementation;
- better and more timely adaptations can be made;
- a clear idea about results is not possible without a clear idea about the inputs and the performance of manpower and organization(s).

Close monitoring and evaluation will be especially necessary in the development stage of an integrated hygiene education component.

Often there is some confusion as to whether or not the monitoring and evaluation of an integrated water supply, sanitation and hygiene education project should include the study of health impact, - ie the reduction in water and sanitation-related diseases as a result of the project. Health impact studies try to ascertain whether, because of the project, people suffer less from diarrhoea or from hookworm. We have seen in Chapter 1 that health impact studies can provide us with relevant information about the relation between water, sanitation and health. However, it is not easy to establish such a relationship, because there may be a lot of influencing factors. For example, there may be improvements not only in water and sanitation, but also in health care or changes in rainfall and food supply. Then it is difficult to know what exactly produced a reduction in water and sanitation-related diseases, or why no reduction took place as expected. Thus, project-specific health impact studies are seldom recommended. For further information about this subject the reader is referred to Briscoe, J. et al (1985 and 1988). In fact, it is not really

necessary to prove that improved water supply, sanitation and hygiene education bring health benefits. They do! More important is to know whether water supply and sanitation facilities are functioning properly and fully used, hygiene conditions and practices are improving, and whether these improvements are sustained over time. Figure 10 illustrates the discussion.

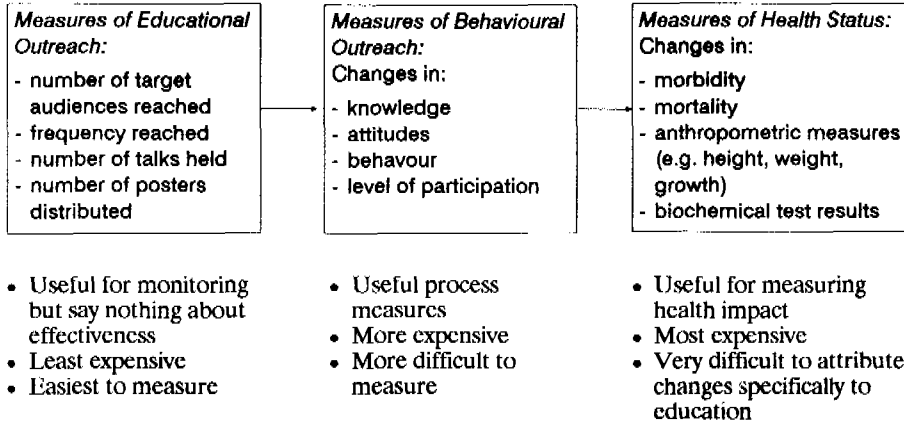


Figure 10: Monitoring and evaluating hygiene education. Source: Favin, M. et al (1986).

12.2 Guidelines for monitoring

Monitoring of integrated hygiene education will be more useful when the following points are kept in mind.

Focus of monitoring

For a hygiene education programme, monitoring may be focused on three related fields:

- **progress** of the programme in relation to the workplan and the identified target groups. Monitoring items for this field may include, for example: inputs in manpower, money and materials; implementation of tasks; the number and type of hygiene education activities. This will allow for a better control of the timing of activities and of the use of resources.
- **participation** and initial response of the target population. Monitoring items here may include, for example: the number and type of participants; the frequency of their participation; their appreciation of the activities; their initiatives and actions, including their inputs in time, money and materials to work on improving conditions and practices related to health and living standards; the establishment of a representative community organization; a growing demand for hygiene education.

- **adaptations and changes in conditions and behaviour related to water use, sanitation and community management, and their sustainability over time.** Monitoring items for this field may include, for example: functioning and use of water supply and sanitation facilities, clean environment, personal and household hygiene, functioning of water and sanitation committees. These items relate to the monitoring of results of the integrated hygiene education programme.

A number of monitoring issues will not only be beneficial for the management of a hygiene education component, but for the other project components as well. Hence, a hygiene education monitoring system can best be set-up in close relationship with the other components, using as uniform a system as possible. (See also Chapter 9, on the importance of developing a workplan in close cooperation with the technical components.)

Monitoring as management tool

Monitoring is a management tool, and therefore should provide relevant and timely information to the people who need this information for planning and implementation of the hygiene education programme and the sustaining of results.

A first requirement in setting up a monitoring system is to decide who needs what information for what purpose(s). Usually there will be at least three management levels and thus three levels of information needs: community level, hygiene education programme level, and general project management level (plus higher levels). Information needs of these various levels will only partly coincide. For example, information on construction and use of latrines may be relevant for all levels, whereas information on the progress of the implementation of the hygiene education workplan will primarily provide necessary information for the programme level.

In setting up a monitoring system it may be worthwhile to use a workshop approach, involving the various management levels, to arrive at a system that is as simple and useful as possible, and that allows essential information to climb up and down the institutional hierarchy without too much adaptation or need for the collection of additional data. In using the monitoring system it is important that information collected at a certain level is acted upon immediately, as well as being sent to the other management levels. For example, if the hygiene education coordinator learns that in one region the turnover of hygiene educators is an increasing concern, it will not suffice just report this to the general project management. Appropriate actions should be set into motion.

Objective:	General use of safe water sources, at least for drinking.
<i>Indicators:</i>	All families live within easy reach of a safe water source; no unprotected source in use for drinking; protection of traditional sources remaining in use.
Objective:	Families will store and use their water under hygienic conditions.
<i>Indicators:</i>	Presence of cover for container; raised platform for container; long-handled dipper to draw water; dipper hanging above floor; absence of flies around container; no communal drinking cup.
Objective:	Users will keep area around place of water collection in a sanitary condition.
<i>Indicators:</i>	Adequate drainage; absence of garbage/leaves/sediment/mud; presence/condition fence; presence/efforts of caretakers; etc.
Objective:	Wastewater will be utilized for irrigating vegetable gardens.
<i>Indicators:</i>	Garden around well or in home compound; garden cooperatives formed; etc.
Objective:	Drawers of water will clean their containers before filling them with "new" water.
<i>Indicators:</i>	Observed washing inside of container before drawing; washing of leaves/balancers before placing them in containers; etc.
Objective:	All households will have and use a sanitary latrine.
<i>Indicators:</i>	Presence of latrine; absence of soiling; presence of cleaning agents (water, paper in latrine); number of flies; no excreta, including of baby, in compound; etc.
Objective:	Hands will be washed with cleansing agent after toilet use/before cooking and eating.
<i>Indicators:</i>	Presence of water for hand washing in or near latrine; presence of soap, ash or other cleansing agent near latrine and in kitchen.

Figure 11: Some examples of objectives defined in behavioral terms and indicators for monitoring and evaluation. Source: IRC (1991), Module V, p. 12, Adapted from: UNICEF (1985) and Monitoring System Morogoro/Shinyanga Rural Water Supply and Sanitation Programmes (1990).

Selection of indicators

Based on the information needs, a decision has to be made as to what data it will be useful to collect. This raises the question of what indicators should be selected. (Indicators enable data to be compared easily from one survey to the next or between projects/situations.) The indicators should be based on:

- the objectives in relation to target groups
- the workplan
- the results of a baseline study or needs assessment.

As a careful selection of indicators is not easy, it is often tempting to select more than the bare minimum. However, data collection itself is an effort, added to by the necessary tabulation and analysis of the data and its subsequent use. Collection of too much data can easily become counter-productive, as it will prevent the timely availability of relevant information. Figure 11 presents some examples of indicators for selected objectives.

Usually an experimental period will be needed to determine what indicators are most useful in producing timely and relevant information. Before printing a lot of monitoring forms, it is better to try them out, and adapt them according to the early results. For the development stage of the hygiene education programme, usually more data and more frequent data are required than for a consolidated programme.

Data collection

Data collection on the progress of the hygiene education programme in relation to the workplan should be an ongoing routine activity by the project, using standard monitoring forms, such as a community visiting form (see example at the end of the chapter) and accounting forms.

For data collection on participation of the target population and on changes in conditions and behaviour, a variety of procedures can be followed, either apart or in combination. They include:

- Routine data collection by individuals and/or groups in the communities, using agreed formats.
- Informal interviews and observations at regular intervals by community members and/or project staff to learn about success stories and problems. Although this will not give quantitative information it will provide relevant insights. The use of an interview and observation checklist will help to cover important aspects and will at the same time provide a framework for recording and reporting. After use the checklist should be reviewed, and if necessary adapted for the next data collection round.
- Questionnaire and observation surveys at regular intervals by community members and/or project staff to measure participation and changes. For this a representative sample should be drawn. After each survey round, the

questionnaire and observation forms should be reviewed, and if necessary adapted for the next round.

When the monitoring data reveal a problem, or a positive development which was not anticipated, further investigation may be required to feed the outcomes into programme adaptation and improvement.

Organization of data collection and use

Monitoring data can be collected and used during:

- planning and progress and staff meetings
- field visits
- supervision and training.

Data are best collected as much as possible as part of the ongoing activities defined by the workplan, such as during a community visit, when information and experiences that should not be forgotten have to be recorded anyway. This implies that data can best be collected by the community groups or programme staff most concerned. It will provide first hand and timely information and does not require additional personnel. And it will have the additional advantage that communities and staff are continuously reminded of key concerns because they have to note them down.

Data collection by the communities and hygiene educators will only work if it serves their immediate interests and/or it forms part of more general support and supervision activities. If people do not get the feeling that data collection is important for themselves and the project, they may soon lose interest. The collected information should provide immediate relevant information and the higher management levels should ensure proper support, feedback and follow-up. It may be that for support and supervision reasons more information needs to be recorded than necessary for monitoring purposes. This should not be a problem, provided the recording form used allows for easy extraction of monitoring data. Introduction of a monitoring system and any subsequent changes in the monitoring system need careful attention and will require training for good compliance.

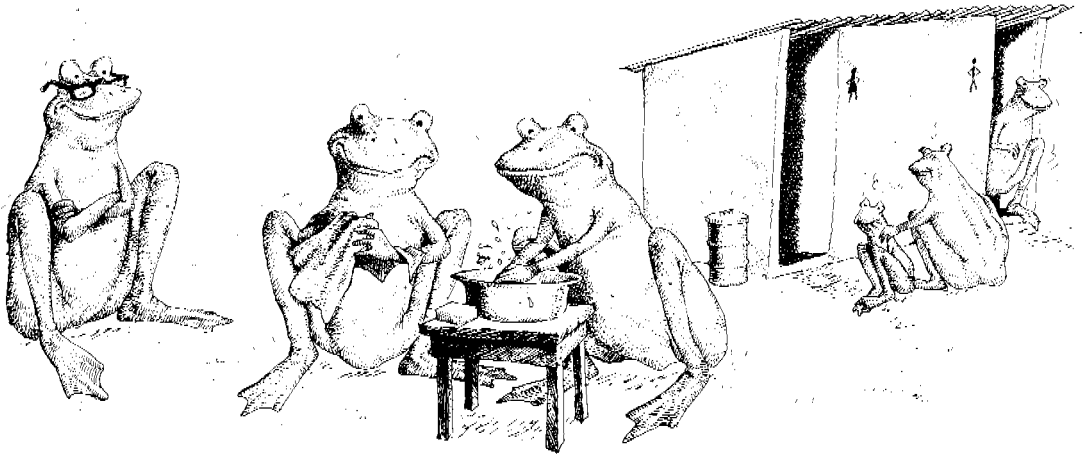
Monitoring data are not to be used as a tool for criticizing communities and/or staff because progress or results are below expectation. The only effect will be that they will not collect reliable information in the future. Instead, the focus should be on learning, and on adapting and improving procedures, activities and results. For effective and reliable collection of data by people directly concerned, it is important to be aware of the natural human tendency to ignore information that warns of poor performance or to exaggerate positive developments (Casley and Kumar, 1987, p. 23).

Reporting

Monthly and quarterly progress reporting are useful tools for monitoring. Such reports should include an overview of major activities undertaken during the reporting period in comparison with the workplan; an overview of cost performance; the number of communities and people covered by the activities; a discussion of current and potential problems, and corrective actions planned or recommended; plans and schedules for major activities during the next reporting period. (Casley and Kumar, 1987, p. 91) It may be important not only to compare activities undertaken with the workplan, but also with previous reporting periods (months and quarters) to learn more about trends, and to allow for more timely and appropriate remedial actions.

The presentation of monitoring information is often more appealing, and receives more attention, if it is:

- discussed verbally;
- summarized on not more than a couple of pages (this can be done for example through 'monitoring briefs', to supplement more elaborate reports);
- illustrated with graphs and figures, as shown in the example at the end of the chapter (Casley and Kumar, 1987, p. 89-98).



Our aim: hygienic practices, sustained over time.

12.3 Guidelines for evaluation

A good monitoring system will provide a valuable basis for an evaluation of the hygiene education programme. As the planning and implementation of an evaluation is not basically different from any other study, such as a baseline

study, the reader is referred to Chapter 7, especially the sections 7.3 to 7.5, for general guidelines for evaluation.

Focus of evaluation

As already indicated, an evaluation can be focused on:

- an assessment of how well the hygiene education programme was planned and implemented (discussed as process evaluation in Chapter 3);
- an assessment of outcomes of the hygiene education programme in terms of changes in knowledge, attitudes, beliefs, and more importantly in terms of changes in conditions and behaviours;
- the investigation of a problem (see also section 12.2).

The general aim of any evaluation is always to learn from experience in order to apply the lessons learned to improve programme planning and implementation and to replicate successful programmes.

Emphasis on internal evaluation

Evaluations can be carried out internally by communities themselves and/or by project staff, or externally by outside professionals not involved in the hygiene education programme. Without going into the debate on the advantages and disadvantages of the various possibilities (the interested reader is referred to Boot (1987) and Narayan-Parker (1990a) for further information on this subject); it is safe to say that for community-level and project-level evaluations the active involvement of all people concerned is essential to arrive at a joint understanding of strong and weak points, constraints and possibilities, alternative solutions and routes of action.

Mesasuring of behavioural change

There are many types of evaluation of changes in conditions and behaviour, but for project evaluations it is most common and realistic to compare the data from the evaluation study with those from the baseline study (see Chapter 7). In evaluating changes in behaviour, we should be aware of the various possible directions a behavioural change can take, to prevent misinterpretation of evaluation results. A behavioural change may involve:

- reduction of a risky behaviour (eg. open field defecation);
- prevention of a new risky behaviour, or prevention of an increase in a risky behaviour (eg. lack of toilet cleaning);
- increase in a hygienic behaviour (eg. exclusive latrine use by all in the family);
- prevention of a decrease in a hygienic behaviour (eg. fewer people reverting to open field defecation) (Green et al, 1980, p. 10-11).

Actual use of improved water and sanitation facilities by men, women and children is always important to evaluate. To evaluate use, we can look at:

General use: all or almost all households actually use improved water points and latrines;

Consistent use: they do so throughout the year, without reverting to other sources or practices with a health risk (diarrhoeal diseases, schistosomiasis, guinea worm, hookworm);

Exclusive use: other water sources or sanitation practices constituting a health risk are not used alongside improved ones;

Hygienic use: water points, sources and latrines are kept clean, and domestic water is collected, stored and drawn in a safe way (no contamination from touching by possibly soiled hands);

Increased use: higher volumes of water are used for domestic and personal hygiene;

Controlled use: use of water resources and latrines without negative impacts on water availability and environment, such as over-exploitation of groundwater, deforestation, overgrazing, chemical and bacteriological contamination, etc.

Source: IRC (1991) Module V, p. 9.

Possible negative consequences

In carrying out an evaluation we also should look at possible negative consequences of changes in behaviour (in which a positive change in behaviour is accompanied by a negative effect). For example, in a water supply project it was observed that the change from the use of unprotected wells to the exclusive use of protected wells with a windlass, pulley and communal bucket was successful. However, as the new protected well became more popular, it caused queuing because only one person could draw water at a time. To solve this problem, people started to bring their private buckets and ropes, thus cutting down on waiting times, but at the same time endangering the quality of the water.

Participatory evaluation methods

During the last decade more and more emphasis was put on alternative evaluation methods that allow for greater community participation and more useful results. An example is given on the next page from Lesotho. There is a need for more recorded examples of these alternative evaluation methods, as they generally make community self-evaluations easier, and a more attractive learning activity for all parties concerned (IRC, 1991, Module V, p. 14). In Chapter 7 the usefulness of participatory research was already emphasized.

School children participated in the evaluation of the rural sanitation project through a community mapping activity.

The instructions for the mapping activity were simple. Working in groups, fifth grade children were asked to draw their communities, including problems, resources, water sources, and places of defecation. The activity unleashed such energy and enthusiasm that the children were moved outdoors. All four groups of students reported three major community problems: public drunkenness, bad roads, and little use of latrines. The resources identified included people, trees, VIP latrines, shops, water supplies, animals, and forms of transportation. Latrines, bushes, and forests were commonly depicted as defecation sites. Water sources included unprotected springs, wells, ponds and standposts. What the children reported in their drawings was confirmed by their school teachers.

The mapping activity produced valuable information on the community water and sanitation situation and helped to establish whether or not latrines were being used. The next step is group discussion and joint solving of identified sanitation problems.

Source: World Bank and UNDP/PROWFESS (1990) p. 21.

Checklist for evaluation

A more detailed overview of points of attention for the evaluation of a hygiene education programme is presented below:

0. What are the general and specific objectives of the water supply and sanitation project?
1. Is hygiene education an integrated component of the water supply and sanitation project?
 - If yes: see next questions.
 - If no: why not? e.g.
 - not planned, not deemed necessary
 - manpower constraints
 - financial constraints
 - organization constraints
 - problems with cooperation/coordination between various government and non-government agencies
 - lack of experience to include a hygiene education component
 - ...
2. What are the general and specific objectives of the hygiene education programme?

3. How is it organized?
 - Which organization is in charge of the hygiene education programme? (e.g. the project organization itself, primary health care centres, department of public health)
 - Who are responsible for the hygiene education activities?
 - How many staff and volunteers are involved in the hygiene education programme? (fulltime/part-time, males/females, paid/unpaid)
 - What is their general background and level of education?
 - Did they get a special training course? If yes:
 - For how many days?
 - What were the main subjects/skills covered?
 - Did they get paid?
 - Are special funds allocated for the hygiene education programme? If yes: how much? Does it cover all the necessary costs of salaries, materials, transport?
 - Are the hygiene education activities integrated in the general project activities? If yes: how, in which phases? If not: why not?
 - Is there any cooperation with other organizations involved in basic health services and local development programmes?

4. Who are the main male and female target groups?
 - How and why were they selected?
 - Were local leaders informed and involved?
 - Were men and women of the various socio-economic groups included in the hygiene education activities?
 - Were men and women of the various ethnic groups, religious groups and/or castes included in the hygiene education activities?
 - If hygiene education activities were mainly concentrated on school children: how were non-schooling children and drop-outs included?
 - If hygiene education activities were mainly concentrated on women: how were men involved?
 - Is attention being paid to high-risk groups?

5. What were the main hygiene education approaches?
 - Are the hygiene education activities planned and organized in close cooperation with community groups, representatives and community level workers?
 - Is a special health committee formed for this purpose?
 - Are community men and women chosen or selected to act as local hygiene promoters? If yes:
 - Who were chosen or selected?
 - Did they get any training?
 - How much time do they spend on hygiene education activities?

- Did/do they get paid?
 - Are they supervised?
 - How are hygiene education activities organized? Through:
 - home visits
 - group gatherings
 - formal meetings
 - informal talks at water collection points, during work-breaks, on the local market, etc.
 - hygiene education activities in other programmes or activities like literacy groups, credit associations, religious groups, youth associations, etc.
 - How often are they organized?
 - Are any audio-visual tools developed and/or used? Like:
 - posters, flash cards and flipcharts
 - picture stories and photo novels
 - flannelgraphs and magnetic boards
 - models
 - stories, songs, plays and games
 - filmstrips and slides
 - cassette recorder
 - video and film.
 - Were audio-visual tools tested and adapted to local circumstances?
 - Were hygiene educators (and hygiene promoters) trained in personal communication and group discussion techniques, and in the use of audio-visual tools?
 - Was there any arrangement for supervision and refresher courses?
6. What are the main hygiene education targets and messages?
- How and why were they selected? (e.g. based on an investigation of prevalent water and sanitation-related diseases; on participatory observations and discussions in the communities; on a formal survey in the area.)
 - Was the emphasis of the messages on:
 - an improved understanding of the relation between water, sanitation and health?
 - reduction of local health risks?
 - convenience and personal advantage?
 - status improvement?
 - an optimal functioning and use of the new facilities?
 - promotion of a proper maintenance of the new facilities?
 - Did the messages take into account:
 - local needs, priorities and preferences?
 - local beliefs and religious backgrounds?
 - socio-economic background?

7. What time schedule has been used?
 - How much time was spent on:
 - preparation
 - implementation
 - arrangement for follow-up activities
 - training
 - development/dissemination of audio-visual aids
 - coordination with other programmes and activities.
 - Were hygiene education and other project activities integrated?

8. How did the people react to the hygiene education activities?
 - How many men, women and children participated in the hygiene education activities? Did it change over time?
 - Were there any constraints to participation of any group of people?
 - What do they remember of the activities and messages?
 - What do they think of the approaches, activities and messages?
 - Did it influence their knowledge and attitudes?
 - Did it influence their behaviour, or were improvements realized on result of the hygiene education activities? What kind of changes? Can they be observed?
 - What suggestions do they have for any future programme?

9. What is the opinion of the hygiene educators on the hygiene education programme?
 - What are their main experiences - positive and negative?
 - Are there any bottlenecks related to:
 - time schedules and timing of activities and tasks
 - availability of transport
 - level of relevant knowledge
 - level of communication skills and group approach techniques
 - supervision
 - salaries and allowances
 - cooperation and coordination with other projects, programmes and organizations?

10. Taking into account the above:
 - What are the main experiences and lessons learned?
 - What are the positive elements that could/should be strengthened?
 - What are the main constraints and how could these be overcome?
 - How can the incorporation of the hygiene education component be facilitated in future programmes?

Example: Monitoring and Supervision Sheet, Yemen

Village activity sheet

Village activity sheet no.: Extension worker:
Rural Council: Health workers:
Village: Head of section:
Date: Adviser:
Meeting place:

Activity:

Time	Subjects covered	Methods used	No. of participants m/f
.....
.....
.....
.....
.....

Review of the activity: (How did it go? How did people react? Messages understood? etc.)

.....
.....
.....
.....

Appointments/agreements (next date; subjects; time; place; miscellaneous):

.....
.....
.....
.....

Adapted from: Derckx, M. (1989).

Example: Monitoring Sheet: Visit to the Village, Sudan

Rural Council:
 Village:
 Page:

Activity	Planned date	Actual date	If planned and actual date not the same: Why not?	Subject(s) covered	With whom? m/f/c	Staff member	Total time spent	Remarks

Source: WADS Project, Sudan (1988) (unpublished).

Example: Village Sanitation Monitoring Report, Tanzania

Month: Ward:

Name of VHW: Division:

Name of village: District:

1. Are any unprotected water sources used for drinking during this month?

NO/YES, by households

Reason(s):

2. Do people stand in any bilharzia-infested water?

NO/YES, to bath/swim/wash clothes

3. Were there any problems with the improved water points? NO/YES

If YES, indicate: bad colour/bad taste/ insufficient water/no water/
latrine(s) near waterpoint/

Number of waterpoints affected this month:

5. How are hygiene conditions of the water system?

No. waterpoints /No. visited /No. unclean

No. washing slabs /No. visited /No. unclean

No. drains /No. visited /No. stagnant

No. cattle troughs /No. visited /No. unclean

6. Did the villagers make any sanitation facilities this month?

Facility	No.	Type	Unit cost	Total cost
Waterpoint
Washing slab
Latrine slab
Latrine
TOTAL			

7. How many of the households with new latrines did you visit for follow-up?

How many latrines were properly built and kept?

How many had water and soap nearby for hand washing?

How many are used consistently by all members of the household?

8. Mutation in population Born (males) (females)

figures: Died (adults) (children)

9. Village contributions to sanitation this month:

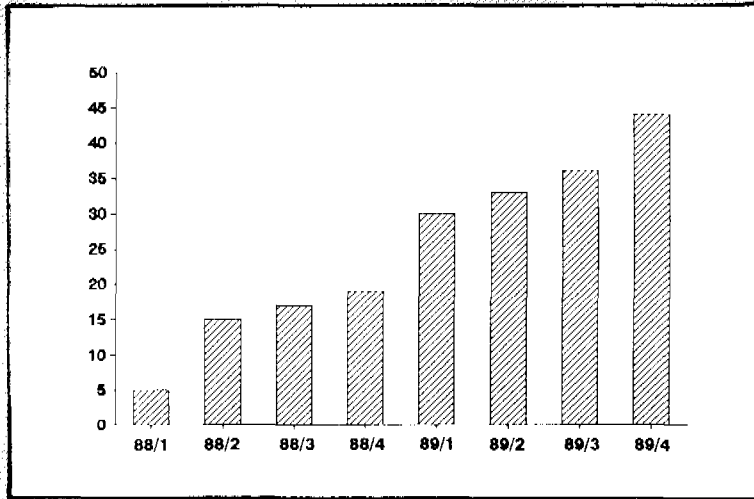
Total time home visits VHW: days

Total cost sanitation facilities: Shillings

Remarks:

Source: IRC (1989) (unpublished).

Example: Graphs and Figures to Make Monitoring and Evaluation Information More Appealing.



Bar graph showing increase of number of water committees using wastewater for tree growing. Source: IRC (1991) (unpublished).

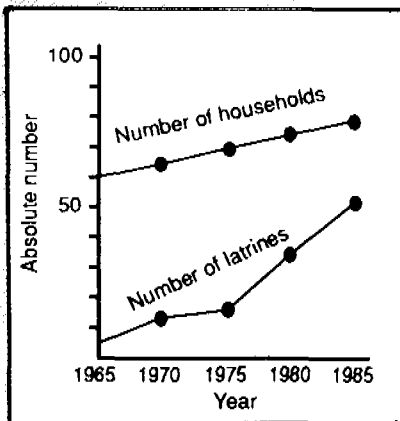


Figure 1: Latrine acquisition curve for village A (number of latrines in village vs. time)

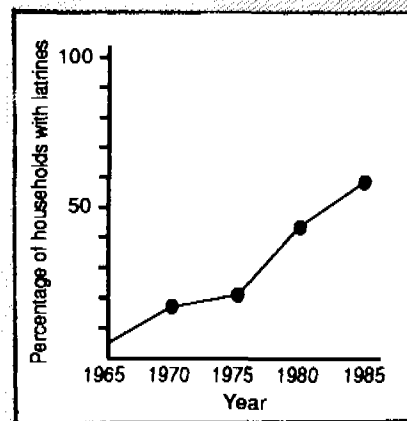
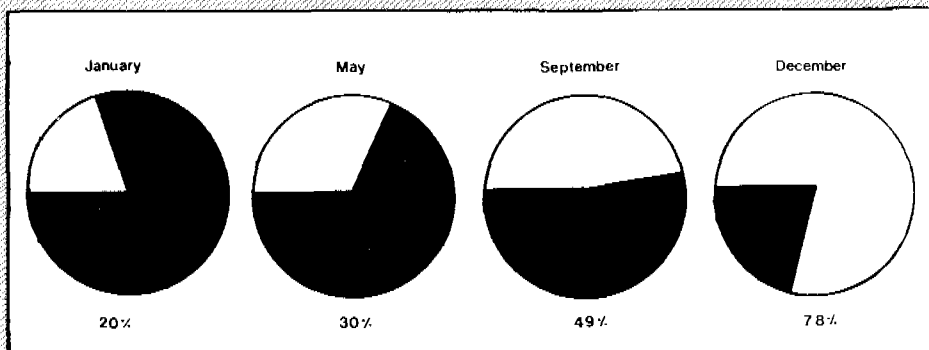


Figure 2: Latrine acquisition curve for village A (percentage of households with latrines vs. time).

Line graphs showing increase in latrine coverage. Source: Smith, C. (1988).

Example continued



Pie chart showing increasing rate of people's participation. Source: Stephens, A. and Putman, K. (1988).

Maejo Health Committee														
Adult population 1/1/88 ... 4.26				Adult population 31/12/88										
				Jan	Feb	Mar	Apr	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Number of members				54	57	62								
Percent of total				12.6	13.4	14.5								
Average attendance at meetings				44.1	49	52.4								
Participation in training (number and person/days)	M			60	20	95								
	F			15	-	3								
Leadership and participation (5-1)				3	4	3								

Participation monitoring chart. Source: Stephens, A. and Putman, K. (1988).

Example continued



- degree of satisfaction, for example with hygiene education activities



- number of children, for example with and without scabies



- number of households using the improved well



- something present or absent, for example fence around water point

Pictogrammes in which drawings or other signs are used to visualize important information.
 Source: Feuerstein, M. (1986); Stephens, A. and Putman, K. (1988).

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