

The World Health Organization's

INFORMATION SERIES ON SCHOOL HEALTH DOCUMENT 9

Skills for Health

Skills-based health education including life skills:
An important component of a
Child-Friendly/Health-Promoting School

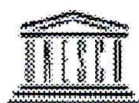
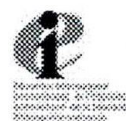
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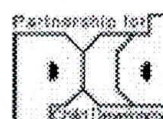
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The principles and policies of each of the above agencies are governed by the relevant decisions of its governing body and each agency implements the interventions described in this document in accordance with these principles and policies and within the scope of its mandate.

This document was prepared with the technical support of Carmen Aldinger and Cheryl Vince Whitman, Health and Human Development Programmes (HHD) at Education Development Center, Inc. (EDC). HHD/EDC is the WHO Collaborating Center to Promote Health through Schools and Communities.

Amaya Gillespie of the Education Section at UNICEF and Jack T. Jones of the Department of Noncommunicable Disease Prevention and Health Promotion at WHO/HQ guided the overall development and completion of this document.

This paper drew on a variety of sources in the research literature and on consultation with experts from a previous paper, *Life Skills Approach to Child and Adolescent Healthy Development* (Mangrulkar, L, Vince Whitman, C, and Posner, M, published by the Pan American Health Organisation, 2001); on a survey questionnaire administered to many international agencies at the global, regional and national levels; and on material developed by UNICEF and WHO. The draft for this paper was circulated widely to UNAIDS cosponsoring organisations and other partners identified below:

CONTRIBUTORS:

David Clarke, Department for International Development, London, UK

Don Bundy and Seung Lee, World Bank, Washington, DC, USA

Celia Maier, Partnership for Child Development, London, UK

Neill McKee and Antje Becker, and colleagues, Johns Hopkins University, Baltimore, MD, USA

Isolde Birdthistle, Sara Gudyanga, Diane Widdus, Margareta Kimzeke, Peter Buckland, Elaine Furniss, Noala Skinner, Andres Guerrero, Aster Haregot, Onno Koopmans, Elaine King, Nurper Ulkuer, Anna Obura, Changu Mannathoko, Paul Wafer, UNICEF/Headquarters, Regional and Country Offices

Francisca Infante, PAHO, Washington, DC, USA

Cecilia Moya and Kent Klindera, Advocates for Youth, Washington, DC, USA

Brad Strickland and Joan Woods, USAID, Washington, DC, USA

V. Chandra-Mouli, Child and Adolescent Health, WHO/HQ, Geneva, Switzerland

Charles Gollmar, CDC, Atlanta, GA, USA

Delia Barcelona, UNFPA/Headquarters, New York, NY, USA

Anna-Maria Hoffmann, UNESCO, Paris, France

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At the start of the 21st century, the learning potential of significant numbers of children and young people in every country in the world is compromised. Hunger, malnutrition, micronutrient deficiencies, parasite infections, drug and alcohol abuse, violence and injury, early and unintended pregnancy, and infection with HIV and other sexually transmitted infections threaten the health and lives of children and youth (UNESCO, 2001). Yet these conditions and behaviours can be improved. Skills-based health education has been shown to make significant contributions to the healthy development of children and adolescents and to have a positive impact on important health risk behaviours.

At appropriate developmental levels, from pre-school through early adulthood, young people can engage in learning experiences that help them prevent disease and injury and that foster healthy relationships. They can acquire the knowledge and skills they need, for example, to practise basic hygiene and sanitation; negotiate and make healthy decisions about sexual and reproductive health choices; or listen and communicate well in relationships. As they grow into young adults, they can play leadership roles in creating healthy environments – advocating, for example, for a tobacco-free school or community.

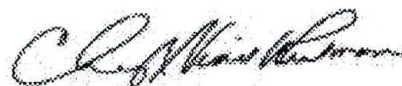
Schools have an important role to play in equipping children with the knowledge, attitudes, and skills they need to protect their health. Skills-based health education is part of the FRESH framework (Focusing Resources on Effective School Health), proposed and supported by WHO, UNICEF, UNESCO, UNFPA, and the World Bank. This document was published jointly by agencies that support the FRESH initiative, and emphasises the role of schools, however this document will also be relevant to out of school settings. Its purpose is to strengthen efforts to implement quality skills-based health education on a national scale worldwide.



Pekka Puska
Director, Noncommunicable Disease
Prevention and Health Promotion,
WHO/HQ, Geneva, SWITZERLAND




Cream Wright
Chief, Education Section,
UNICEF, New York, USA




Cheryl Vince-Whitman
Director, WHO Collaborating Center to
Promote Health through Schools and
Communities,
Education Development Center Inc.
Newton, Massachusetts, USA



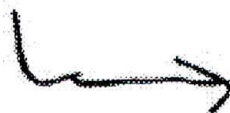
Mary Joy Pigozzi
Director, Division for the Promotion
of Quality Education,
UNESCO, Paris, FRANCE



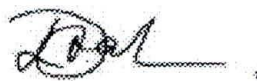
Mari Simonen
Director, Technical Support Division,
UNFPA, New York, USA



Ruth Kagia
Director, Education
Human Development Network,
The World Bank, Washington DC, USA



Fred Van Leeuwen
General Secretary,
EI, Education International,
Brussels, BELGIUM



Leslie Drake
Coordinator, Partnership for Child
Development,
London, UNITED KINGDOM

Purpose: to describe the rationale and audience for the document; define key concepts; and explain how skills-based health education, including life skills, fits into the broader context of what schools can do to improve education and health.

Ensuring that children are healthy and able to learn is an essential part of an effective education system. As many studies show, education and health are inseparable. A child's nutritional status affects cognitive performance and test scores; illness from parasitic infection results in absence from school, leading to school failure and dropping out (Vince Whitman et al., 2001). Structures and conditions of the learning environment are as important to address as individual factors. Water and sanitation conditions at school can affect girls' attendance. Children cannot attend school and concentrate if they are emotionally upset or in fear of violence. On the other hand, children who complete more years of schooling tend to enjoy better health and have access to more opportunities in life. Equipping young people with knowledge, attitudes, and skills through education is analogous to providing a vaccination against health threats. Educating for health is an important component of any education and public health programme. It protects young people against threats both behavioural and environmental, and complements and supports policy, services, and environmental change.

Over the decades, educating people about health has been an important strategy for preventing illness and injury. This approach has drawn heavily from the fields of public health, social science, communications, and education. Early experiments with education relied heavily on the delivery of information and facts. Gradually, educational approaches have turned more to skill development and to addressing all aspects of health, including physical, social, emotional, and mental well-being. Educating children and adolescents can instill positive health behaviours in the early years and prevent risk and premature death. It can also produce informed citizens who are able to seek services and advocate for policies and environments that affect their health. While utilising both school and non-school settings to reach children and young people will be essential, this document emphasises school-based activities. Education for health is an important and essential component of an effective school health programme, and it is likely to be most effective when complemented by health-related policies and services and healthy environments.

1.1. INTERNATIONAL SUPPORT FOR SCHOOL HEALTH

At the World Education Forum in Dakar, Senegal, in April 2000, WHO, UNICEF, UNESCO, and the World Bank met and agreed to work collaboratively in promoting the implementation of an effective school health programme: Their framework, called **FRESH – Focusing Resources on Effective School Health**, calls for the following four core components to be implemented together, in all schools:

- Health-related school policies
- Provision of safe water and sanitation as essential first steps toward a healthy learning environment
- Skills-based health education
- School-based health and nutrition services

These components should be supported and implemented through effective partnerships between teachers and health workers and between the education and health sectors; through effective community partnerships; and through student awareness and participation.

(From UNESCO/UNICEF/WHO/The World Bank, 2000.)

1.2. WHY WAS THIS DOCUMENT PREPARED?

This document, along with a complementary Briefing Package, can be used to orient education and health workers to improve health among youth through skills-based health education, including life skills. It is offered by UNICEF, WHO, the World Bank and UNFPA and complements other documents available from their Web sites:

<http://www.unicef.org/programme/lifeskills/>,

<http://www.who.int/school-youth-health/>,

<http://www.schoolsandhealth.org>, <http://www.unfpa.org>.

The supporting agencies, *UNICEF, WHO, the World Bank and UNFPA*, worked together to prepare this document to encourage more schools and communities to use skills-based health education, including life skills, as the method for improving health and education. Together, these agencies are dedicated to fostering effective school health programmes that implement skills-based health education along with school health policies, a healthy and supportive environment, and health services together in all schools.

The commitment to skills-based health education as an important foundation for every child is shared across the supporting agencies. They and their FRESH partners agree that skills-based health education is an essential component of a cost-effective school health programme.

FRESH supports Education for All (EFA) which originated in Jomtien, Thailand, where world leaders gathered in March 1990 for the first EFA World Conference to launch a renewed worldwide initiative to meet the basic learning needs of all children, youth and adults. This commitment was renewed during the World Education Forum in Senegal, Dakar, in April 2000. The resulting Dakar Framework for Action (2000) refers to life skills in goal 3 ("ensuring that the learning needs of all young services; policies and codes of conduct that enhance physical, psychosocial, and emotional health of teachers and learners; and education content and practices that lead to the knowledge, attitudes, values, and life skills students need to develop and maintain self-esteem, good health, and personal safety. FRESH people and adults are met through equitable access to appropriate learning and life skills programmes") and goal 6 ("improving all aspects of the quality of education, and ensuring excellence of all so that recognized and measurable learning outcomes are achieved by all, especially in literacy, numeracy and essential life skills") and in strategy 8. As depicted in Figure 1, strategy 8 of the Dakar Framework calls for countries to create safe, healthy, inclusive, and equitably resourced educational environments. Such learning environments embody the four core components of FRESH. The Dakar Framework for Action (2000) describes these components as follows: adequate water and sanitation; access to or linkages with health and nutrition is further supported by Health-Promoting Schools and Child-Friendly Schools and their respective networks worldwide. Section 5.2.2. in Chapter 5 describes Health-Promoting Schools; Child Friendly Schools are further described in Section 5.2.3.

1.3. FOR WHOM WAS THIS DOCUMENT PREPARED?

This document was prepared for people who are interested in advocating for, initiating, and strengthening skills-based health education, including life skills, as their approach to health education.

(a) **Government policy- and decision-makers**, programme planners, and coordinators at local, district, provincial, and national levels, especially those in ministries of education, health, population, religion, women, youth, community, and social welfare.

(b) **Members of non-governmental institutions** and other organisations who are responsible for planning and implementing programmes described in this document, including programme staff and consultants of national and international health, education, and development agencies interested in promoting health through schools.

(c) **Community leaders and other community members** such as local residents, religious leaders, media representatives, health care providers, social workers, mental health counsellors, development assistants, and members of organised groups such as youth groups and women's groups interested in improving health, education, and well-being in schools and communities.

(d) **Members of the school community**, including teachers and their representative organisations, counsellors, students, administrators, staff, parents, and school-based service workers.

1.4. WHAT ARE SKILLS-BASED HEALTH EDUCATION AND LIFE SKILLS?

Skills-based health education is an approach to creating or maintaining healthy lifestyles and conditions through the development of knowledge, attitudes, and *especially skills*, using a variety of learning experiences, with an emphasis on participatory methods.

Life skills are abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life (WHO definition). In particular, life skills are a group of psychosocial competencies and interpersonal skills that help people make informed decisions, solve problems, think critically and creatively, communicate effectively, build healthy relationships, empathise with others, and cope with and manage their lives in a healthy and productive manner. Life skills may be directed toward personal actions or actions toward others, as well as toward actions to change the surrounding environment to make it conducive to health.

Health is a state of complete physical, mental, and social well-being (WHO definition).

For many decades, instruction about health and healthy behaviours has been described as "health education." Within that broad term, health education takes many forms. Health education has been defined as "any combination of learning experiences designed to facilitate voluntary adaptations of behaviour conducive to health" (Green et al., 1980). At school, it is a planned, sequential curriculum for children and young people, presented by trained facilitators, to promote the development of health knowledge, *health-related skills*, and positive attitudes toward health and well-being. Typically, health education targets a broad range of content areas, such as emotional and mental health; nutrition; alcohol, tobacco, and other drug use; reproductive and sexual health; injuries; and other topics, with human rights and gender fairness as important cross-cutting or underpinning principles. Skill development has always been included in health education. Psychosocial and interpersonal skills are central, and include communication, decision-making and problem-solving, coping and self-management, and the avoidance of health-compromising behaviours. The attention to knowledge, attitudes, and skills *together* (with an emphasis

on skills) is an important feature that distinguishes skills-based education from other ways of educating about health issues.

As health education and life skills have evolved during the past decade, there is growing recognition of and evidence for the role of psychosocial and interpersonal skills in the development of young people, from their earliest years through childhood, adolescence, and into young adulthood. These skills have an effect on the ability of young people to protect themselves from health threats, build competencies to adopt positive behaviours, and foster healthy relationships. Life skills have been tied to specific health choices, such as choosing not to use tobacco, eating a healthy diet, or making safer and informed choices about relationships. Different life skills are emphasised depending on the purpose and topic. For instance, critical thinking and decision-making skills are important for analysing and resisting peer and media influences to use tobacco; interpersonal communication skills are needed to negotiate alternatives to risky sexual behaviour. Young people can also acquire advocacy skills with which they can influence the broader policies and environments that affect their health, including efforts to create tobacco- and weapon-free zones, the addition of safe water and latrines to school grounds, or access to reproductive and sexual health services including availability of condoms for the prevention of HIV.

Skills-based health education is placed in a variety of ways in the school curriculum. Sometimes it is a core subject within the broader curriculum. Sometimes it is placed in the context of related health and social issues, within a carrier subject such as science. Or it may be offered as an extracurricular programme (see Section 5.3). Regardless of its placement, teachers and school personnel from a wide range of subjects and activities need to be involved in skills-based health education in order to reinforce learning across the broader school environment.

A note about life skills-based education and livelihood skills

The term **life skills-based education** is often used almost interchangeably with skills-based health education. The difference between the two approaches lies only in the content or topics that are covered. Skills-based health education focuses on "health." Life skills-based education may focus on peace education, human rights, citizenship education, and other social issues as well as health. Both approaches address real-life applications of essential knowledge, attitudes, and skills, and both employ interactive teaching and learning methods.

The term **livelihood skills** refers to capabilities, resources, and opportunities for pursuing individual and household economic goals (Population Council, Kenya); in other words, income generation. Livelihood skills include technical and vocational abilities (carpentry, sewing, computer programming, etc.); skills for seeking jobs, such as interviewing strategies; and business management, entrepreneurial, and money management skills. Though livelihood skills are critical to survival, health, and development, the focus of this document lies elsewhere.

1.5. WHAT IS THE FOCUS OF THIS DOCUMENT?

The focus of this document is skills-based health education for teaching children and adolescents how to adopt or strengthen healthy lifestyles. It is concerned with the knowledge, attitudes, skills, and support that they need to act in healthy ways, develop healthy relationships, seek services, and create healthy environments.

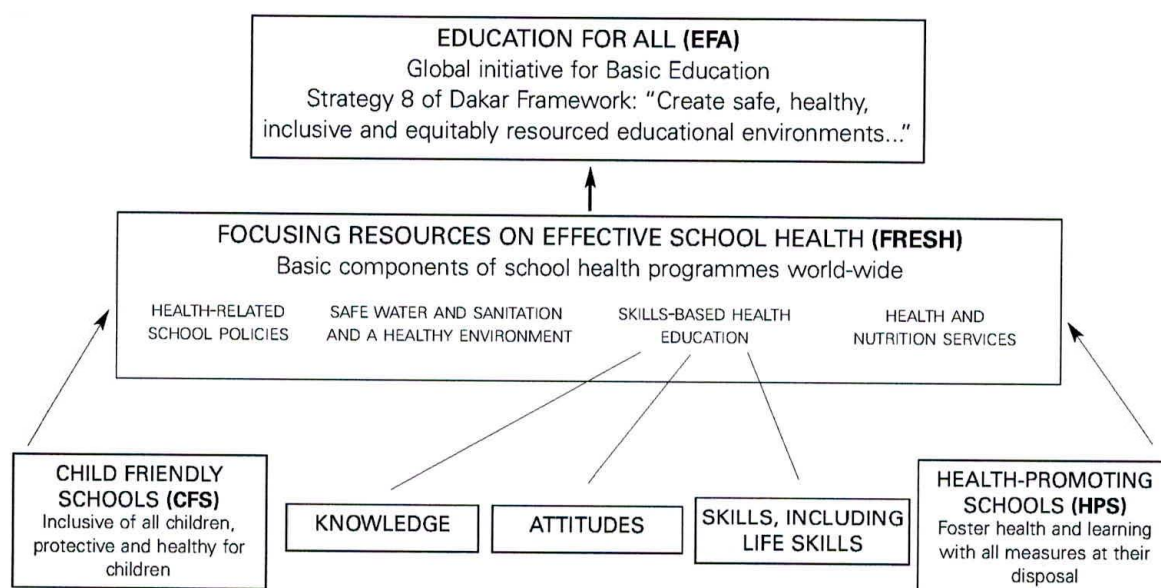
This document specifically:

- defines the term skills-based health education, including life skills;
- describes the theoretical foundation;
- reviews the educational approaches of skills-based health education;
- presents evaluation evidence and practical experiences to make the case for implementing skills-based health education as part of an effective school health programme;
- reviews criteria for effective programmes and preparation for those who deliver such programmes;
- describes available resources

School setting: Skills-based health education and life skills can and have been incorporated in many settings and for a wide range of target groups. In this document, we focus on school-based programmes. Education reform ensures a place for skills-based health education in the curriculum and in various extra-curricular efforts. Special programmes for students and parents, peer education and counselling programmes, and school/community programmes offer ways for students to apply and practise what they learn.

Student participation in active learning can strengthen student-teacher relationships, improve the classroom climate, accommodate a variety of learning styles, and provide alternative ways of learning. Skills-based health education can and should be used to address the health issues that children and young people can encounter in the school setting, including the use of alcohol, tobacco and other drugs; helminth and other worm infections; nutrition; reproductive and sexual health; and the prevention of violence and of HIV/AIDS.

Figure 1: Links between EFA, FRESH, Health-Promoting Schools (HPS), Child-Friendly Schools (CFS), Skills-Based Health Education (SBHE), Life Skills (LS)



2. UNDERSTANDING SKILLS-BASED HEALTH EDUCATION & LIFE SKILLS

Purpose: to define the content and methods of skills-based health education, with examples.

Skills-based health education is good quality education per se and good quality health education in particular. It relies on relevant and effective content *and* participatory or interactive¹ teaching and learning methods.

When planning skills-based health education, it is important to consider first the goals and objectives, then the content and methods (see Figure 2). The goals of skills-based health education describe in *general* terms a health or related social issue to be influenced in some particular way. The objectives describe in *specific* terms the behaviours or conditions (see Figures 3 and 4) that if positively influenced, will have a significant impact on the goals. Many factors influence behaviour and conditions; skills-based health education is one of them.

The content of skills-based health education is a clear delineation of specific knowledge, attitudes, and skills, including life skills, that young people will be helped to acquire so they might adopt behaviours or create the conditions described in the objectives. Once the content is delineated, methods are chosen that are most suitable to the content. For example, *lectures* are suitable methods for helping students acquire accurate knowledge; *discussions* are suitable for influencing attitudes; and *role plays* are suitable for developing skills. A wide range of teaching and learning methods can and should be used in enabling students to acquire knowledge, attitudes, and skills (see boxed example).

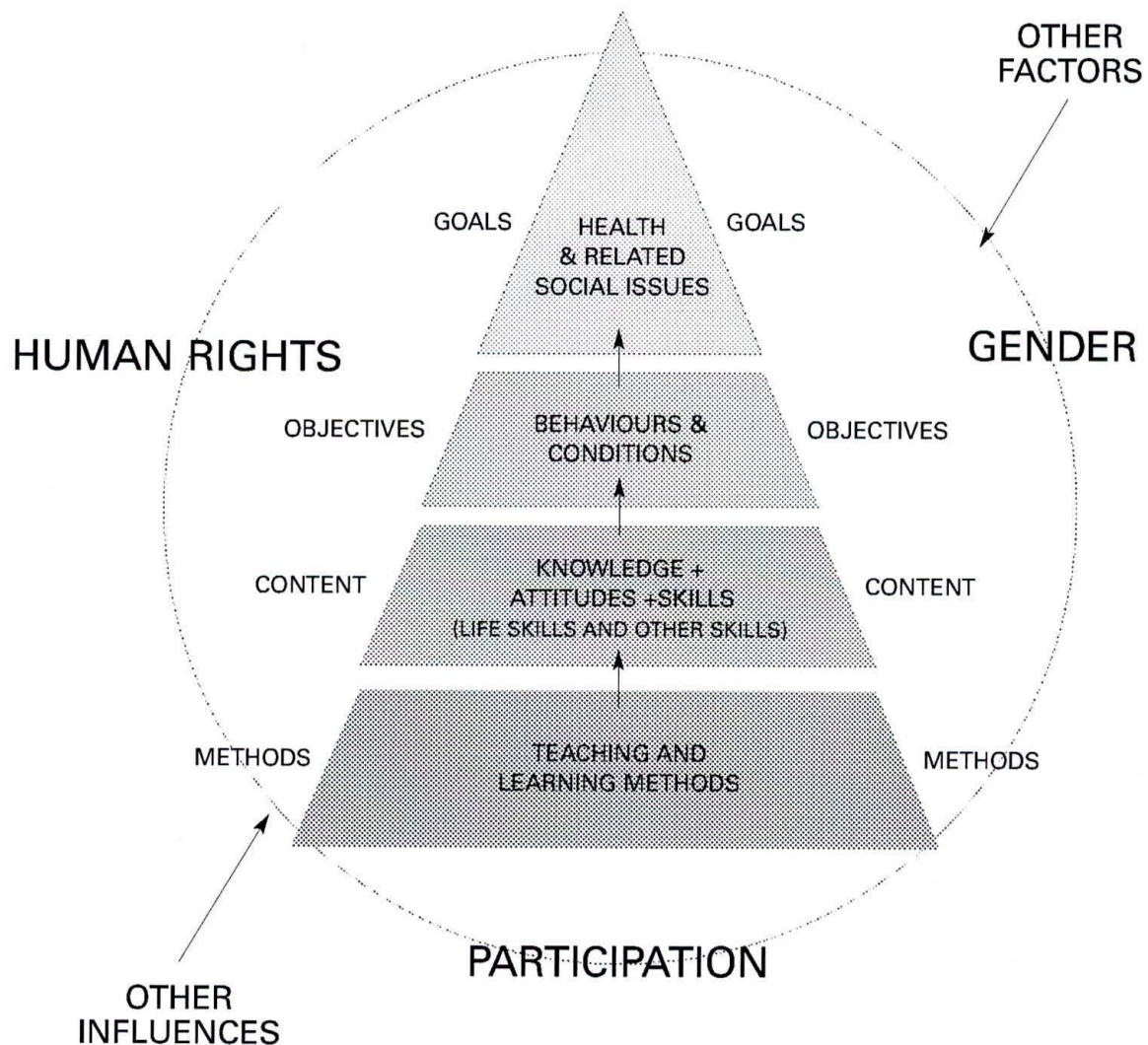
EXAMPLE

Goals and objectives determine the content and methods of skills-based health education. Let's suppose the goal is preventing health problems from the use of tobacco. Objectives for this goal might include reducing young people's use of tobacco products and changing conditions that affect tobacco use, such as the number of smoke-free environments and the cost and accessibility of cigarettes. Content might therefore address (1) knowledge of the health risks of smoking; (2) awareness of the insidious tactics employed by the tobacco industry to persuade young people to use tobacco and make them addicted; (3) attitudes that afford protection against harming one's health and the health of others; (4) critical thinking and decision-making skills to assist in choosing not to use tobacco; communication and refusal skills to withstand peer pressure; and skills to advocate for a smoke-free environment. Teaching methods for this content might include (1) a presentation that clearly and convincingly explains the harmful effects of tobacco and how companies use marketing to make tobacco use seem attractive; (2) a discussion and small group work using audio-visual materials to convey the dangers of smoking; (3) an exercise to research strategies that the tobacco industry uses to gain youth as replacement smokers; (4) role plays to practise refusal skills; and (5) a school-wide activity to gain support for a smoke-free school environment. By itself, skills-based health education has been shown to help many young people avoid health risks such as exposure to tobacco smoke. However, in many communities, social and economic policies and practices undermine the goals of skills-based health education or glorify risk-taking behaviour. National and local strategies that curtail the influence of such policies and practices are needed to achieve the full benefit of skills-based health education.

¹The words "participatory" and "interactive" are used interchangeably in this paper. They refer to teaching methods that actively engage students in the process of education.

Figure 2. Pyramid for Planning skills-based health education

PLANNING PYRAMID



2.1. CONTENT

In skills-based health education, **content** refers to the specific health knowledge and attitudes toward self and others, as well as the skills necessary to influence behaviour and conditions related to a particular health issue. Skills-based health education should enable a young person to apply knowledge and develop attitudes and skills to make positive decisions and take actions to promote and protect one's health and the health of others.

Knowledge refers to a range of information and the understanding thereof. To impart this knowledge, teachers may combine instruction on facts with an explanation of how these facts relate to one another (Greene & Simons-Morton, 1984). For example, a teacher might describe how HIV infection is transmitted and then explain that engaging in sexual relations with an intravenous drug user elevates the risk of HIV infection.

Attitudes are personal biases, preferences, and subjective assessments that predispose one to act or respond in a predictable manner. Attitudes lead people to like or dislike something, or to consider things good or bad, important or unimportant, worth caring about or not worth caring about. For example, gender sensitivity, respect for others, or respecting one's body and believing that it is important to care for are attitudes that are important to preserving health and functioning well (adapted from Greene & Simons-Morton, 1984). For the purposes of this document, the domain of attitudes comprises a broad range of concepts, including values, beliefs, social norms, rights, intentions, and motivations.

Skills are grouped in this document into life skills (defined below) and other skills. In general, skills are abilities that enable people to carry out specific behaviours. The phrase **other skills** refers to practical health skills or techniques such as competencies in first aid (e.g., bandaging, resuscitation, sterilising utensils), in hygiene (e.g., hand washing, brushing teeth, preparing oral rehydration therapy), or sexual health (e.g., using condoms correctly).

Life skills are abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life (WHO definition). In particular, life skills are psychosocial competencies and interpersonal skills that help people make informed decisions, solve problems, think critically and creatively, communicate effectively, build healthy relationships, empathise with others, and cope with managing their lives in a healthy and productive manner. Life skills may be directed toward personal actions or actions toward others, or may be applied to actions that alter the surrounding environment to make it conducive to health.

Various health, education, and youth organisations and adolescence researchers have defined and categorised key skills in different ways. Despite these differences, experts and practitioners agree that the term "life skills" typically includes the skills listed in the preceding definition. To these we have added advocacy skills, because they are important in personal and collective efforts to make a strong case for behaviours and conditions that are conducive to health. (For a case study on advocacy skills, see Section 2.2).

The process of categorizing various life skills may inadvertently suggest distinctions among them (see Figure 3). However, many life skills are interrelated, and several of them can be taught together in a learning activity.

Figure 3. Life skills for skills-based health education

COMMUNICATION AND INTERPERSONAL SKILLS	DECISION-MAKING AND CRITICAL THINKING SKILLS	COPING AND SELF-MANAGEMENT SKILLS
<ul style="list-style-type: none"> • Interpersonal Communication Skills <ul style="list-style-type: none"> - verbal/nonverbal communication - active listening - expressing feelings; giving feedback (without blaming) and receiving feedback • Negotiation/Refusal Skills <ul style="list-style-type: none"> - negotiation and conflict management - assertiveness skills - refusal skills • Empathy Building <ul style="list-style-type: none"> - ability to listen, understand another's needs and circumstances, and express that understanding • Cooperation and Teamwork <ul style="list-style-type: none"> - expressing respect for others' contributions and different styles - assessing one's own abilities and contributing to the group • Advocacy Skills <ul style="list-style-type: none"> - influencing skills and persuasion - networking and motivation skills 	<ul style="list-style-type: none"> • Decision-making/Problem-solving Skills <ul style="list-style-type: none"> - information-gathering skills - evaluating future consequences of present actions for self and others-determining alternative solutions to problems - analysis skills regarding the influence of values and of attitudes about self and others on motivation • Critical Thinking Skills <ul style="list-style-type: none"> - analysing peer and media influences - analysing attitudes, values, social norms, beliefs, and factors affecting them - identifying relevant information and sources of information 	<ul style="list-style-type: none"> • Skills for Increasing Personal Confidence and Abilities to Assume Control, Take Responsibility, Make a Difference, or Bring About Change <ul style="list-style-type: none"> - building self-esteem/confidence - creating self-awareness skills, including awareness of rights, influences, values, attitudes, rights, strengths, and weaknesses - setting goals - self-evaluation / self-assessment/self-monitoring skills • Skills for Managing Feelings <ul style="list-style-type: none"> - managing anger - dealing with grief and anxiety - coping with loss, abuse, and trauma • Skills for Managing Stress <ul style="list-style-type: none"> - time management - positive thinking - relaxation techniques

In efforts to achieve specific behavioural outcomes, programmes aimed at developing young people's life skills without a particular context such as a health behaviour or condition are less effective than programmes that overtly focus on applying life skills to specific health choices and behaviours (Kirby et al, 1994). To influence behaviour effectively, skills must be applied to a particular topic, such as a prevalent health issue. Not to be overlooked, however, is the importance of building life skills to equip young people in other aspects of their development as well, such as maintaining positive interpersonal relations with teachers, students, and family members.

2. UNDERSTANDING SKILLS-BASED HEALTH EDUCATION & LIFE SKILLS

Figure 4 shows how students can apply one or more life skills as they practise choosing positive behaviours and creating healthy conditions in response to various health concerns.

Figure 4. Life skills made specific to major health topics

HEALTH TOPICS	COMMUNICATION AND INTERPERSONAL SKILLS	DECISION-MAKING AND CRITICAL THINKING SKILLS	COPING AND SELF-MANAGEMENT SKILLS
ALCOHOL, TOBACCO, AND OTHER DRUGS	<ul style="list-style-type: none"> • Communication Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - inform others of the negative health and social consequences and personal reasons for refraining from alcohol, tobacco, and drug use - ask parents not to smoke in the car when they ride with them • Empathy Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - listen to and show understanding of the reasons a friend may choose to use drugs - suggest alternatives in an appealing and convincing manner • Advocacy Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - persuade the headmaster to adopt and enforce a policy for tobacco-free schools - generate local support for tobacco-free schools and public buildings • Negotiation/Refusal Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - resist a friend's repeated request to chew or smoke tobacco, without losing face or friends • Interpersonal Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - support persons who are trying to stop using tobacco and other drugs - express constructive positive intolerance for a friend's use of substances. <i>"It is not okay for you to do that..."</i> 	<ul style="list-style-type: none"> • Decision-making Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - gather information about consequences of alcohol and tobacco use - weigh the consequences against common reasons young people give for using alcohol or tobacco - identify their own reasons for not using alcohol or other drugs and explain those reasons to others - suggest a decision to drink non-alcoholic beverages at a party where alcohol is served - make and sustain a decision to stop using tobacco or other drugs and seek help to do so • Critical Thinking Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - analyse advertisements directed toward young people to use tobacco and see how they are playing upon the need to seem "cool," appeal to girls, or be attractive to boys - develop counter-messages that include the cost of buying cigarettes and how else that money could be used - assess how tobacco use takes advantage of poor people - analyse what may be driving them to use substances and aim to find a healthy alternative 	<ul style="list-style-type: none"> • Skills for Managing Stress: Students can observe and practise ways to: <ul style="list-style-type: none"> - analyse what contributes to stress - reduce stress through activities such as exercise, meditation, and time management - make friends with people who provide support and relaxation

Figure 4. Life skills made specific to major health topics (continued)

HEALTH TOPICS	COMMUNICATION AND INTERPERSONAL SKILLS	DECISION-MAKING AND CRITICAL THINKING SKILLS	COPING AND SELF-MANAGEMENT SKILLS
HEALTHY NUTRITION	<ul style="list-style-type: none"> • Communication Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - persuade parents and friends to make healthy food and menu choices • Refusal Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - counter social pressures to adopt unhealthy eating practices • Advocacy Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - present messages of healthy nutrition to others through posters, ads, performances, and presentations - gain support of influential adults such as headmasters, teachers, and local physicians to provide healthy foods in the school environment 	<ul style="list-style-type: none"> • Decision-making Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - choose nutritious foods and snacks over those less nutritious - convincingly demonstrate an understanding of the consequences of unbalanced nutrition (deficiency diseases) • Critical Thinking Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - evaluate nutrition claims from advertisements and nutrition-related news stories 	<ul style="list-style-type: none"> • Self-awareness and Self-management Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - recognise links between eating disorders and psychological and emotional factors - identify personal preferences among nutritious foods and snacks - develop a healthy body image
SEXUAL AND REPRODUCTIVE HEALTH AND HIV/AIDS PREVENTION	<ul style="list-style-type: none"> • Communication Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - effectively express a desire to not have sex - influence others to abstain from sex or practise safe sex using condoms if they cannot be influenced to abstain - demonstrate support for the prevention of discrimination related to HIV/AIDS • Advocacy Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - present arguments for access to sexual and reproductive health information, services, and counselling for young people • Negotiation/Refusal Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - refuse sexual intercourse or negotiate the use of condoms 	<ul style="list-style-type: none"> • Decision-making Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - seek and find reliable sources of information about human anatomy; puberty; conception and pregnancy; STIs, HIV/AIDS, and local prevalence rates; and available methods of contraception - analyse a variety of potential situations for sexual interaction and determine a variety of actions they may take and the consequences of such actions • Critical Thinking Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - analyse myths and misconceptions about HIV/AIDS, contraceptives, gender roles, and body image that are perpetuated by the media 	<ul style="list-style-type: none"> • Skills for Managing Stress: Students can observe and practise ways to: <ul style="list-style-type: none"> - seek services for help with reproductive and sexual health issues, e.g., contraception, condoms to prevent HIV or unplanned pregnancy, sexual abuse, exploitation, discrimination, (gender-based) violence, or other emotional trauma • Skills for Increasing Personal Confidence and Abilities to Assume Control, Take Responsibility, Make a Difference, or Bring About Change: Students can observe and practise ways to: <ul style="list-style-type: none"> - assert personal values when encountering peer and other pressures

Figure 4. Life skills made specific to major health topics (continued)

HEALTH TOPICS	COMMUNICATION AND INTERPERSONAL SKILLS	DECISION-MAKING AND CRITICAL THINKING SKILLS	COPING AND SELF-MANAGEMENT SKILLS
SEXUAL AND REPRODUCTIVE HEALTH AND HIV/AIDS PREVENTION	<ul style="list-style-type: none"> • Interpersonal Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - show interest and listen actively to others - be caring and compassionate, including when interacting with someone who is infected with HIV 	<ul style="list-style-type: none"> - analyse social-cultural influences regarding sexual behaviours 	
REDUCING HELMINTH (WORM) INFECTIONS	<ul style="list-style-type: none"> • Communication Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - communicate messages about worm infection to families, peers, and members of the community - encourage peers, siblings, and family members to take part in deworming activities and to avoid reinfection • Advocacy Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - advocate for an environment and behaviour that are not conducive to helminth infections - share positive results of deworming activities 	<ul style="list-style-type: none"> • Decision-making/problem-solving Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - identify and avoid behaviours and environmental conditions that are likely to cause infection, such as ingestion of or contact with contaminated soil, and adopt behaviours that are likely to prevent infection, such as keeping human faeces from polluting the ground or surface water - use safe water and uncontaminated food 	<ul style="list-style-type: none"> • Self-Monitoring Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - engage in behaviours that are not conducive to contracting helminth and worm infections, such as avoiding contaminated water
VIOLENCE PREVENTION OR PEACE EDUCATION	<ul style="list-style-type: none"> • Communication Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - state their position clearly and calmly, without blaming - listen to each other's point of view - communicate positive messages - use "I" statements and not accuse others • Negotiation Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - intervene and discourage others from conflict before it escalates • Advocacy Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - get involved in community activities that promote non-violent behaviour - join, support, and inform others about non-violent activities and organisations - advocate for programmes to buy back weapons or create weapon free zones - discourage viewing violent television movies and video games 	<ul style="list-style-type: none"> • Decision-making Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - understand the roles of aggressor, victim, and bystander • Critical Thinking Skills: Students can observe and practise ways to: <ul style="list-style-type: none"> - identify and avoid situations of conflict - evaluate both violent and non-violent solutions that appear to be successful as depicted in the media - analyse their own stereo types, beliefs, and attributions that support violence - help reduce prejudice and increase tolerance for diversity 	<ul style="list-style-type: none"> • Skills for Managing Stress: Students can observe and practise ways to: <ul style="list-style-type: none"> - identify and implement peaceful ways of resolving conflict - resist pressure from peers and adults to engage in violent behaviour

Optimally, skills-based health education will be utilised across a range of content areas. Guidelines for addressing several of these content areas can be found in the WHO Information Series for School Health (see Appendix 1).

Skills-based health education and human rights

Skills-based health education supports the basic human rights included in the Convention on the Rights of the Child (CRC), especially those related to the highest attainable standard of health (Article 24) and the right to education for the development of children to their fullest potential (Articles 28 and 29). Children have universal and indivisible rights, including the right to survival; to protection from harmful influences, abuse, and exploitation; and to full participation in family, cultural, and social life. Furthermore, children have rights to information, education and services; to the highest attainable standard of physical and mental health; and to formal and non-formal education about population and health issues, including sexual and reproductive health issues (International Conference on Population and Development, 1999). States are accountable to respect, protect, and fulfil the rights of children. Education must address the best interests and ongoing development of the whole child in a non-discriminatory way and with respect for the views and participation of the child. Skills-based health education is a means to do so.

2.2. TEACHING AND LEARNING METHODS FOR SKILLS-BASED HEALTH EDUCATION

To contribute to skills-based health education goals and achieve the objectives of skill-based health education, teaching and learning methods must be relevant and effective. Effective skills-based health education replicates the natural processes by which children learn behaviour. These include modelling, observation, and social interactions. **Interactive or participatory teaching and learning methods are an essential part of skills-based health education.**

Skills are learned best when students have the opportunity to observe and actively practise them. Listening to a teacher describe skills or read or lecture about them does not necessarily enable young people to master them. Learning by doing is necessary. Teachers need to employ methods in the classroom that let young people observe the skills being practiced and then use the skills themselves. Researchers argue that if young people can practise the skills in the safety of a classroom environment, it is much more likely that they will be prepared to use them in and outside of school.

The role of the teacher in delivering skills-based health education is to facilitate participatory learning (that is, the natural process of learning) in addition to conducting lectures or employing other appropriate and efficient methods for achieving the learning objectives. Participatory learning utilises the experience, opinions, and knowledge of group members; provides a creative context for the exploration and development of possibilities and options; and affords a source of mutual comfort and security that aids the learning and decision-making process (CARICOM & UNICEF, 1999).

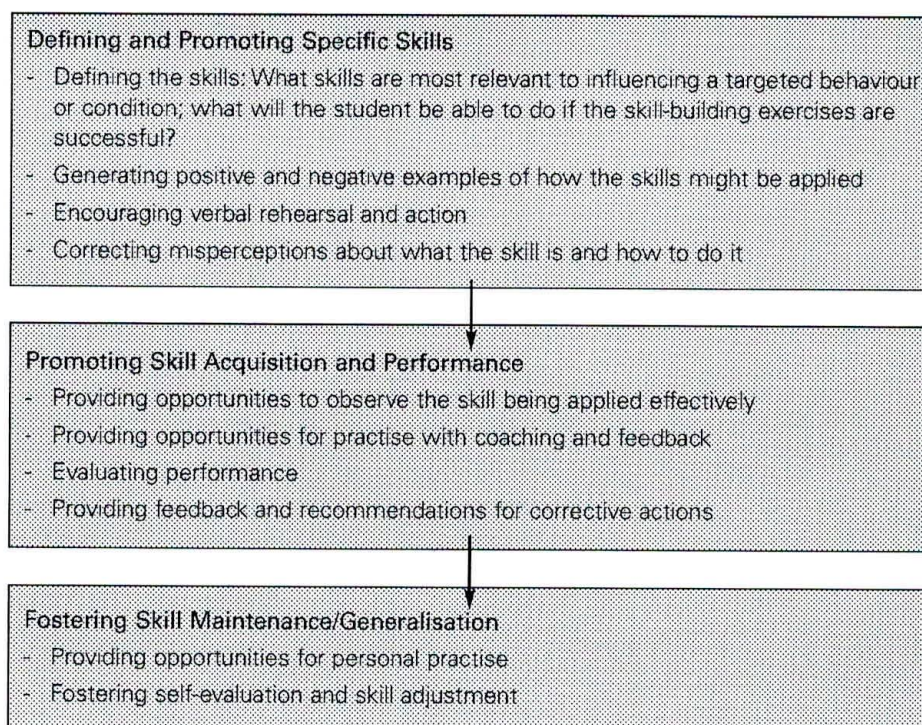
Social learning theory provides some of the theoretical foundation for why participatory teaching techniques work. Bandura's research shows that people learn what to do and how to act by observing others. Positive behaviours are reinforced by the positive or

negative consequences viewed or experienced directly by the learner. Retention of behaviours can be enhanced when people mentally rehearse or actually perform modelled behaviour patterns (Bandura, 1977).

Constructivist theory provides another rationale. Vygotsky argues that social interaction and the active engagement of the child in problem-solving with peers and adults is the foundation of the developing mind (Vygotsky, 1978). Many programmes capitalise on the power of peers to influence social norms and individual behaviours. Adults and young people tend to act in ways that they perceive to be normative or what most people their age are doing. If youngsters perceive (correctly or incorrectly) that fighting is the way most young people solve problems, then that becomes the norm or typical way most youngsters in a setting will respond. If, on the other hand, students sense that the norm is to talk problems through and that bystanders will intervene to stop a fight rather than encourage it, most students will gravitate to that norm of behaviour. Through cooperative work with peers to promote pro-social behaviours, the normative peer structure is changed to support healthy, positive behaviours; it also may move some of the high-risk peers who are more likely to engage in damaging behaviours toward the pro-social norms (Wodarski & Feit, 1997). Setting positive standards in the school environment is key; making students aware of those standards and then model them can lead more students to behave in health-promoting ways (adapted from Mangrulkar et al., 2001, p. 27).

Figure 5 describes a model of skills development that can serve as a guide for structuring classroom lessons.

Figure 5. Cycle of Skills Development



(The text in Figure 5 was adapted from Mangrulkar et al., 2001, p. 27.)

Studies of approaches to health education have shown that active participatory learning activities for students are the most effective method for developing knowledge, attitudes, and skills *together* for students to make healthy choices (e.g., Wilson et al., 1992; Tobler, 1998).

Specific advantages of active participatory teaching and learning methods, and working in groups, include the following:

- augment participants' perceptions of themselves and others
- promote cooperation rather than competition
- provide opportunities for group members and their trainers/teachers to recognise and value individual skills and enhance self-esteem
- enable participants to get to know each other better and extend relationships
- promote listening and communication skills
- facilitate dealing with sensitive issues
- appear to promote tolerance and understanding of individuals and their needs
- encourage innovation and creativity

(from: CARICOM, 2000; CARICOM & UNICEF, 1999)

Participatory teaching methods for building skills and influencing attitudes include the following:

- class discussions
- brainstorming
- demonstration and guided practice
- role play
- small groups
- educational games and simulations
- case studies
- story telling
- debates
- practising life skills specific to a particular context with others
- audio and visual activities, e.g., arts, music, theatre, dance
- decision mapping or problem trees

Effective programmes balance these participatory and active methods with information and attitudes related to the context (Kirby et al., 1994). Figure 6 describes content, benefits, and how-to processes for some major participatory teaching methods. In the following case study, young students used advocacy and action skills to change conditions in the environment and promote health.

CASE STUDY

Elementary school students in Hibbing, Minnesota, in the United States participated in the *Skills for Growing Up* programme developed by Lions-Quest, an initiative of Lions Clubs International/Lions Clubs International Foundation to teach life skills to youth. The students decided that the "Hey Man Cool" gum stick with a red tip that expelled puffs of sugar "smoke" could easily be mistaken for a real cigarette, and that the manufacturer was glamorizing smoking. They got two local candy stores to remove the candy from their shelves and then made their case to the manufacturer, the Philadelphia Chewing Gum

Corporation. The company agreed to change the packaging, remove the red tip, and modify the shape of the gum. Encouraged by their success, the teacher said that the students are now taking on a beef jerky company whose product resembles chewing tobacco.

(From <http://www.quest.edu/content/OurProgrammes/EvaluationReport/evalreport.html>)

Figure 6: Participatory Teaching Methods

Each of the teaching methods in Figure 6 can be used to teach life skills.

TEACHING METHOD	DESCRIPTION	BENEFITS	PROCESS
CLASS DISCUSSION (In Small or Large Groups)	The class examines a problem or topic of interest with the goal of better understanding an issue or skill, reaching the best solution, or developing new ideas and directions for the group.	Provides opportunities for students to learn from one another and practise turning to one another in solving problems. Enables students to deepen their understanding of the topic and personalise their connection to it. Helps develop skills in listening, assertiveness, and empathy.	<ul style="list-style-type: none"> • Decide how to arrange seating for discussion • Identify the goal of the discussion and communicate it clearly • Pose meaningful, open-ended questions • Keep track of discussion progress
BRAIN-STORMING	Students actively generate a broad variety of ideas about a particular topic or question in a given, often brief period of time. Quantity of ideas is the main objective of brainstorming. Evaluating or debating the ideas occurs later.	Allows students to generate ideas quickly and spontaneously. Helps students use their imagination and break loose from fixed patterns of response. Good discussion starter because the class can creatively generate ideas. It is essential to evaluate the pros and cons of each idea or rank ideas according to certain criteria.	<ul style="list-style-type: none"> • Designate a leader and a recorder • State the issue or problem and ask for ideas • Students may suggest any idea that comes to mind • Do not discuss the ideas when they are first suggested • Record ideas in a place where everyone can see them • After brainstorming, review the ideas and add, delete, categorise
ROLE PLAY	Role play is an informal dramatisation in which people act out a suggested situation.	Provides an excellent strategy for practising skills; experiencing how one might handle a potential situation in real life; increasing empathy for others and their point of view; and increasing insight into one's own feelings.	<ul style="list-style-type: none"> • Describe the situation to be role played • Select role players • Give instructions to role players • Start the role play • Discuss what happened

Figure 6: Participatory Teaching Methods (continued)

TEACHING METHOD	DESCRIPTION	BENEFITS	PROCESS
SMALL GROUP/ BUZZ GROUP	For small group work, a large class is divided into smaller groups of six or less and given a short time to accomplish a task, carry out an action, or discuss a specific topic, problem, or question.	Useful when groups are large and time is limited. Maximises student input. Lets students get to know one another better and increases the likelihood that they will consider how another person thinks. Helps students hear and learn from their peers.	<ul style="list-style-type: none"> • State the purpose of discussion and the amount of time available • Form small groups • Position seating so that members can hear each other easily • Ask group to appoint recorder • At the end have recorders describe the group's discussion
GAMES AND SIMULATIONS	Students play games as activities that can be used for teaching content, critical thinking, problem-solving, and decision-making and for review and reinforcement. Simulations are activities structured to feel like the real experience.	Games and simulations promote fun, active learning, and rich discussion in the classroom as participants work hard to prove their points or earn points. They require the combined use of knowledge, attitudes, and skills and allow students to test out assumptions and abilities in a relatively safe environment.	<p>Games:</p> <ul style="list-style-type: none"> • Remind students that the activity is meant to be enjoyable and that it does not matter who wins <p>Simulations:</p> <ul style="list-style-type: none"> • Work best when they are brief and discussed immediately • Students should be asked to imagine themselves in a situation or should play a structured game or activity to experience a feeling that might occur in another setting
SITUATION ANALYSIS AND CASE STUDIES	Situation analysis activities allow students to think about, analyse, and discuss situations they might encounter. Case studies are real-life stories that describe in detail what happened to a community, family, school, or individual.	Situation analysis allows students to explore problems and dilemmas and safely test solutions; it provides opportunities to work together, share ideas, and learn that people sometimes see things differently. Case studies are powerful catalysts for thought and discussion. Students consider the forces that converge to make an individual or group act in one way or another, and then evaluate the consequences. By engaging in this thinking process, students can improve their own decision-making skills. Case studies can be tied to specific activities to help students practise healthy responses before they find themselves confronted with a health risk.	<ul style="list-style-type: none"> • Guiding questions are useful to spur thinking and discussion • Facilitator must be adept at teasing out the key points and step back and pose some 'bigger' overarching questions • Situation analyses and case studies need adequate time for processing and creative thinking • Teacher must act as the facilitator and coach rather than the sole source of 'answers' and knowledge

Figure 6: Participatory Teaching Methods (continued)

TEACHING METHOD	DESCRIPTION	BENEFITS	PROCESS
DEBATE²	In a debate, a particular problem or issue is presented to the class, and students must take a position on resolving the problem or issue. The class can debate as a whole or in small groups.	Provides opportunity to address a particular issue in-depth and creatively. Health issues lend themselves well: students can debate, for instance, whether smoking should be banned in public places in a community. Allows students to defend a position that may mean a lot to them. Offers a chance to practise higher thinking skills.	<ul style="list-style-type: none"> • Allow students to take positions of their choosing. If too many students take the same position, ask for volunteers to take the opposing point of view. • Provide students with time to research their topic. • Do not allow students to dominate at the expense of other speakers. • Make certain that students show respect for the opinions and thoughts of other debaters. • Maintain control in the classroom and keep the debate on topic.
STORY TELLING³	The instructor or students tell or read a story to a group. Pictures, comics and photonovels, filmstrips, and slides can supplement. Students are encouraged to think about and discuss important (health-related) points or methods raised by the story after it is told.	Can help students think about local problems and develop critical thinking skills. Students can engage their creative skills in helping to write stories, or a group can work interactively to tell stories. Story telling lends itself to drawing analogies or making comparisons, helping people to discover healthy solutions.	<ul style="list-style-type: none"> • Keep the story simple and clear. Make one or two main points. • Be sure the story (and pictures, if included) relate to the lives of the students. • Make the story dramatic enough to be interesting. Try to include situations of happiness, sadness, excitement, courage, serious thought, decisions, and problem-solving behaviours.

Source: Health and Family Life Education (HFLE) Life Skills Training, Barbados, March/April 2001, compiled by HHD/EDC, Newton, Mass.

²Source: Meeks, L. & Heit, P. (1992). *Comprehensive School Health Education*. Blacklick, OH: Meeks Heit Publishing.

³Source: Werner, D. & Bower, B. (1982). *Helping Health Workers Learn*. Palo Alto, CA: Hesperian Foundation.

Purpose: to summarise the theories and principles that serve as a foundation for skills-based health education, and to highlight how they are applied.

A significant body of theory and research provides a rationale for the benefits and uses of skills-based health education. This section outlines a selection of these theories, with brief annotations highlighting their implications for skills-based health education planning. The theories share many common themes and have all contributed to the development of skills-based health education and life skills.

Behavioural science, and the disciplines of education and child development, placed in the context of human rights principles, constitute a primary source of these foundation theories and principles. Those who work in these disciplines have provided insights - acquired through decades of research and experience - into the way human beings, specifically children and adolescents, grow and learn; acquire knowledge, attitudes, and skills; and behave. Research and experience have also revealed the many spheres of influence that affect the way children and adolescents grow in diverse settings, from family and peer groups to school and community.

Most of the theories outlined below are drawn from Western or North American social scientists and may or may not be equally relevant to other cultures and practices. Therefore, programme designers, together with local social and behavioural scientists, paediatricians, anthropologists, educators, and others who study child and adolescent development, may want to consider the relevance of these ideas and their own cultural basis for programme design.

3.1. CHILD AND ADOLESCENT DEVELOPMENT THEORIES

An understanding of the complex biological, social, and cognitive changes, gender awareness, and moral development that occurs from childhood through adolescence lies at the core of most theories of human development.

The onset of puberty constitutes a fundamental biological change from childhood to early adolescence. An important component of social cognition in the transition from adolescence to adulthood is the process of understanding oneself, others, and relationships. The ability to understand causal relationships develops in early adolescence, and problem-solving becomes more sophisticated. The adolescent is able to conceptualise simultaneously about many variables, think abstractly, and create rules for problem-solving (Piaget, 1972). Social interactions become increasingly complex at this time. Adolescents spend more time with peers; increase their interactions with opposite-sex peers; and spend less time at home and with family members. Moral development occurs during this period as well; adolescents begin to rationalise the different opinions and messages they receive from various sources, and begin to develop values and rules for balancing the conflicting interests of self and others.

→ Implications for skills-based health education planning:

(1) In the school setting, late childhood and early adolescence (ages 6–15) are critical moments of opportunity for building skills and positive habits. During this time,

⁴Most of this chapter represents a summary of "Chapter II: The Theoretical Foundations of the Life Skills Approach," from Mangrulkar, L., Vince Whitman, C., & Posner, M. (2001), *Life Skills Approach to Child and Adolescent Healthy Human Development*, Washington, DC: Pan American Health Organisation.

children are developing the ability to think abstractly, to understand consequences, to relate to their peers in new ways, and to solve problems as they experience more independence from parents and develop greater control over their own lives.

(2) The wider social context of early and middle adolescence provides varied situations in which to practise new skills and develop positive habits with peers and other individuals outside the family.

(3) Developing attitudes, values, skills, and competencies is recognised as critical to the development of a child's sense of self as an autonomous individual and to the overall learning process in school.

(4) Within this age span, the skills of young people of the same age and different ages can vary dramatically. Activities need to be developmentally appropriate.

3.2. MULTIPLE INTELLIGENCES

This theory, developed by Howard Gardner (1993), proposes the existence of eight human intelligences that take into account the wide variety of human capacities. They include linguistic, logical/mathematical, musical, spatial, bodily/kinaesthetic, naturalist, interpersonal, and intrapersonal intelligences. The theory argues that all human beings are born with the eight intelligences, but they are developed to a different degree in each person and that in developing skills or solving problems, individuals use their intelligences in different ways.

→ Implications for skills-based health education planning:

(1) A broader vision of human intelligence points toward using a variety of instructional methods to engage different learning styles and strengths.

(2) The capacity of managing emotions and the ability to understand one's feelings and the feelings of others are critical to human development, and adolescents can learn these capacities just as well as they learn reading and mathematics.

(3) Students have few opportunities outside of school to participate in instruction and learning for these other capacities, such as social skills. Therefore, it is important to use the school setting to teach more than traditional subject matter.

3.3. SOCIAL LEARNING THEORY OR SOCIAL COGNITIVE THEORY

This theory is based largely upon the work of Albert Bandura (1977), whose research led him to conclude that children learn to behave both through formal instruction and through observation. Formal instruction includes how parents, teachers, and other authorities and role models tell children to behave; observation includes how young people see adults and peers behaving. Children's behaviour is reinforced or modified by the consequences of their actions and the responses of others to their behaviours.

→ Implications for skills-based health education planning:

(1) Skills teaching needs to replicate the natural processes by which children learn behaviour: modelling, observation, and social interaction.

(2) Reinforcement is important in learning and shaping behaviour. Positive reinforcement is applied for the correct demonstration of behaviours and skills; negative or corrective reinforcement is applied for behaviours or skills that need to be adjusted to build more positive actions.

(3) Teachers and other adults are important role models, standard setters, and sources of influence.

3.4. PROBLEM-BEHAVIOUR THEORY

Jessor & Jessor (1977) recognise that adolescent behaviour (including risk behaviour) is the product of complex interactions between people and their environment. Problem-behaviour theory is concerned with the relationships among three categories of psychosocial variables. The first category, the personality system, involves values, expectations, beliefs, and attitudes toward self and society. The second category, the perceived environmental system, comprises perceptions of friends' and parents' attitudes toward behaviours and physical agents in the environment, such as substances and weapons. The third category, the behavioural system, comprises socially acceptable and unacceptable behaviours. More than one problem behaviour may converge in the same individuals, such as a combination of alcohol and tobacco or other drug use and sexually transmitted disease.

→ Implications for skills-based health education planning:

(1) Behaviours are influenced by an individual's values, beliefs, and attitudes and by the perceptions of friends and family about these behaviours. Therefore, skills in critical thinking (including the ability to evaluate oneself and the values of the social environment), effective communication, and negotiation are important aspects of skills-based health education and life skills. Building these types of interactions into activities, with opportunities to practise the skills, is an important part of the learning process.

(2) Many health and social issues, and their underlying factors, are linked. Interventions on one issue can be linked to and benefit another.

(3) Interventions need to address personal, environmental, and behavioural systems together.

3.5. SOCIAL INFLUENCE THEORY AND SOCIAL INOCULATION THEORY

These two theories are closely related. Social influence theory is based on the work of Bandura (see above) and on social inoculation theory by researchers such as McGuire (1964, 1968), and was first used in smoking prevention programmes by Evans (1976; et al., 1978). Social influence theory recognises that children and adolescents will come under pressure to engage in risk behaviours, such as tobacco use or premature or

unprotected sex. Social influence and inoculation programmes anticipate these pressures and teach young people both about the pressures and about ways to resist them before youth are exposed. Usually these programmes are targeted at very specific risks, tying peer resistance skills to particular risk behaviours and knowledge. Social resistance training is usually a central component of social skills and life skills programmes.

→ **Implications for skills-based health education planning:**

(1) Peer and social pressures to engage in unhealthy behaviours can be dissipated by addressing them *before* the child or adolescent is exposed to the pressures, thus pointing toward early prevention rather than later intervention.

(2) Making young people aware of these pressures ahead of time gives them a chance to recognise in advance the kinds of situations in which they may find themselves.

(3) Teaching children *resistance skills* is more effective for reducing problem behaviours than just providing information or provoking fear of the results of the behaviour.

3.6. COGNITIVE PROBLEM SOLVING

This competence-building model of primary prevention theorises that teaching social-cognitive problem-solving skills to children at an early age can improve interpersonal relationships and impulse control, promote self-protecting and mutually beneficial solutions among peers, and reduce or prevent negative "health-compromising" behaviours. Poor problem-solving skills are related to poor social behaviours, indicating the need to include problem-solving and other skills in skills-based health education.

→ **Implications for skills-based health education planning:**

(1) Teaching interpersonal problem-solving skills at early stages in the developmental process (childhood, early adolescence) develops a strong foundation for later learning.

(2) Focusing on skills for self-awareness and self-management, as in anger management or impulse control, as well as generating *alternative solutions* to interpersonal problems, can reduce or prevent problem behaviours. Focusing on the ability to conceptualise or think ahead to the consequences of different behaviours or solutions can help children make positive choices.

3.7. RESILIENCE THEORY

This theory explains the process by which some people are more likely to engage in health-promoting rather than health-compromising behaviours. It examines the interaction among factors in a young person's life that protect and nurture, including conditions in the family, school, and community, allowing a positive adaptation in young people who are at risk. The importance of this theory is its emphasis on the need to modify and promote mechanisms to protect children's healthy development. Resilience theory argues that there are internal and external factors that interact among themselves and allow people to overcome adversity. Internal protective factors include self-esteem and self-confidence, internal

locus of control, and a sense of life purpose. External factors are primarily social supports from family and community. These include a caring family that sets clear, nonpunitive limits and standards; the absence of alcohol abuse and violence in the home; strong bonds with and attachment to the school community; academic success; and relationships with peers who practise positive behaviours (Kirby 2001; Infante, 2001; Luthar, 2000; Kirby 1999; Kass, 1998; Blum & Reinhard, 1997; Luthar & Ziegler, 1991; Rutter, 1987). According to Bernard (1991), the characteristics that set resilient young people apart are social competence, problem-solving skills, autonomy, and a sense of purpose. Today, there seems to be agreement on the sets of factors that are present in resilient behaviours. Research is focusing on identifying the types of interactions among these factors that allow resilient adaptation to take place despite adverse conditions.

→ Implications for skills-based health education planning:

(1) Social-cognitive skills, social competence, and problem-solving skills can serve as *mediators* for behaviour.

(2) The specific skills addressed by skills-based health education, and life skills-based education for other learning areas, are part of the internal factors that help young people respond to adversity and are the traits that characterise resilient young people.

(3) It is important that both teachers and parents learn these same skills and provide nurturing family and school environments, modelling what they hope young people will be able to do.

(4) Resilience focuses on the child, the family, and the community, allowing the teacher or caregiver to be the facilitator of the resilient process.

While skills may protect young people, many larger factors in the environment play a role and may also have to be addressed if healthy behaviour is to be achieved.

3.8. THEORY OF REASONED ACTION AND THE HEALTH BELIEF MODEL

The Theory of Reasoned Action and the Health Belief Model contain similar concepts. Based on the research of Fishbein and Ajzen (1975), the Theory of Reasoned Action views an individual's intention to perform a behaviour as a combination of his *attitude* toward performing the behaviour and *subjective normative beliefs* about what others think he should do. The Health Belief Model, first developed by Rosenstock (1966; Rosenstock et al., 1988; Sheehan & Abraham, 1996) recognises that perceptions - rather than actual facts - are important to weighing up benefits and barriers affecting health behaviour, along with the perceived susceptibility and perceived severity of the health threat or consequences. Modifying factors include demographic variables and cues to action which can come from people, policies or conducive environments.

→ Implications for skills-based health education planning:

(1) If a person perceives that the outcome from performing a behaviour is positive, she will have a positive attitude toward performing that behaviour. The opposite can be said if the behaviour is thought to be negative.

2) If relevant others (such as parents, teachers, peers) see performing a behaviour as positive and the individual is motivated to meet the expectations of relevant others, then a positive individual behaviour is expected. The same is true for negative behaviour norms.

3.9. STAGES OF CHANGE THEORY OR TRANSTHEORETICAL MODEL

This theory, based on a model developed by Prochaska (1979; & DiClemente, 1982), describes stages that identify where a person is regarding her change of behaviour. The six main stages are precontemplation (no desire to change behaviour), contemplation (intent to change behaviour), preparation (intent to make a behaviour change within the next month), action (between 0 and 6 months of making a behaviour change), maintenance (maintaining behaviour change after 6 months for up to several years), and termination (permanently adopted a desirable behaviour).

→ Implications for skills-based health education planning:

(1) It is important to identify and understand the stages where students are in terms of their knowledge, attitudes, motivation, and experiences in the real world, and to match activities and expectations to these.

(2) Interventions that address a stage not relevant to students are unlikely to succeed. For instance, a tobacco-cessation programme for people who mostly do not smoke or who smoke but have no desire to change is not likely to lead to quitting smoking.

For more information, see Chapter II in *Life Skills Approach to Child and Adolescent Healthy Development*, by Mangrulkar, L., Vince Whitman, C., and Posner, M., published by the Pan American Health Organisation in 2001. Available at <http://www.paho.org/English/HPP/HPF/ADOL/Lifeskills.pdf>

Purpose: to outline the body of research evidence and accumulated experience on the effectiveness of skills-based health education.

4.1. MAJOR RESEARCH EVIDENCE CONCERNING THE EFFECTIVENESS OF SKILLS-BASED HEALTH EDUCATION⁵

Education for health for young people has been referred to as health education, skills-based health education, and a life skills approach. Evaluation research over the past decade has revealed more about strategies for producing the desired knowledge, attitude, skill, and behavioural outcomes that decrease risk behaviours and improve health. Three findings are important for policymakers and programme planners:

(1) Health education that concentrates on developing **skills** for making healthy choices in life, *in addition to* imparting health-related knowledge, attitudes, values, services, and support, is more likely to produce the desired outcome.

(2) Skill development is more likely to result in the desired healthy behaviour when practising the skill is tied to the content of a specific health behaviour or health decision.

(3) The most effective method of skill development is learning by doing - involving people in active, participatory learning experiences rather than passive ones.

(UNESCO/UNICEF/WHO/The World Bank, 2000; Tobler, 1998 Draft; WHO, 1997; WHO/UNFPA/UNICEF, 1995; Burt, 1998; Vince Whitman et al., 2001)

Research shows that skills-based health education promotes healthy lifestyles and reduces risk behaviours. A meta-analysis of 207 school-based drug prevention programmes grouped approaches to prevention into nine categories: knowledge only; affective only; knowledge and affective; decisions, values, and attitudes; generic skills training; social influences; comprehensive life skills; "other" programmes; and health education K-12. The author found that "the most effective programmes teach comprehensive life skills" (as defined in sections 1.4. and 2.1. of this document). Programmes were also grouped according to whether or not they used interactive methods. The study concluded that "the most successful of the interactive programmes are the comprehensive life skills-based education programmes that incorporate the refusal skills offered in the social influences programmes and add skills such as assertiveness, coping, communication skills, etc." (Tobler, 1992). Meta-analyses by Kirby (1997, 1999, 2001) confirmed that active learning methods, along with other factors, were effective in reaching students and led to positive behavioural results. Studies in developing countries have also established the effectiveness of interactive and participatory teaching methods for skills-based health education (e.g., Wilson et al., 1992). These findings together provide a clear basis for establishing a focus on this approach to health education.

Skills-based health education has been shown by research to:

- reduce the chances of young people engaging in **delinquent behaviour** (Elias, 1991), **interpersonal violence** (Tolan & Guerra, 1994), and **criminal behaviour** (Englander-Goldern et al, 1989)
- delay the onset age of using **alcohol, tobacco, and other drugs** (Griffin & Svendsen, 1992; Caplan et al., 1992; Werner 1991; Errecart et al., 1991; Hansen, Johnson, Flay, Graham, & Sobel, 1988; Botvin et al., 1984, 1980)

⁵Parts of this chapter are drawn from Vince Whitman, C., Aldinger, C., Levinger, B., & Birdthistle, I. (2000). *Education For All 2000 Assessment. Thematic Studies: School Health and Nutrition*. Paris: UNESCO.

Examples:

- >Australia, Chile, Norway, and Swaziland collaborated in a pilot study on the efficacy of the social influences approach in school-based alcohol education. The data show that peer-led education appears to be effective in reducing alcohol use across a variety of settings and cultures (Perry & Grant, 1991).
- >In South Africa, a smoking prevention programme, derived from social cognitive theory, was implemented in schools in the Cape Town area. During the intervention, children increased their self-confidence and decreased the use of tobacco compared to children in the control schools. This evaluation led to a recommendation that the Department of Education and Training consider making the programme part of the formal school curriculum (Hunter et al., 1991).
- >In the United States, a study of nearly 6,000 students from 56 schools implemented a Life Skills Training (LST) programme, based on a person-environment interactive model that assumes that there are multiple pathways to tobacco, alcohol, and drug use. The results of the three-year intervention study showed that LST had a significant impact on reducing cigarette, marijuana, and alcohol use. Results of the six-year follow-up indicated that the effects of the programme lasted until the end of the twelfth grade (CDC, 1999).

- Reduce **high risk sexual activity** that can result in pregnancy or STI or HIV infections (Kirby, 1997 and 1994; WHO/GPA, 1994; Postrado & Nicholson, 1992; Scripture Union, n.d., Zabin et al., 1986; Schinke, Blythe and Gilcrest, 1981)

Examples:

- >In Uganda, an HIV/AIDS prevention programme in primary schools emphasised improving access to information, peer interaction, and quality of performance of the existing school health education system. After two years of interventions, the percentage of students who stated they had been sexually active fell from 42.9% to 11.1%. Social interaction methods were found to be effective. Students in the intervention group tended to speak to peers and teachers more often about sexual matters. Reasons for abstaining from sex were associated with the rational decision-making model rather than with the punishment model (Shuey et al., 1999).
- >Kirby and DiClemente (1994) found that negotiation skills enhance students' ability to delay sex or to use condoms. Wilson and colleagues (1992) concluded that interactive teaching methods are "better than lectures at increasing condom use and confidence in using condoms and at reducing the number of sexual partners." Their evaluation found that female student teachers in Zimbabwe who participated in a skills-based AIDS intervention were more knowledgeable about condoms and their correct use, had a higher sense of self-efficacy, perceived fewer barriers, and reported fewer sexual partners four months after the intervention than their colleagues who participated in a lecture.

- prevent **peer rejection** (Mize and Ladd, 1990) and **bullying** (Olewus, 1990)
- teach **anger control** (Deffenbacher, Oetting, Huff, and Thwaites, 1995; Deffenbacher, Lynch, Oetting, and Kemper, 1996; Feindler, et al 1986)
- promote positive **social adjustment** (Elias, Gara, Schulyer, Brandon-Muller, and Sayette, 1991) and reduce **emotional disorders** (McConaughy, Kay and Fitzgerald, 1998)
- improve health-related behaviours and **self-esteem** (Young, Kelley, and Denny, 1997)
- improve **academic performance** (Elias, Gara, Schulyer, Brandon-Muller, and Sayette, 1991)

A matrix of evaluation studies in Appendix 3 summarises the evidence. The matrix lists selected studies that used skills-based health education and achieved changes in knowledge, attitudes, skills, or behaviour. Studies that show impact on behaviour tend to include more comprehensive interventions that include but go beyond skills-based health education. The next section describes key success factors in school-based programmes and lists barriers to success by category.

4.2. WHICH FACTORS CONTRIBUTE TO EFFECTIVE PROGRAMMES?

Skills-based health education will be most effective in influencing behaviour when applied as part of a comprehensive, multi-strategy approach that delivers consistent messages over time. Strategies need to be tailored to discrete aspects and stages of behaviour. A narrow focus on skills-based health education is unlikely to sustain changed behaviour in the long term. More powerful and sustained outcomes tend to be achieved when skills-based health education is coordinated with policies, services, family and community partnerships, and mass media and other strategies. For instance, research shows that a curriculum combined with youth community service reduces risk behaviours such as fighting, early sexual behaviour, and substance use more effectively than a curriculum alone (O'Donnell et al., 1998).

Indeed, the FRESH (Focusing Resources on Effective School Health) initiative emerged in response to the need for more comprehensive programming rather than singular approaches for which the expectations are often unreasonably high. For more information on FRESH, see Sections 1.1. and 5.1.2. The success factors described in Figure 7 are derived from research and experience in developing and more developed nations. Chapter 5 of this document outlines ways to translate these evaluation results into effective programmes.

Figure 7: Critical success factors in school-based approaches

Gaining commitment
<p><i>Intense advocacy is required from the earliest planning stages</i> to influence key national leadership; to mobilise the community to place skills-based health education on its agenda; and to hold the community accountable for implementing national and international agreements. Advocating with accurate and timely data can convince national leaders and communities that prevention from an early age is important. It can also help ensure that programmes focus on the actual health needs, experience, motivation, and strengths of the target population, rather than on problems as perceived by others.^{6,7} Communicating the evidence, listening and responding to community concerns, and valuing community opinions can help garner commitment, while effective resource mobilisation will underscore the success of such efforts.^{8,9} On the school level, effective skills-based health education programmes rely on the larger vision of health promotion, which incorporates health into education reform. They also rely on the extent to which the school itself makes a priority of promoting health, that is, whether it links its own health policies and services to skills-based health education and provides a healthy psychosocial and physical school environment.</p>

⁶UNICEF. (2000). *Involving People, Evolving Behaviour*. Edited by McKee, N., Manoncourt, E., Saik Yoon, C., & Carnegie, R.

⁷Webb, D. & Elliott, L., in collaboration with UK Department for International Development and UNAIDS. (2000). *Learning to Live - Monitoring and evaluating HIV/AIDS programmes for young people*. Save the Children Fund.

⁸UNESCO, PROAP Regional Clearinghouse on Population Education and Communication, UNFPA. (2001). *Communication and Advocacy Strategies: Adolescent Reproductive and Sexual Health: Booklet 3, Lessons Learned and Guidelines*. Bangkok, Thailand: UNESCO, UNFPA.

⁹South Africa Ministry of Health and Ministry of Education. (1998). *Life Skills Programme Project Report 1997/98*.

Figure 7: Critical success factors in school-based approaches (continued)

Theoretical underpinnings
<p><i>"Effective programmes are based upon theoretical approaches that have been demonstrated to be effective in influencing health-related risky behaviours"</i>¹⁰ (see examples in Chapter 3). Common elements exist across these theories, including the importance of personalising information and probability of risks, increasing motivation and readiness for change/action, understanding and influencing peers and social norms, enhancing personal skills and attitudes and ability to take action, and developing enabling environments through supportive policies and service delivery.¹¹ Social learning theories suggest that performing a behaviour will be affected by an understanding of what needs to be done (knowledge), a belief in the anticipated benefit (motivation), a belief that particular skills will be effective (outcome expectancy), and a belief that one can effectively use these skills (self-efficacy)¹²</p>
Content of programmes
<p><i>The information, attitudes, and skills that comprise the programme content should be selected for their relevance to specific health-related risk and protective behaviours; for example, resisting peer pressure to smoke or use drugs, delaying the initiation of intercourse or using contraception, or identifying a trusted adult for support during depression. Programmes that address a balance of knowledge, attitudes, and skills - such as communication, negotiation, and refusal skills - have been most successful in affecting behaviour. Programmes with heavy emphasis on (biological) information have had more limited impact on enhancing attitudes and skills and reducing risk behaviours.¹³ Effective programmes focus narrowly on a small number of specific behavioural goals and give a clear health content message by continually reinforcing a positive and health-promoting stance on these behaviours.¹⁴ General programmes and those that have attempted to cover a broad array of topics, values, and skills without linking them are generally not recommended where prevention of a specific risk behaviour is the goal.¹⁵</i></p>
Methods
<p><i>Effective programmes utilise a variety of participatory teaching methods, address social pressures and modelling of skills, and provide basic, accurate information. Effective participatory teaching methods actively involve the students and target particular health issues.¹⁶ For examples of participatory teaching methods, see Section 2.2 of this document. Programmes with a heavy emphasis on information can improve knowledge, but are generally not effective in enhancing attitudes, skills, or actual behaviour.¹⁷ However, effective programmes do need to provide some basic, accurate information that students can use to assess risks and avoid risky behaviours.¹⁸</i></p>

¹⁰Kirby, D. (2001). *Emerging Answers: Research Findings on Programmes to Reduce Teen Pregnancy*. Washington, D.C.: National Campaign to Reduce Teen Pregnancy.

¹¹UNICEF. (2000). *Involving People, Evolving Behaviour*. Edited by McKee, N., Manoncourt, E., Saik Yoon, C., & Carnegie, R.

¹²Kirby, D. (2001). *Emerging Answers: Research Findings on Programmes to Reduce Teen Pregnancy*. Washington, D.C.: National Campaign to Reduce Teen Pregnancy (p.29).

¹³Wilson, D., Mparadzi, A., & Lavelle, E. (1992). An experimental comparison of two AIDS prevention interventions among young Zimbabweans. *Journal of Social Psychology*, 132(3), 415 - 417.

¹⁴Kirby, D. (2001). *Emerging Answers*.

¹⁵Kann, L., Collins, J. L., Patterman, B. C., Small, M. L., Ross, J. G., & Kolbe, L. J. (1995). The School Health Policies and Programmes Study (SHPPS): Rationale for a Nationwide Status Report on School Health. *Journal of School Health*, 65, 291 - 294.

¹⁶Kirby, D. (2001). *Emerging Answers*.

¹⁷Wilson, D., Mparadzi, A., & Lavelle, E. (1992). An experimental comparison of two AIDS prevention interventions among young Zimbabweans. *Journal of Social Psychology*, 132(3), 415 - 417.

¹⁸Kirby, D. (2001). *Emerging Answers: Research Findings on Programmes to Reduce Teen Pregnancy*. Washington, D.C.: National Campaign to Reduce Teen Pregnancy (p.30).

Figure 7: Critical success factors in school-based approaches (continued)

<p>Timing and sequence</p> <p><i>Effective education programmes are intensive and begin prior to the onset of risk behaviours.</i>^{19,20} As a guide, at least 8 hours of intensive training or at least 15 hours of classroom sessions per year will be required to provide adequate exposure and practise for students to acquire skills. Subsequent booster sessions are needed to sustain outcomes.^{21,22,23,24} A planned and sequenced curriculum across primary and secondary school is recommended. The age and stage of the learner need to be considered. Concepts should progress from simple to complex, with later lessons reinforcing and building on earlier learning. Education and other prevention efforts need to be constant over time to ensure that successive cohorts of children and young people are protected.</p>
<p>Multi-strategy for maximum outcomes</p> <p><i>Programmes need to be coordinated with other consistent strategies over time, such as policies, health and community services, community development, and media approaches. Coordination within and among donor agencies and between regional and national programmes is also important. Because the determinants of behaviour are varied and complex, and the reach of any one programme (e.g., in schools) will be limited, a narrow focus is unlikely to yield sustained impact on behaviour in the long term. Only coordinated multi-strategy approaches can achieve the intensity of efforts that yields sustained behaviour change in the long term.</i>^{25,26}</p>
<p>Teacher training and professional development</p> <p><i>Teachers or peer leaders of effective programmes believe in the programme and receive adequate training. Training needs to give teachers and peers information about the programme as well as practise in using the teaching strategies in the curricula.</i>²⁷ Research shows that teacher training for the implementation of a comprehensive secondary school health education curriculum positively affects teachers' preparedness for teaching skills-based health education and has positive effects both on curriculum implementation and on student outcomes.^{28,29}</p>

¹⁹Kirby, D. & DiClemente, R. J. (1994). School-based interventions to prevent unprotected sex and HIV among adolescents. In R. J. DiClemente & J. L. Peterson (Eds.), *Preventing AIDS: Theories and methods of behavioural intentions* (pp. 117 - 139). New York: Plenum Press.

²⁰Botvin, G. J. (2001). Life Skills Training: Fact Sheet. Available from <http://www.lifeskillstraining.com/facts.html>

²¹Jemmott, J. B., Jemmott, L. S., & Fong, G. T. (1992). Reductions in HIV risk-associated sexual behaviours among black male adolescents: Effects of an AIDS prevention intervention. *American Journal of Public Health*, 82(3), 372 - 377.

²²Kirby, D. & DiClemente, R. J. (1994). School-based interventions to prevent unprotected sex and HIV among adolescents.

²³Wilson, D., Mparadzi, A., & Lavelle, E. (1992). An experimental comparison of two AIDS prevention interventions among young Zimbabweans. *Journal of Social Psychology*, 132(3), 415 - 417.

²⁴Botvin, G. J. (2001). Life Skills Training: Fact Sheet. Available from <http://www.lifeskillstraining.com/facts.html>

²⁵UNESCO, PROAP Regional Clearinghouse on Population Education and Communication, UNFPA. (2001). *Communication and Advocacy Strategies: Adolescent Reproductive and Sexual Health: Booklet 3, Lessons Learned and Guidelines*. Bangkok, Thailand: UNESCO, UNFPA.

²⁶South Africa Ministry of Health and Ministry of Education. (1998). *Life Skills Programme Project Report 1997/98*.

²⁷Kirby, D. (2001). *Emerging Answers: Research Findings on Programmes to Reduce Teen Pregnancy*. Washington, D.C.: National Campaign to Reduce Teen Pregnancy.

²⁸Kann, L., Collins, J. L., Pateman, B. C., Small, M. L., Ross, J. G., & Kolbe, L. J. (1995). The School Health Policies and Programmes Study (SHPPS): Rationale for a Nationwide Status Report on School Health. *Journal of School Health*, 65, 291 - 294.

²⁹Ross, J. G., Luepker, R. V., Nelson, G. D., Saavedra, P., & Hubbard, B. M. (1991). Teenage Health Teaching Modules: Impact of Teacher Training on Implementation and Student Outcomes. *Journal of School Health*, 61(1), 31 - 34.

Figure 7: Critical success factors in school-based approaches (continued)

Relevance
<p><i>Programmes must be relevant to the reality and developmental levels of young people and must address risks that have the potential to cause most harm to the individual and society. Issues that attract media attention and public concern may not be the most prevalent or harmful. Issues of gender and violence should be integrated, along with other cofactors in the lives of young people. Reinforcing clear values against risk behaviour and strengthening individual values and group norms need to be central to prevention programmes. The programme goals, teaching methods, and materials need to be appropriate to the age, experience, and culture of children and young people and the communities they live in, and need to recognise what the learner already knows, feels, and can do.³⁰</i></p>
Participation
<p><i>Develop mechanisms to allow involvement of students, parents, and the wider community in the programme at all stages. A collaborative approach can reinforce desired behaviour through providing a supportive environment for school programmes. The participation of learners, parents, community workers, peer educators, and others in the design and implementation of school health programmes can help ensure that the needs and concerns of all these constituencies are met in culturally and socially appropriate ways. Participants whose concerns are addressed are more likely to demonstrate commitment to and ownership of the programme, which in turn enhances sustainability and effectiveness.^{31,32}</i></p>

More detailed information on effective programmes is available from:

UNICEF at: <http://www.unicef.org/programme/lifeskills/index.html>

WHO at: <http://www.who.int/school-youth-health>

Life Skills Training Center, Inc. at: <http://www.lifeskillstraining.org>

4.3. WHICH FACTORS CAN CREATE BARRIERS TO EFFECTIVE SKILLS-BASED HEALTH EDUCATION?

While it is important to capitalise on the success factors of effective programmes, it is also helpful to be aware of, and to try to avoid, the barriers to effective skills-based health education.

Barriers of *focus* tend to include the following:

- infusion of health issues across a range of subjects without providing a solid foundation within one subject, where knowledge, attitudes, and skills can be linked and developed in a sequential, reinforcing strategy
- inadequate orientation and training of administrators, teachers, and other support staff

³⁰Kirby, D. (2001). *Emerging Answers*:

³¹UNICEF (2001). *The Participation Rights of Adolescents: A Strategic Approach*. Prepared by R. Rajani.

³²Jemmott, J. B., Jemmott, L. S., & Fong, G. T. (1998). Abstinence and safer sex HIV risk-reduction interventions for African American Adolescents: A randomized controlled trial. *JAMA*, 279(19) (May 20, 1998), 1529 - 1536.

- general programmes that are less directed toward specific contexts or risk behaviours. For example, such programmes may use a model in which generic decision-making steps are presented but are not applied to a specific context, or are applied across a range of topics that are not necessarily linked.
- efforts to cover a broad array of topics, values, and skills while failing to emphasise particular facts, values, norms, and skills that students need to reduce risk or promote specific behaviour. For example, a programme may cover the physiology of reproductive health and the value of positive personal relationships but omit content on sustaining decisions to avoid unprotected sex; building skills to avoid risky situations, negotiating with a partner not to have sex, using a condom, or resisting peer pressure to use alcohol or drugs.
- presentations that are information-heavy, particularly with physiological information, with little or no attention to feelings, relationships, skills, and local situations
- too little concentrated time on the learning task

Barriers of *coordination and consistency* include the following:

- weak leadership, lack of genuine commitment and coordination from ministries of health and education and from school officials; for example, lack of well-defined national strategies for the promotion, support, coordination, and management of school-based programmes and insufficient staff in the ministries of education and health designated to the task of strengthening skills-based health education and life skills programmes
- insufficient infrastructure for teacher training
- lack of quality teaching materials and participatory methods
- insufficient coordination in terms of time frames and plans, leading to isolated and vertical programmes
- competition with other health topics or programmes within the school environment or inconsistent messages and learning experiences

Barriers of *intensity and scale* include the following:

- failure to plan for expansion or to go beyond the pilot stage
- inadequate funding
- inadequate attention to related strategies that maximise success, such as effectively implemented policies, access to related health services, and links with the community and other sectors. For example, effective school-based alcohol abuse prevention strategies may be linked to policies in the community that restrict access to alcohol to minors and links to community-school partnerships that help enforce such policies.
- inadequate mechanisms for supervising, monitoring, and evaluating programmes, including a lack of detailed documentation.

(The preceding information on barriers to effective skills-based health education is adapted in part from Mangrulkar et al., 2001, p. 41, and from a UNAIDS Inter-Agency working group, 2001.)

Applying proven methods of success and using available guidelines and tools, such as the *WHO Information Series on School Health*, listed in Annex 1, can help address many of these challenges.

Purpose: to focus on a set of key actions that can significantly improve the quality and scale of skills-based health education programmes.

Very substantial evidence exists to support the benefits of skills-based health education. However, too few schools implement programmes of good quality, and too few programmes are implemented on a national scale.

The following chart lists priority actions that are recommended for shifting efforts away from ineffective strategies and toward approaches that have the focus and intensity which typify successful programmes. (For the research that forms the basis for these recommendations, please refer to Chapter 4 of this document.)

Away from... 1. small-scale pilot projects...	Toward...Going to scale • programing for a national scale
Away from... 2. education programmes developed and delivered in isolation from other health related efforts...	Toward... A comprehensive approach • comprehensive and effective school health programmes that combine skills-based health education with supporting policies at the school and/or national level, clean water and sanitation as a first step in a healthy environment, related health services, and school-community partnerships
Away from... 3. attempts to infuse health topics thinly across many subjects...	Toward...Effective placement within curriculum • addressing a limited number of high-priority health issues and teaching the necessary knowledge, attitudes, and skills together in one existing subject (sometimes called a carrier subject) in the context of other related issues and processes
Away from... 4. creating new teaching and learning materials from scratch	Toward...Using existing materials better • better distribution and adaptation of the many quality materials that demonstrate research and evaluation evidence of effectiveness
Away from... 5. generic life-skills programmes that are not attached to specific objectives and goals	Toward...Linking content to behavioural objectives and changes in health-related conditions • applying skills-based teaching and learning methods for the development of knowledge, attitudes, and skills needed to achieve objectives in terms of behaviours and conditions that will lead to health and correlated social goals
Away from... 6. delivery by unprepared adults ...	Toward...Consistent, ongoing professional development for teachers and support teams • the use of key staff units identified within ministries, schools, and communities dedicated to ongoing teacher training, support for implementation, and collaborative strategies such as partnerships with young people

5.1 GOING TO SCALE

“Going to scale” means implementing interventions nation-wide. It involves considering a variety of expansion models and agencies for reaching the greatest number of schools and students. Such considerations should be made from the beginning of the planning process, once the importance and feasibility of skills-based health education are understood. Expanding the reach of good-quality programmes on national and local levels then becomes a priority. Since ample evidence supports the effectiveness of skills-based health education, there is less need for further pilot projects than for nation-wide coverage, which may coordinate several models, facilitators, and agencies.

Education agencies that are striving to go to scale may be able to adapt certain activities already in use, thereby expanding community-based programmes for young people. Smith and Colvin (2000) distinguish four major approaches for scaling up young adult programmes. (1) Planned Expansion means a steady process of expanding the number of sites and youth served by a particular programme once it has been pilot tested. (2) Association consists of expanding programme size and coverage through a network of organisations. (3) Grafting means adding a new initiative to an existing programme. (4) Explosion involves sudden implementation of a youth programme at a large scale.

The following lessons were learned from scaling up young adult reproductive health programmes:

- **Programmes should prepare for scaling up by focusing on institutionalisation.** Support such as training curricula and a cadre of trained and committed service providers is essential to institutionalisation. Changes in undergraduate- and graduate-level training in colleges and universities may be required.
- **Policy shapes programme development.** Policy structures can support programme efforts. However, momentum for scaling up can be gathered even without a supportive political environment, especially when the issues can gain visibility through allied groups. While certain programmes must engage the policy level more than others, and pilot projects can stimulate policy development, even government programmes may be vulnerable in a negative policy environment.
- **Activists and programme planners should build on existing institutions and infrastructure** when scaling up. NGOs, which are often the first to initiate young adult reproductive health programmes, can complement and reinforce government initiatives. Programmes can take advantage of existing infrastructure by forming and deepening collaborations with partner organisations. Programmes with strong ties at the local level are better able to survive change, so building a social marketing strategy is important for creating and maintaining a community constituency.
- **Committed leaders are needed to support, guide, and sponsor** the scaling-up process. A successful scale-up effort requires a major commitment of time and energy on the part of leaders as well as a formal governance structure.
- **Make scaling up participatory, and build in flexibility.** Programmes aimed at young people depend on their input for success.
- **Anticipate obstacles and challenges.** The environment in which a programme develops and the availability of resources may influence its shape and the effort to scale up. Programme developers and policy advocates in particular need to be sensitive to these issues. This includes developing long range financing strategies.
- **Data, research, monitoring and evaluation systems are critical** to scaling up effective programmes. Data and research are especially important for designing programmes, scaling them up, advocacy and securing acceptance and support for programmes.

(These recommendations are adapted from Smith & Colvin, 2000, and from Stage Five: Going to Scale, <http://eric-web.tc.columbia.edu/families/TWC/stg5idx.html>, December 18, 2001.)

Going to scale and creating a sustainable change in teaching practise in regard to skills-based health education are described in the example that follows.

Example: Systems-level actions and support for sustainable change in teaching practice

Evaluation of professional education has shown that initial training must be followed by ongoing coaching and technical assistance to produce an impact on teachers in the classroom. The lack of administrative support at the school and classroom levels, along with a lack of ongoing support from expert teachers on substantive issues, sometimes precludes sustainable change.

The following points on achieving sustainable change in classroom teaching emerged from UNICEF's Mekong project in East Asia.

- From the beginning, plan to go to scale, rather than having small pilot projects.
- From the beginning, plan for a series of linked training workshops; avoid single, unrelated training sessions.
- Model the interactive methods in all aspects of the training, and build in opportunities for teachers to practise new skills within and after the training.
- Encourage professional peer-education support groups and coaching for mentoring among teachers.
- Ensure ongoing, long-term implementation support from experts or experienced teachers.
- Work with administrators and school communities to advocate and encourage support for teachers to implement the new methods effectively.

(UNICEF/EAPRO, 1998).

5.2. SKILLS-BASED HEALTH EDUCATION AS PART OF COMPREHENSIVE SCHOOL HEALTH

Skills-based health education is more effective when it is taught as part of a comprehensive approach to school health than in isolation. The frameworks of FRESH and Health-Promoting Schools (see Figure 1) offer approaches for implementing skills-based health education as part of effective school health programmes.

5.2.1 THE FRESH FRAMEWORK

Focusing Resources on Effective School Health (FRESH), initiated by WHO, UNESCO, UNICEF, and the World Bank in 2000, is a framework for action that proposes four components as a starting point for developing an effective school health programme as part of broader efforts to design health-promoting, child-friendly schools. If all schools were to implement these four components, there would be a significant, immediate benefit in the health of students and staff and a basis for future expansion. The aim is to focus on interventions that are feasible to put in place.

The four FRESH components, listed below, should be made available together, in all schools:

- **Health-related school policies.** Health policies in schools can help ensure a safe and secure physical and psychosocial environment; address issues such as abuse of students, sexual harassment, and school violence; guarantee the further education of pregnant schoolgirls and young mothers; and reinforce health education for teachers and students.
- **Provision of safe water and sanitation - the essential first steps toward a healthy learning environment.** It is a realistic goal in most countries to ensure that all schools have access to clean water and sanitation. By providing these, schools can reinforce health and hygiene messages and act as an example both to students and to the wider community. Separate facilities for girls, particularly adolescent girls, contribute significantly to reducing dropout.
- **Skills-based health education.** This approach to health, hygiene, and nutrition education focuses on developing the knowledge, attitudes, values, and life skills that young people need to make and act on the most appropriate and positive health-related decisions. Health in this context extends beyond physical health to include psychosocial and environmental issues. Individuals who possess these skills are more likely to adopt and sustain a healthy lifestyle during their school years and throughout the rest of their lives.
- **School-based health and nutrition services.** Health and nutrition services can be effectively delivered by or through schools provided that the services are simple, safe, and familiar and that they address issues that are prevalent and recognised as important within the community. For example, micronutrient deficiencies and worm infections may be effectively addressed with infrequent oral treatment; and short-term hunger - an important constraint on learning - can be addressed by changing the timing of meals or providing a snack. If schools cannot provide services on school grounds they can refer to nearby services in the community.

Several strategies can support the implementation of the four FRESH components:

- Effective partnerships between teachers and health workers and between the education and health sectors
- Effective community partnerships
- Pupil awareness and participation

(This is summarised from UNESCO/UNICEF/WHO/World Bank, 2000, a tri-lingual brochure explaining FRESH.)

5.2.2. HEALTH-PROMOTING SCHOOLS

Skills-based health education is one important component of a Health-Promoting School. Through its Global School Health Initiative, WHO encourages the creation of Health-Promoting Schools worldwide, a concept fully embraced by UNICEF and other international agencies. Health-Promoting Schools foster health and learning with all measures at their disposal and by engaging health and education officials, teachers, students, parents, health care providers, and community leaders in efforts to improve the health of students, school personnel, families, and community members. Health-Promoting Schools strive to blend a healthy environment, skills-based health education, and school health services with school/community projects and outreach, health promotion programmes for staff, nutrition and food safety programmes, physical

education and recreation, reproductive and sexual health, and the promotion of mental health, with opportunities for counselling and social support (WHO, 1998).

5.2.3 CHILD FRIENDLY SCHOOLS

WHO promotes the development of Health-Promoting Schools as a step toward achieving the broader concept of UNICEF's Child Friendly School. UNICEF'S dedication to Child Friendly Schools encourages and supports healthy, well-nourished children who are ready to learn and who are supported by their family and community, as well as quality teaching and learning processes that are child-centred and include life skills. Supported by quality learning environments with adequate facilities, policies, and services, Child Friendly Schools are inclusive of all children, protective and healthy for children, and, in all aspects, gender sensitive. They address quality of learning with respect to the learners' focus, experiences, and needs; the relevance of curriculum content and processes; the quality of the classroom and broader school environment; the appropriateness of assessment in literacy, numeracy, knowledge, attitudes, life skills, and other areas; and the achievement of learning outcomes.

5.3. EFFECTIVE PLACEMENT WITHIN THE CURRICULUM

There are three primary ways for implementing skills-based health education within schools:

- **A core health education subject** – Skills-based health education can be a core (or separate) subject in the broader school curriculum.
- **Carrier subject** – Skills-based health education is sometimes placed in the context of related health and social issues within an existing, so-called carrier subject that is relevant to the issues, such as science, civic education, social studies, or population studies.
- **Infusion across many subjects** – Health topics can be included in all or many existing subjects by regular classroom teachers.

Figure 8 describes the benefits and disadvantages of all three approaches, though localities may vary in their needs.

5. PRIORITY ACTIONS FOR QUALITY AND SCALE

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Figure 8. Pros and Cons of ways to place skills-based health education within the curriculum

1. **Core health-education subject:** Skills-based health education (e.g., Health Education or Family Life Education) is taught as a core subject for addressing important issues – This is a good long term option, requiring strong commitment over time.

PROS	CONS
<ul style="list-style-type: none"> - Likely to be taught by teachers who are focused on health and who are more likely to be specifically trained in health education and life skills. - Likely to allow congruence between the content and teaching methods. - More likely to command the attention of students and teachers than when presented as a sidebar to another course lesson. - Tends to have high teacher support owing to specific focus on health and teacher's sense of professional responsibility to health education and life skills development. - Allows health concepts to be sequenced smoothly from primary levels to secondary levels, to reinforce previous learning experiences, and to make links for new learning. - Time is specifically allotted to health and related issues, better ensuring the effective planning, implementation, and evaluation of skills-based health education. - Teachers can incorporate skills and materials from other subjects, creating support and involvement from other teachers. - Easier to examine the subject than if infused, and therefore teachers are more likely to be highly motivated to teach it well. 	<ul style="list-style-type: none"> - Possible that the subject is attributed very low status and seen as unimportant. - Difficulty of finding adequate time in the curriculum for the subject.

Figure 8. Pros and Cons of ways to place skills-based health education within the curriculum (continued)

2. Carrier subject: Skills-based health education is placed in an existing subject designed for another purpose but relevant to the issues, such as civic/social studies or population education. – This is a good short-term solution.

PROS	CONS
<ul style="list-style-type: none"> - Teacher support tends to be better than for infusion across all subjects. - Teachers of the carrier subject are likely to link the relevance of the topic to other subjects. - Training of teachers is faster and less expensive than via infusion. - It is faster and costs less to integrate skills-based health education into materials of one principal subject than to infuse across all. - The carrier subject can be reinforced by infusion through other subjects. 	<ul style="list-style-type: none"> - The selection of carrier subject may be inappropriate; for example, biology may not be a suitable carrier unless the social and personal issues and skills in biology can be addressed. - Teachers may or may not be knowledgeable about or comfortable with health content. - Health topics may receive less time than needed if overshadowed by the carrier topic.

3. Infusion across subjects: Regular classroom teachers integrate aspects of skills-based health education across many existing subjects. – This approach is not recommended as it does not yield good results on its own.

PROS	CONS
<ul style="list-style-type: none"> - Lends itself to a whole-school approach. - Many teachers are involved, even those not usually involved in the effort to implement skills-based health education. - Potential for reinforcement. 	<ul style="list-style-type: none"> - The issues can be lost among the higher-status elements of other subjects. - Too little time is dedicated to health content and skill development. - Teachers may maintain a heavy information bias in content and methods used to teach the content, as is the case with most subjects. - Teachers are usually not adequately trained. - The task of accessing all teachers and influencing all texts is very costly and time-consuming. - Some teachers do not see the relevance of the issue to their subject. - Potential for reinforcement seldom realised owing to other barriers.

Figure 8. Pros and Cons of ways to place skills-based health education within the curriculum (continued)

4. **Combination of approaches:** Another option is the combined use of a carrier subject in the short term with a separate subject in the long term. – This is a very long term option.

PROS	CONS
<ul style="list-style-type: none"> - Learning and changes can be addressed comprehensively through the carrier subject by trained teachers, and then can be reinforced across the other subject area. - A more intensive approach and outcome should be achieved. - Enables students who need knowledge and skills now to acquire them while a separate subject is being developed. 	<ul style="list-style-type: none"> - There is too much to achieve all at once; this approach needs to be carefully planned. - May require additional time.

Whichever option is chosen, it is important to understand that the effort to influence behaviours and conditions associated with school-based priority health, education, and development issues is a long-term and significant commitment. Skills-based health education works best to affect behaviour where reinforcing strategies are in place. Every effort should be made to combine skills-based health education with complementary strategies such as policy development, health services, and a supportive psychosocial environment. Given the factors vying for the attention of young people, it is unreasonable to believe that a single positive strategy might prevail over the many competing influences. Helping to ensure that teachers model health-promoting behaviours and that the school environment supports these behaviours is important. Skills-based health education should be considered but one of the four basic FRESH components of an effective school health programme, and such programmes themselves are most effective when complemented by community, national, and international strategies to support their health, education, and development goals.

THE EVIDENCE AGAINST INFUSION

- Experience with infused skills-based health education in the United States has shown that when teachers teach general life-skills programmes, they often do not cover, in depth, the specific health issues that adolescents face. Evaluations of programmes in the United States which emphasised generic decision-making skills, general communication, and assertiveness found no effect on adolescent health, especially sexual behaviour (Kann et al., 1995).
- A study by the Centers for Disease Control (CDC) in the United States (Kann et al., 1995) showed that compared to "health educators", "infusion teachers" teaching HIV/AIDS prevention were less likely to be trained and were trained on fewer of the relevant topics; were less likely to cover the necessary topics, especially the more sensitive and relevant topics regarding prevention; were more likely to cover the science and biology of HIV/AIDS than prevention elements; and were less likely to include family and community elements in their programmes. They spent less time on the subject, were less likely to utilise recommended resources (including the formal

curriculum); used fewer interactive methodologies, and covered fewer of the skills and offered less practise of skills than "health educators."

- More specific to developing countries, a UNICEF-supported review of skills-based HIV/AIDS prevention programmes in East and South Africa (Gachuhi, 1999) found that infusion approaches tended not to have the expected impact, often because teachers are usually not sufficiently trained and do not implement the programme properly; teachers especially overlook sensitive issues and realistic situations that would personalise the risks that young people face. Not having a specific allocation in the timetable was also a barrier to effective implementation.
- Uganda and Mozambique are moving away from an infusion approach in favour of more specific approaches such as a carrier subject, after finding that the infusion approach did not have an impact on the sexual behaviour and skills of adolescents for many of the same reasons stated above (UNICEF, 2000, personal communications).
- Reviews in Zimbabwe question the integration approach. Teacher training appeared to be inadequate, and the quality of implementation suffered as a result (Ndlovu & Kaim, 1999; Kaim et al., 1997).

NON-FORMAL MODELS

In many countries, the formal curriculum time is overburdened and alternatives have been developed which do not rely on formal curriculum time, for example, non-formal or extra-curricular programmes. Both the in-school and non-school population can be reached with these activities. They may operate at or near schools, or separate from schools, and tend not to rely on teachers to deliver them, for example, programmes operated by non-government workers, peer educators, community groups, youth organisations (e.g., Girl Guides, Boys Scouts), or faith-based organisations. The Ministry of Education is often responsible for both formal and non-formal mechanisms for reaching children and young people so that these different mechanisms can be coordinated for maximum quality and coverage. The case study below presents an example of a successful programme that taught life skills as part of a non-formal school subject.

CASE STUDY

SHAPE is a non-formal school subject in Myanmar, taught in grades 2 through 9, which uses student-centred participatory teaching and learning methods and encourages students to practise what they have learned in the classroom at home and in their communities. SHAPE aims to equip young people with the knowledge, attitudes, and skills they need to promote healthy living through the active participation and involvement of teachers, students, school principals, education officials, parents, and other community members. The content of the programme focuses on a range of health and social issues relevant to children and young people, including personal health and hygiene, growth and development, nutrition, alcohol and drugs, and HIV/AIDS. At least half of the content is dedicated to activities designed to develop life skills, such as communication, cooperation, coping with emotions and stress, decision-making, problem-solving, and counselling, and these life skills are then applied in a specific way to each of the health and social issues. In addition, peer education, child-to-parent dissemination of information, and collaboration between schools and communities are important SHAPE strategies.

This programme has successfully encouraged children to share what they have learned in the classroom with their parents and other family members and to improve health conditions in their community. For instance, in one small village, children told their families what they had learned about the need for iodised salt. Impressed by their children's commitment to learning, parents got together and put enough pressure on the shopkeeper to change the type of salt he sold, and the whole community benefited from the availability and use of iodised salt. In another township, children told their families what they had learned about the importance of using safe water and sanitary latrines. After this information spread in the community, families and community members got together and built enough latrines to greatly improve the quality of sanitation in the community.

(This case study is based on information provided by Tin Mar Aung, UNICEF Myanmar.)

5.4. USING EXISTING MATERIALS BETTER

It is often possible to work with existing resources rather than starting anew to create appropriate materials for skills-based health education.

The following issues might be considered for selecting existing materials.

- Do the materials have goals that clearly describe health and related social issues to be influenced in a particular way? Do the objectives clearly describe behaviours or conditions that can be influenced to significantly impact the goals? Are these relevant to our students' needs?
- Who is the target audience?
- What time investment is suggested (number and length of sessions)?
- Are the materials suitable for the available settings?
- Is the language used most appropriate for the target group/users of the materials?
- Have the materials been evaluated, and if so, with what audience and setting? What is the evidence of effectiveness? What is the similarity between the "proven programme" and the intended audience and cultural setting?
- How well is knowledge relevant to the health issue addressed? Is the information clear? Does it provide accurate, up-to-date knowledge on the health issue?
- How relevant are the attitudes to the health issue addressed?
- How relevant are skills to the behaviours that are intended to be influenced?
- How appropriate are the methods for achieving the educational objectives (e.g., increasing knowledge, fostering health-supporting attitudes, building skills)?
- Are the materials gender-sensitive in content, methods, and language?
- Are the materials relevant to student needs and interests?
- How easy will it be for teachers, parents, and students to adapt and implement the materials?
- Do the materials include sufficient learning experiences to achieve the objectives?

Existing materials may be available from local or regional UN agencies such as UNICEF or WHO and from governmental and non-governmental agencies, educational institutions, and the private sector. Many materials are available from these agencies on the World Wide Web; for example, www.who.int, www.unicef.org, www.unesco.org, www.ei-ie.org, www.cdc.gov, www.unfpa.org, and www.edc.org.

5.5. LINKING CONTENT TO BEHAVIOURAL OUTCOMES

Programmes aimed at helping young people to develop life skills without a particular context are less effective in achieving specific behavioural outcomes. It is critical that programme planners set objectives and select content on the basis of what is most relevant to influencing the behaviours and conditions that are associated with priority health issues (see Figure II in Chapter 2).

What: The central question is what behaviours or conditions must be sustained or changed to influence the health issues. Then, what knowledge, attitudes, and skills will be the most useful to address, given the behaviours and conditions to be changed? The answers to these "whats" are then used to develop programme objectives. Setting objectives for preventing or reducing risk behaviours and risk conditions and for promoting protective behaviours and conditions is important. Such objectives are required for clearly delineating the programme content, including knowledge, attitudes, and skills that are important to achieve the behavioural and conditional objectives. The physical, mental, emotional, and social dimensions of knowledge, attitudes, and skills need to be explored to facilitate informed decision making, the ability to practise healthy behaviours, and the creation of conditions that are conducive to health. Local factors and conditions that affect the ability of the individual to take action must also be considered; for example, using a condom properly may not be a feasible protective practise if condoms are not available.

The situation assessment information should reveal the issues most relevant to the health and development of the young people who will participate in the programme. Using this information to identify the direct and indirect factors affecting morbidity (and mortality to a lesser extent) can be particularly helpful in the process of setting priorities. Issues that emerge for school-age children and young people throughout the world are family issues; youth and interpersonal violence and conflict and seeking peace; alcohol, tobacco, and other drug use; unintentional injuries; depression and mental health; diet and physical activity; and hygiene and infectious disease, unwanted pregnancy, HIV/AIDS/STIs and malaria. Aspects of these issues vary in relevance depending on the age of the young person.

When: The needs and developmental abilities of young people vary with their age; thus programmes must take these factors into account. This is commonly referred to as "developmentally appropriate programing." For example, concepts in school curricula should be sequenced smoothly from primary levels to secondary levels to reinforce previous learning experiences and make links for new learning; this process is sometimes referred to as a "spiral curriculum." For sensitive issues such as HIV/AIDS, sexual and reproductive health, education should begin as interest begins to increase but *before* the target group has become involved in the risk behaviours. The building blocks for dealing with such sensitive issues should be in place at the very beginning of children's education. Such building blocks include self esteem, positive values of cooperation and teamwork, the protection and promotion of health, and pro-social behaviour. However, to

help young people develop positive behaviour and avoid risks, these topics must be taught in a way that is increasingly specific to actual situations in their lives.

Figure 9 describes important knowledge, attitudes, and skills objectives for HIV/AIDS and other health issues for three developmental stages: early childhood, preadolescence and adolescence. This overview is only illustrative; local conditions and factors should always be considered in designing a programme. For similar information regarding other health and social issues, please refer to the WHO documents in Appendix 1.

Figure 9. Examples of Skills-Based Health Education Objectives

EARLY CHILDHOOD		
KNOWLEDGE	ATTITUDES	SKILLS
Participants will know: <ul style="list-style-type: none"> • second-hand smoke can be harmful • the benefits of eating a range of nutritious foods (or balanced diet), and where these foods can be found locally • violent behaviour is learned and can be unlearned • how HIV is transmitted and not transmitted 	Participants will demonstrate: <ul style="list-style-type: none"> • respect for themselves and others • understanding of gender roles and sexual differences • belief in a positive future • empathy with others • understanding of duty in regard to self and others • willingness to explore attitudes, values, and beliefs • recognition of behaviour that is deemed appropriate within the context of social and cultural norms • support for equity, human rights, and honesty 	Participants will be able to: <ul style="list-style-type: none"> • demonstrate practical and positive methods for dealing with emotions and stress • demonstrate fundamental skills for healthy interpersonal communication

Figure 9. Examples of Skills-Based Health Education Objectives (continued)

PRE-ADOLESCENCE		
KNOWLEDGE	ATTITUDES, VALUES, BELIEFS	SKILLS
<p>Participants will learn:</p> <ul style="list-style-type: none"> • about bodily changes that occur during puberty – and that they are natural and healthy events in the lives of young persons • about how Helminth and other infections can be prevented by using safe water and taking other precautions • the effects of tobacco, alcohol, and other drugs on body systems • ways to identify nutritious foods that are available locally 	<p>Participants will demonstrate:</p> <ul style="list-style-type: none"> • commitment to setting ethical, moral, and behavioural standards for themselves • positive self-image by defining positive personal qualities and accepting positively the bodily changes that occur during puberty • portrayal of human sexuality as a healthy and normal part of life • confidence to change unhealthy habits • willingness to take responsibility for their own behaviour • an understanding of their own values and standards • concern for social issues and their relevance to social, cultural, familial, and personal ideals • a sense of care and social support for those in their community or nation who need assistance • respect for the knowledge, attitudes, beliefs, and values of their society, culture, family, and peers 	<p>Participants will be able to:</p> <ul style="list-style-type: none"> • communicate messages about HIV prevention, healthy eating, and tobacco control to families, peers, and members of the community • actively seek out information and services related to sexuality, substance use, or other issues • recognise and manage peer and social influences on their personal value system • use critical thinking skills to analyse complex situations and a variety of alternatives • use problem-solving skills to identify a range of decisions and their consequences in relation to health issues that are experienced by young persons • discuss sexual behaviour and other personal issues with confidence and positive self-esteem, with responsible adults and peers • use negotiation skills to resist peer pressure to use alcohol, tobacco, or drugs or to get involved sexually

Figure 9. Examples of Skills-Based Health Education Objectives (continued)

ADOLESCENCE		
KNOWLEDGE	ATTITUDES	SKILLS
Participants will know: <ul style="list-style-type: none"> • which behaviours place individuals at increased risk for contracting HIV or malaria infection • what preventive measures can reduce risk of HIV, STI, worm and malaria infection, and unintended pregnancies • how to obtain testing and counselling to determine HIV/STI status as well as help with eating disorders and drinking problems • how to use contraceptives appropriately • how to prepare a balanced meal • what are the roles of aggressor, victim, and bystander 	Participants will demonstrate: <ul style="list-style-type: none"> • understanding of discrepancies in moral codes in their society • a realistic risk perception • positive attitude toward alternatives to intercourse • responsibility for personal, familial, and community health • support for school and community resources that will provide information and services about risk prevention interventions • encouragement of peers, siblings, and family members to take part in prevention activities • encouragement of others to change unhealthy habits 	Participants will be able to: <ul style="list-style-type: none"> • assess risk and negotiate for less risky alternatives • appropriately use health products • seek out and identify sources of help with substance use problems, including sources of clean needles or needle exchange • advocate for tobacco- and drug-free schools and generate local support

(The preceding skills-based health-education objectives were adapted from documents in the WHO Information Series on School Health.)

5.6. PROFESSIONAL DEVELOPMENT FOR TEACHERS AND SUPPORT TEAMS³³

Various individuals involved in skills-based health education must be trained to ensure successful implementation of such programmes. Trained educators are more likely than those who are not specifically trained in this learning area to implement programmes as intended, that is, to teach all of the required content and to use effective, high-quality teaching and learning methods (Kann et al., 1995). Skills-based health education teachers must possess a mix of professional and personal qualities. Some individuals bring these qualities to the job; others must receive training to acquire them. When properly trained, students themselves (peers), community agency workers, guidance officers or counsellors, social workers, and psychologists or other health care providers, as well as teachers, can facilitate skills-based health education.

What follows is an overview of the attitudes and attributes, professional skills, and competencies teachers need to develop to teach skills-based health education, along with some suggestions for training design of these requirements.

³³Parts of this section are adapted from Chapter 3, "Programme Providers and Training," in Mangrulkar, L., Vince Whitman, C., & Posner, M. (2001). *Life Skills Approach to Child and Adolescent Healthy Human Development*. Washington, D.C.: Pan American Health Organization.

5.6.1 ATTITUDES AND ATTRIBUTES

The following descriptors identify the best programme facilitators.

- role models for healthy behaviours
- credible and respected
- skilled and competent
- able to access resources and leadership and institutional support

5.6.2. PROFESSIONAL SKILLS AND COMPETENCIES

Teachers and other facilitators of learning involved with skills-based health education need to employ interactive teaching methods. For this reason, they need to possess or develop the following characteristics:

- Ability to play different roles - to support, focus, or direct the group as required (Tobler, 1992)
- Ability to act as a guide as opposed to dominating the group (Tobler, 1992)
- Respect for the adolescent and his or her freedom of choice and individual self-determination (Tobler, 1992)
- Warmth, supportiveness, and enthusiasm (Ladd and Mize, 1983)
- Ability to deal with sensitive issues, such as hygiene, sexual and reproductive health, HIV/AIDS prevention, dating, friendships, substance abuse, and difficult decisions about the future. These are topics that a teacher or facilitator needs to be prepared to discuss, either by answering questions or knowing where to go for more information. This requires training in content about adolescent stages of development, body image, sexuality, and available community resources.
- Appropriate personal and professional attitudes and practices. Teachers and facilitators are often expected to work with adolescents to develop skills that they themselves may not possess, such as, assertiveness, stress management, and problem-solving. Furthermore, teachers and facilitators may need help with their own sexual health issues, HIV/AIDS coping strategies, substance abuse problems, or violence in the home. Studies on health-promotion programmes for teachers have shown that training can result in specific health benefits to providers as well as improved attendance, morale, and quality of learning (Allegrante, J, 1998). Some parent-focused interventions have addressed this concern by helping parents (as programme providers) to develop skills in their children (Shure & Spivack, 1979) while also helping parents improve their own problem-solving, parenting, and stress-management skills.
- Practice what you preach. Teachers and other facilitators need extensive opportunities to practise student participatory learning methods such as open discussion, role-plays and cooperative group work. They should also model the behaviours which their training advocates.
- Accurate knowledge of, and adequate personal comfort with, the range of issues being addressed; and the ability to refer to other sources of expertise where necessary.

Many adults will need to unlearn authoritarian approaches to learning in order to become effective programme providers. The case study that follows the next section describes the positive impact of skills-based health education training on teachers and students in 85 schools in the United States.

5.6.3. TRAINING DESIGN

Access to good-quality training and support is essential to the development of the characteristics described in the preceding section.

Teachers and other facilitators ideally should receive quality training in both pre-service and in-service contexts. Training needs to expose teachers to, and allow them to gain experience in, participatory teaching and learning methods, with administrative support at the school level, and ongoing support from experts to foster and sustain participatory teaching and learning methods. Training for skills-based health education should mirror the teaching and learning principles of the programmes that are to be implemented. Training should incorporate active teaching and learning methodologies that take account of what is known about adult learning styles. In reality, teachers in many countries receive neither quality pre-service training nor ongoing in-service training, and there may be little support for addressing sensitive and complex topics that require specific skills.

Whether or not teachers have had the benefit of quality preparation in the past, quality training can support the development of positive attributes and substantially improve the competencies required for skills-based teaching. The strategies utilised by skills-based teaching are familiar within traditions of learning that have existed for generations in local cultures. These traditions include learning in groups, from elders across generations, through women's networks, through peers groups, and among girls and boys together; information and culture have been passed down in these ways through history.

Key elements of effective training for teachers and other facilitators include the following:

- establishing an adequate knowledge base about the issues to be addressed and networks of experts to draw on for further information
- establishing an effective, safe, and supportive training and programme environment
- inspiring broad participation and genuine interaction
- applying participatory teaching methods; for example, building competence in group process, role plays, dramatisations, debates, small group work, and open discussions
- modelling the skills addressed in the curriculum
- focusing on the whole child and adolescent, not just, for instance, on the effect of one particular health issue
- analysing adult perceptions of adolescents and adolescence, adult stereotypes and myths, and clarification of adult values around issues relevant to young people
- building skills in conjunction with providing information
- addressing sensitive issues in adolescents
- providing constructive criticism and positive reinforcement and feedback
- accessing and assessing the quality of teaching and learning resources
- accessing and assessing referral and support networks and community liaisons, and facilitating local participation
- fitting training to the skills level of the providers (Gingiss, 1992)
- providing ample opportunity for trainees to demonstrate and practise their new skills and for ongoing coaching, including continued training and booster sessions (Hansen, 1992; Botvin, 1986)
- allowing active participation of trainees in making decisions about programme adoption
- pairing experienced skills-based health education providers with new trainees (Dusenbury & Falco, 1995)

CASE STUDY

Developers of Teenage Health Teaching Modules (THTM), a skills-based health education curriculum in the United States, effectively trained programme providers in the following:

- establishing a programme environment in which open communication and positive peer interaction are valued and constructive problem solving occurs
- using participatory teaching strategies
- modelling skills and applying them to particular behaviours, including how to give encouragement and praise to reinforce positive social norms (O'Donnell, 1998)
- teaching complex social skills;
- providing resources for health information and referral
- dealing with sensitive issues (Blaber, 1999)

A study involving 85 schools found that pre-implementation training in THTM positively affected teachers' preparedness to teach THTM and student outcomes. Trained teachers implemented the curriculum with a significantly higher degree of fidelity than untrained teachers. Teacher training also had positive effects on student outcomes. Students' knowledge and attitude scores were significantly higher for classes taught by trained teachers than by untrained teachers. At the senior high school level, trained teachers also accounted for curbing self-reported use of illegal drugs (Ross et al., 1991).

Purpose: to identify key steps for effective planning and advocating for skills-based health education, and to clarify elements of design and evaluation.

A document recently produced by the World Health Organization, called *Local Action: Creating Health-Promoting Schools*, contains tools that can guide you or your school health team through the planning steps described in this chapter.

6.1. SITUATION ANALYSIS

A situation analysis is conducted to ensure that interventions are relevant to local conditions and cultures. It consists of needs and resource assessments and data collection, conducted before interventions are planned and implemented. Needs assessments involve the collection of accurate and current data that yield insight into the health issues and behaviours in a community. Resource assessments yield knowledge of the available capacities and resources in schools and communities.

The following types of information might be considered:

- health status, including local public health data on morbidity and mortality
- health priorities of children and adolescents
- behaviours and health conditions that are influencing priority health issues
- knowledge, attitudes, beliefs, values, skills, and services related to priority health issues for young people and their associated behaviours and conditions
- relevant policies
- available human, financial, and material resources and existing programmes that address health and social issues

Gathering evidence from credible sources can provide valuable information about what young people know, think, feel, and do and what health conditions affect them. Many sources of information can be utilised in this process, including the following:

- focus groups or in-depth interviews with the actual target audience or a similar group of learners
- related literature and research
- survey results
- professional expertise
- parents, care givers, and community groups
- epidemiological data from health departments and local clinics

The points of view of different stakeholders need to be shared and considered together, and ultimately agreement has to be reached. Where agreement proves elusive, it is the needs of the learners that ultimately must be central to decisions about what to include.

For further information, please refer to Appendix 2.

6.2. PARTICIPATION AND OWNERSHIP OF ALL STAKEHOLDERS

Schools may involve members of the school and community in planning goals and objectives for interventions. Such involvement can help ensure that the interventions will address the needs of learners and will be maintained over time.

School teams may include headmasters, teachers, students, school-based service providers such as nurses or counsellors, parents, and support staff. Members of school teams should represent a variety of backgrounds and viewpoints, be committed to the idea of health promotion, be interested in skills-based health education, work well in a team, and be able and willing to make a commitment of time. The team members work together to maintain and promote the health of all people who are working and learning at school, and to plan skills-based health education.

Community advisors can complement the school team and provide ongoing advice and support from the community. Partners from the community sector may include local government officials, religious leaders, media and business representatives, community residents and youth agency members, health and social service providers, and representatives of non-governmental agencies.

Together, school teams and community advisors assess needs and develop programme goals and objectives, and may work together in implementing and evaluating the interventions.

6.3. PROGRAMME GOALS AND OBJECTIVES

With the results of the situation analysis in hand, especially the identified needs and available resources, the school teams of students, teachers, and families, with support from other community advisors, can play an active role in defining the goals and objectives of the programme.

A goal describes in broad terms what it is hoped the intervention will achieve in the long term. A **goal** is a fairly grand statement, targeting a change in health status, such as reductions in teenage suicides or unwanted teen pregnancies. Many strategies are required to achieve outcomes at this level.

Outcome objectives target risk behaviours or conditions related to the goal. For example, if the goal is reduced teenage suicide or unwanted teen pregnancy, target behaviours or conditions might include delaying the initiation of sexual intercourse and increasing the number of teachers who serve as trusted adults to whom students can go when feeling depressed.

Sub-Objectives (process objectives) define in specific, measurable, and attainable terms what is to be accomplished to help achieve the outcome objectives. For skills-based health education, this means describing the activities and interventions that are to be implemented over a given period of time to influence knowledge, attitudes, skills, and other factors associated with the outcome objectives and, ultimately, the goal. For example, sub-objectives could include increasing knowledge about which factors constitute depression, or developing skills for negotiating alternatives to sex.

Figure 10. Outcome expectations for three levels of programming

LEVEL	TARGET	EXAMPLES OF STRATEGIES REQUIRED TO ACHIEVE TARGET GOALS
GOAL Many strategies are required to achieve outcomes at this level.	Change in health outcome or health status: Reduction in HIV, STI, and teen pregnancy rates, reduction in teen suicide, reduction in drunk driving car crashes, increase in teens' eating according to national nutrition guidelines; etc.	Skills-based health education plus... Public and school-level policy, regulations and legal incentives, mass media campaigns, access to friendly services and needed supplies, school-community partnerships, etc.
OBJECTIVE Several strategies are needed to achieve these more complex and broader outcomes.	Reduce risk behaviours: Delay sex; increase contraceptive use; decrease consumption of alcohol, tobacco, and other drugs by young people; increase eating of balanced meals; decrease bullying at school, etc.	Skills-based health education plus... School policies, links to health and social services, a health-supporting school environment, school-community partnerships, etc.
SUB-OBJECTIVE Educational strategies are required to achieve these relatively specific, immediate outcomes.	Enhance knowledge, attitudes, and skills: Increased knowledge of transmission and prevention of HIV; peaceful solutions for resolving conflicts; components of a healthy diet; effects of alcohol, tobacco, and other drugs Enhanced attitudes regarding self-image and reduction of stigmatisation Improved skills, demonstrated via classroom activities, in abilities related to assertion, negotiation, decision-making, and values clarification applied to a specific issue such as HIV/AIDS, violence, or alcohol, tobacco, and drug use	Skills-based health education*, by well prepared and supportive teachers and facilitators. *Although it is possible to achieve sub-objectives with skills-based health education alone, it is always advisable to reinforce it with other strategies to maximize outcomes - such as supportive school policies, school health services and a supportive environment.

6.4. ADVOCATING FOR YOUR PROGRAMME

A first step in putting a programme into action is gathering support and resources. To gain support, it may be necessary to advocate for the programme.

Policymakers need good reasons to increase support for any health or education effort. They must be able to justify their decisions. Advocacy is the art of influencing others to support an idea, principle, or programme.

An advocate for skills-based health education must convince school policy and decision-makers and communities that school-based efforts in support of it are appropriate and doable and that these efforts can help reach generally supported goals for young people. The goal is to convince decision-makers to take actions that invest in and strengthen school health programmes. Arguments about the importance and effectiveness of skills-based health education can be used as part of this advocacy effort (see Chapter 4 and this section, below).

Convincing people may be easier when the following two questions have been answered first: What factors cause one person to say yes to another person? and What techniques produce this result? While we cannot force people to think or act in a certain way, our ideas and knowledge can shape the environment of their thinking.

For example, the following six principles of persuasion can make a person want to say yes to another person:

- Commitment and consistency: Even small acts can gain commitment, and when people commit, they tend to behave in ways that are consistent with that commitment.
- Social proof: People often use information about how others behave to decide what to do.
- Scarcity: People are more likely to act if the opportunity to do so is available only once and there is a loss associated with not acting.
- Reciprocation: People usually try to repay, in kind, what another has given.
- Authority: People with titles and significant knowledge can exert a lot of influence.
- Liking: People prefer to say yes to requests from those they know or like. (Cialdini, 1993)

Applying these principles to advocating for skills-based health education requires that a presenter deliver a message to an audience. An effective presenter needs to be trustworthy, confident, clear, and attentive to the needs of the audience. It is important to find out whether, and at what level, the audience understands the issue, and whether they can do something about it. Effective messages to audiences have certain common qualities: They are simple, emphasising three key points and actions that the presenter wants to get across. They balance facts with emotion and human stories. They avoid jargon and complex data, and use specific examples, analogies, metaphors, one-liners, vivid language, and images that the audience can easily identify with (Vince Whitman, 2001).

Appendix 2 provides references to handbooks that can be useful in planning advocacy efforts.

In advocating for skills-based health education and life skills, it is not always obvious which arguments or approaches work best with which audiences. What seems obvious or appeals to health and education planners at first may not be the most persuasive argument for others. For example, the chief of police for a college campus in the United States reported that the college president and trustees were not persuaded to take action when presented with statistics on high rates of student drinking, vandalism, sexual assaults, and related car crashes. What did make a difference was the chief's report that

a very large number of students were dropping out on account of alcohol-related problems, creating an economic loss for the university (Mangrulkar et al., 2001).

Experience from the Field

Existing skills-based health education and life skills programmes in Latin American and Caribbean countries have yielded the following key lessons in advocacy, which can be helpful in guiding new initiatives:

- Strong advocacy requires clear arguments and a clear understanding of the life skills approach, adapted to a particular audience and setting.
- Data on local needs as well as the situation of children and adolescents (e.g., from Demographic Health Surveys) can be a powerful basis for advocacy and critical for determining programme objectives.
- Buy-in and involvement of local programme providers, from the initial needs assessment stage, is key to programme effectiveness and sustainability.
- Programme providers themselves have health needs that should be taken into account in programme implementation and can potentially be addressed through life skills programmes.
- Schools-based health education can serve as a unifying framework for the many competing and duplicative adolescent health programmes in a given setting.
- Support and technical assistance for curriculum development, which can involve either adapting pieces of existing curricula or developing original curricula, are needed at the regional or country level.
- Planning for all stages, from needs assessment through programme institutionalisation, is a key to sustainability.

6.5. EVALUATING SKILLS-BASED HEALTH EDUCATION

Evaluation is important to consider from the outset and throughout your programme. When you assess needs at the very beginning (conduct a situation analysis), set objectives, and plan activities (devise an action plan), you are laying the groundwork for evaluation. At the same time, you need a formal evaluation plan to track progress, and you need to be certain that your evaluation design is feasible to implement.

Comprehensive evaluation designs include both process evaluation and outcome evaluation. During the course of the implementation, process evaluation monitors the progress and provides feedback so that you can make adjustments or correct your programme where needed. Outcome evaluation assesses the results and impact of the interventions and determines if and to what extent the interventions were effective in achieving the desired objectives. The cycle then starts again, with the question of what further change or maintenance is desirable as a new goal.

6.5.1. PROCESS EVALUATION

Process evaluation answers questions about how the programme was conducted rather than what the programme achieved per se, and it monitors whether the programme has been implemented as planned. Two important dimensions are coverage and quality of the programme. Coverage assesses the extent to which the programme actually reaches the intended audience. Quality refers to the adequacy of training and satisfaction of stakeholders with training and delivery of the programme, but quality assurance should go much further. Process evaluation may include formative evaluation about teaching and training materials and sessions. This can provide insight for improving the programme and its outcomes. Process evaluation may also monitor changes in intermediate factors such as communication patterns, relationships, sources of information, social norms or norms among peers, changes in programme providers, and changes in connection to community, family, parent, or school.

Process evaluation is important for ensuring that the implementation is the same in all programme sites, and importantly, for providing evidence that the outcomes observed can truly be linked to the interventions, rather than to some other influence. Figure 11 provides samples of process indicators at the programme level.

Figure 11. Sample areas of questioning for process evaluation

- Coverage:** Is the intended audience being reached? Who is not reached?
- Is the programme being offered in all intended settings? E.g., schools?
- % of schools offering programmes, formal and non-formal
 - Is the programme reaching the intended audience of facilitators/teachers?
- % of all teachers/facilitators trained
 - Is the programme reaching the intended audience of children and young people?
- % girls/boys (rural/urban; ethnic groups, other...)
- Quality:** Are facilitators/teachers implementing the programme according to quality standards?
- Possible Programme Quality Standards
- Does the programme address relevant health and social issues?
 - Are there objectives to influence behaviour?
 - Is there a mix of knowledge, attitudes, and skills?
 - Are participatory teaching and learning methods used?
 - Is the programme participant-centred and gender-sensitive?
 - Are policies in place to support the programme (e.g., teacher preparation, in-service and ongoing support)?
 - Are related support services accessible to the audience/participants?
 - Are stakeholders consulted? Involved?
 - Are facilitators/teachers trained for this purpose?
 - Are facilitators/teachers supported in the implementation phase?
 - Are facilitators/teachers satisfied with the implementation of the programme?
 - Are participants satisfied with the implementation of the programme?
 - Is the programme of sufficient duration to achieve the desired objectives?
 - Are relevant educational materials utilised (accurate, gender-sensitive, age-appropriate, accessible, language-appropriate, durable...)?

Figure 11. Sample areas of questioning for process evaluation (continued)

- Is the programme based on relevant, current, accurate information and methods?
- Are programme impact and process monitoring and evaluation in place?
- How much does the programme cost?

It is advisable to continue some level of process evaluation or monitoring throughout the life of a programme, even after it is mainstreamed, so that you can assess whether or not it remains on track, whether changes are needed over time, and whether the programme quality is maintained over time.

6.5.2. OUTCOME EVALUATION³⁴

Outcome evaluation assesses whether or not the programme has reached its objectives and whether what has been done has made a difference, especially in terms of affecting targeted behaviours and conditions and the knowledge, attitudes, and skills that are intended to influence them. Outcome evaluation is conducted to determine any impact or changes that have occurred over the time of an intervention. The first steps begin well before the intervention, including establishing some baseline or benchmark for comparison, and should continue well after implementation.

This kind of evaluation needs to be quite detailed, rigorous, and scientific and seeks to assess the size of the effect or change, often to “prove” that the strategies applied really work. Programmes that have already proven to be effective in achieving the desired skills or behaviour do not need a detailed outcome evaluation every time they are being implemented. Where resources such as time, personnel, and budget for evaluation may be scarce, it may be sufficient, and more feasible, to conduct a process rather than an outcome evaluation. Too often, programmes rush to study their impact on youth without fully understanding whether or how well implementation of the interventions occurred. However, establishing effectiveness is essential before attempting to scale up, and information from the process evaluation can be extremely useful in identifying possible barriers to replicating the intervention elsewhere or at greater scale.

Outcome evaluation questions include the following:

- To what degree have objectives been accomplished?
- To what extent have knowledge, attitudes, skills, and behaviour of students and staff been affected?
- Which specific interventions or components of our programmes work best? Which elements did not work?

The outcome indicators selected for the programme depend on the desired goals of the programme. Skills-based health education that is well implemented should be expected to affect changes in behaviours and conditions and related knowledge, attitudes, beliefs, and skills.

The impact of skills-based health education can be assessed at different levels, and it is essential that expectations set for the programme are a reasonable match for the strategies utilised. When implemented alone, skills-based health education is most likely to achieve outcomes at the first level (immediate); however, when implemented with

³⁴The terms “impact” and “outcome” sometimes refer to the shorter - and long-term changes, respectively. In this document, “outcome” includes both meanings.

increasingly more coordinated strategies, outcomes at level 2 (medium term) and 3 (longer term) can be expected. The three levels are as follows:

1. Immediate outcomes: development of knowledge, attitudes, and skills. This level is the main interest of facilitators or teachers in the classroom, although they will also have an interest in medium-term outcomes related to behaviour and conditions that are intended to be influenced.
2. Medium-term outcomes: changes or maintenance of targeted behaviour and conditions that will impact on goals. This level is the main interest of the skills-based health education coordinators or managers, although they will also have an interest in immediate outcomes.
3. Longer-term outcomes: reaching the programme goals, changes in health status, or social outcomes. This level is the main interest of policy- and decision-makers in government, although they will also have an interest in medium-term and immediate outcomes.

Figure 12 provides examples of questions at all three levels.

Figure 12. Sample areas of questioning for three levels of outcomes related to HIV/AIDS/STI prevention

LEVEL OF EVALUATION	OUTCOMES
<p>Level 1. Immediate Outcomes: Knowledge, attitudes, and skills (session or classroom level)</p> <p>- Assessed by the facilitator/teacher when the educational activities are completed, or very soon after.</p> <p>*The term "attitudes" is used here to encompass a wide range of beliefs; feelings about self (e.g., confidence) and others (e.g., discrimination); values; thoughts; and social, religious, and cultural tenets, morals, and ethics.</p>	<p>Learning Outcomes Knowledge: Have students learned that ...</p> <ul style="list-style-type: none"> • HIV is a virus some people have acquired? • HIV is difficult to contract and cannot be transmitted by casual contact? • people can be HIV-infected for years without showing symptoms of this infection? <p>Have they learned ...</p> <ul style="list-style-type: none"> • how HIV is transmitted and not transmitted? • the difference between HIV and AIDS? • which behaviours place individuals at increased risk for contracting HIV infection? • what preventive measures can reduce risk of HIV, STI, and unintended pregnancies? • how to obtain testing and counselling to determine HIV status? <p>Attitudes:* Do students demonstrate ...</p> <ul style="list-style-type: none"> • acceptance, not fear, of people with HIV and AIDS? • understanding of gender roles and sexual differences? • empathy with others? • understanding of duty in regard to self and others? • commitment to setting ethical, moral, and behavioural standards for themselves? • a positive self-image by defining positive personal qualities and accepting positively the bodily changes that occur during puberty? • willingness to take responsibility for their own behaviour?

Figure 12 provides examples of questions at all three levels (continued)

LEVEL OF EVALUATION	OUTCOMES
<p>*The term "skills" is used here to refer to life skills, psychosocial and interpersonal skills that can be applied to AIDS prevention and related issues. These skills are important because they can facilitate and may lead to behaviour change when supported in comprehensive ways.</p>	<ul style="list-style-type: none"> • an understanding of how their family values support behaviours or beliefs that can prevent HIV infection? • concern for social issues and their relevance to social, cultural, familial, and personal ideals? • understanding of discrepancies in moral codes in their society? • a realistic risk perception? • encouragement of peers, siblings, and family members to take part in HIV prevention activities? <p>Skills*: Are students confident they are able to ...</p> <ul style="list-style-type: none"> • acquire practical and positive methods for dealing with emotions and stress? • actively seek out information and services related to reproductive and sexual health services, and substance use that are relevant to their health and well-being, including identifying a responsible adult or peer? • use critical thinking skills to analyse complex situations that require decisions from a variety of alternatives? • use problem-solving skills to identify a range of decisions and their consequences in relation to health issues that are experienced by young people? • discuss sexual behaviour and other personal issues with confidence and positive self-esteem? • communicate clearly and effectively a desire to delay initiation of intercourse (e.g., negotiation, assertiveness)? • assess risk and negotiate for less risky alternatives? • appropriately use health products (e.g., condoms)? <p>(Examples in this section are adapted from WHO, 1999, pp. 19-21.)</p>
<p>Level 2 Medium-term Outcomes: Behavioural Level</p> <p>- Assessed a short time after intervention.</p> <p>- It is assumed that achievement of the outcomes of Level 1 will lead to achievements at this level.</p>	<p>Behavioural Outcomes</p> <ul style="list-style-type: none"> • Was a condom used at last sex? • Has the number of sex partners decreased? • Is age at first sex increasing? (Is the partner low risk? What is the age difference between partners?) • Is intravenous drug use decreasing? • Are more intravenous drug users cleaning needles? • Are fewer intravenous drug users sharing needles? • Are participants (and others) affected by HIV/AIDS treated as well as others are treated? • Are more pregnant girls/young women who are at risk receiving prenatal testing and treatment?

Figure 12 provides examples of questions at all three levels (continued)

LEVEL OF EVALUATION	OUTCOMES
Level 3. Long-term Outcomes: Social Health Epidemiology Level Long-term health and social outcomes.	Health and Social Outcomes <ul style="list-style-type: none"> • Are STIs decreasing? (Is the average duration of STI decreasing? Are health services accessed more/earlier)? • Is age of first pregnancy rising? • Is age of first marriage rising? • Are rates of HIV infection decreasing? • Are those affected by HIV/AIDS healthier? Living longer than before? • Is mental health improved (e.g., self-esteem, self-confidence, outlook, connectedness/sense of community)? • Is drug addiction decreasing? • Are more children who are affected by HIV/AIDS staying at school?

The following case study points to the common practices and shortcomings of evaluation designs.

CASE STUDY

For twelve school health evaluation studies in Europe, the outcome evaluations included measures of behaviour, knowledge, and attitudes. In recent years, more studies included measurement of normative beliefs (social influence), self-efficacy expectations, and expectations regarding future performance (intention). Most evaluations used self-reported data (questionnaires). Physical examinations and biomedical measures were used as a reliability check for self-reported data. Most of the interventions to which these measures were applied targeted secondary school students, and all were in the form of classroom-based activities, sometimes combined with parental involvement or community interventions. The health issues addressed included smoking, drug use, obesity, dental health, AIDS, and general health. Most programmes produced changes in knowledge and some behavioural effects, but long-term effects were not assessed or could not be found in most studies. Analysis across these studies suggests that improvements could be made in evaluation by developing more rigorous evaluation designs; increasing the number of subjects in the studies; including long-term outcome assessment tools such as behavioural measures; establishing clear measurement procedures; and ensuring the inclusion of process measures, such as the monitoring of classroom factors and assessing whether the programme was implemented as intended.

(From Peters, L. & Paulussen, T. (1994). *School health - a review of the effectiveness of health education and health promotion*. Utrecht: Dutch Centre for Health Promotion and Health Education. As cited by Hubley, J. (2000). *School Health Promotion in Developing Countries: A literature review*. Leeds, UK: John Hubley.)

For further information on evaluation design, please refer to Appendix 2.

6.5.3. ASSESSING SKILLS-BASED HEALTH EDUCATION AND LIFE SKILLS IN THE CLASSROOM

This section illustrates that assessing skills-based health education can be a normal part of what education systems do, and that life skills can be assessed in the classroom.

The preceding section focused on measuring behavioural outcomes as an outcome or result of programmes over time. While large-scale surveys may be useful for measuring these medium-term outcomes across schools, regions, or countries, other levels of evaluation can offer more detail. In the school setting, assessment is a regular part of following student progress through education systems, and many techniques implemented at the classroom level can complement larger-scale surveys. Just as the skill of high jumping in a physical education class or bandaging in a first aid class can be assessed against criteria, so too can life skills such as assertion, negotiation, or cooperation be assessed. In addition, by matching a detailed level of feedback on knowledge, attitudes, and skills with data on behaviour patterns, it is possible to gain a better understanding of which aspects of the programme are working well and which could be improved.

The classroom is an ideal setting for skills-based health education, including life skills. It offers a relatively safe environment in which the application of information and the development of attitudes and skills can be explored, observed, and assessed using role plays, discussions, simulations, and other exercises.

PAPER-AND-PENCIL ASSESSMENTS

Knowledge, attitude, and skill levels can be self-assessed (by peers or students) or assessed by teachers, other facilitators, parents, and other community members. Paper-and-pencil assessments include worksheets, tests, quizzes, and homework assignments. They may include **forced-choice** items like the following:

- multiple choice
- matching
- alternate choice
- true-false
- multiple responses
- fill-in-the-blanks
- scales

(From UNICEF/CARICOM, 2001.)

Ranked or forced-choice questions require the student to rank or choose statements according to appeal or some other priority. An item could ask for a simple ranking from high to low (e.g., How important do you think it is to have drug-free environments at school?) Scales require students to choose from a point on a scale that corresponds to the student's answer to a question. A student may be asked to answer yes or no to a question (a two-point scale) or indicate the degree of agreement (a five-point scale). (From Annette Wiltshire for the Trainer of Trainers Workshop Facilitators Programme, CARICOM HFLE Project, May 2000.)

Formalised paper-and-pencil assessments include the Social Skills Rating System (SSRS) (Gresham and Elliot, 1990), which is one of many different rating scales that have been used to assess students' social skills, including cooperation, assertion, empathy, and self-control, by self-report as well as through teachers and parents. Social and emotional adjustment can be measured through many different scales, including the Survey of

Adaptational Tasks of Middle School (Elias et al., 1992). This survey asks teachers, parents, and students about adjustment in middle school (generally ages 10 to 14 in the United States). Another scale is the Self-Perception Profile for Children, which measures children's perceptions of personal competency (Harter, 1985). In the area of violence prevention, a number of self-report measures assess the attitudes and knowledge of adolescents about violence. For example, the Beliefs Supporting Aggression Scale (Slaby & Guerra, 1988) measures normative beliefs about aggression, and the Attitude Towards Conflict scale (Lam, 1989) measures how young people feel about different methods for resolving conflicts.

In addition to forced-choice assessments, paper-and-pencil assessment may include essays or short written responses. Through **essays** students relate what they know about content and demonstrate their ability to think and reason, by making an argument, coming to conclusions, or problem-solving. Essays are also useful for assessing strength and clarity of written communication skills. Short written responses are like mini-essays, in which students respond to requests such as "In one or two sentences describe..." or "Briefly respond to the following..." Responses are used to assess student understanding of content, and to some degree provide insight about thinking and reasoning skills (UNICEF/CARICOM, 2001).

ALTERNATIVE ASSESSMENT METHODS

Pen-and-paper methods are not always useful for assessing the affective domain, such as feelings, attitudes, beliefs, and values or skills like assertiveness, refusal skills, locus of control, decision making, and problem-solving. Creative ways of assessing skills include a range of collaborative methods, such as peer feedback on a performance, group assessment of a demonstration or of a role play against a set of predetermined criteria, or community-based projects or internships.

In some cases a multifaceted assessment system, composed of a variety of assessment methods, might be appropriate, especially for assessing skills, which by definition are best understood by demonstration. A multi-faceted assessment may include the following:

- Exhibitions
- Laboratory performance
- Essays
- Journals
- Short answer items
- Multiple choice items
- Projects
- Portfolios
- Interviews
- Papers
- Concept mapping
- Systematic observation
- Long-term investigation
- Manipulative skills

(From VISMT-Vermont Institute of Science, Mathematics and Technology, cited in UNICEF/CARICOM, 2001.)

Some alternative methods of evaluating combined learning outcomes around knowledge, attitudes, and skills are briefly described below.

Observation - Teachers directly observe their students every day in a variety of settings, under all types of conditions. Observation permits immediate, on-the-spot assessment of behaviour, such as cooperation. Daily observation (e.g., a teacher log) over an extended period permits more direct, more reliable references about patterns of behaviour than data from a single administration of a written instrument; however, it is more time-consuming. Observations produce most consistent assessments where standards-based or criterion-based checklists or feedback forms accompany the observations.

Interview - The informal interview is a variation of teacher observation. The teacher asks the student a series of probing questions to assess what the student knows and understands and how the student feels and behaves in regard to relevant health issues. For this face-to-face encounter, the teacher needs to have carefully developed questions in a structured or unstructured format. For dealing with sensitive content such as sexual behaviour, drug taking, or other risk behaviour, experience shows that someone other than the regular teacher, preferably someone from outside the school, can conduct a more effective interview. The interviewer needs to ensure that the answers will be kept confidential.

Peer observations - Students can learn to observe and give feedback to fellow students as they make presentations or engage in role plays or discussions. Peer observers must know what is expected of them as observers and what is expected of students they are observing.

Student self-assessment - This assessment comes directly from the student. As students carry out the self-assessment process, they reflect on their work and develop new learning goals.

Oral presentations and reports - Through oral presentations, students can organise what they know about content and demonstrate their ability to think and reason. This format also enables students to demonstrate various aspects of their communication skills. To some degree, plays, skits, role plays, speeches, and debates can be considered variations of oral presentations and reports.

Portfolio - A portfolio is a collection or showcase of examples of a person's best work in a particular field. Portfolios have the advantage of containing students' work (product) over a period of time and their reflections (process) about doing the work. Portfolios can provide evidence of students' increased knowledge and skills and can document their progress as a learner.

Unobtrusive Technique - This is a related observational technique that may include a review of school records, library checkouts, attendance records, student copybooks/notebooks, and physical evidence such as voluntary seating arrangements. It requires ingenuity and creativity on the part of the teacher.

(From UNICEF/CARICOM, 2001, and Annette Wiltshire for the Trainer of Trainers Workshop Facilitators Programme, CARICOM HFLE Project, May 2000.)

The following documents can be downloaded or ordered from the World Health Organisation, Department of Noncommunicable Disease Prevention and Health Promotion, 20 Avenue Appia, 1211 Geneva 27, Switzerland, ph. +41-22-791-2582 or 3581; or on-line at <http://www.who.int/school-youth-health/>

Local Action: Creating Health-Promoting Schools, WHO/SCHOOL/98.7, published in 2000 jointly by WHO, UNESCO, and EDC, helps individuals working at the local level to plan, implement, and evaluate efforts to improve health through schools. It provides practical guidance, tools, and tips from schools around the world. It offers suggestions about how school administrators, teachers, students, parents, and community members can work together to implement the four components of an effective school health programme: (1) school health policies; (2) safe water and sanitation as first steps in creating a healthy school environment, (3) skills-based health education, and (4) school health and nutrition services, as called for by WHO, UNICEF, UNESCO, and the World Bank in their joint initiative to Focus Resources on Effective School Health (FRESH).

Preventing HIV/AIDS/STI and Related Discrimination: An important responsibility of a Health-Promoting School, WHO/SCHOOL/98.6, published in 1999 jointly by WHO, UNESCO, UNAIDS, and Education International to help individuals advocate for and implement HIV/AIDS/STI prevention through schools. It describes strong arguments for addressing HIV/AIDS/STI prevention through schools; concepts and qualities of a Health-Promoting School; and specific ways in which schools can use their full organisational capacity to prevent HIV infection. The document describes how each of the four components of FRESH can be used to prevent HIV/AIDS/STI.

Tobacco Use Prevention: An important responsibility of a Health-Promoting school, WHO/SCHOOL/98.5, published in 1999 jointly by WHO, UNESCO, and Education International to help individuals advocate for and implement tobacco use prevention efforts through schools. It describes strong arguments for addressing tobacco use prevention through schools; concepts and qualities of a Health-Promoting School; and specific ways in which schools can use their full organisational capacity to prevent tobacco use. The document describes how each of the four components of FRESH can be used to prevent tobacco use.

Violence Prevention: An important element of a Health-Promoting School, WHO/School/98.3, published in 1999 jointly by WHO, UNESCO, and Education International to help individuals advocate for and implement violence prevention efforts through schools. It describes strong arguments for initiating efforts to address violence prevention through schools; concepts and qualities of a Health-Promoting School; and specific ways in which schools can begin to use their organisational capacity to prevent violence.

Healthy Nutrition: An essential element of a Health-Promoting School, WHO/SCHOOL/98.4, published in 1998 jointly by WHO, FAO, and Education International to help individuals advocate for and implement efforts to promote healthy nutrition through schools. It describes strong arguments for initiating efforts to address nutrition and healthy eating behaviour; concepts and qualities of a Health-Promoting School; and specific ways in which schools can use their organisational capacity to improve nutrition among young people, school personnel, and families. The document describes how each of the four components of FRESH can be used to improve dietary practices.

Strengthening Interventions to Reduce Helminth Infections: An entry point for the development of Health-Promoting Schools, WHO/SCHOOL/96.1, published in 1996 by WHO to help ministries of health and education establish policies, provide skills-based health education, create a healthy environment, and provide school health services that reduce helminth infections among students, their families, and the community. The document describes how each of the four components of FRESH can be used to prevent helminth infections.

Creating an Environment for Emotional and Social Well-being: An important responsibility of a Health-Promoting and Child Friendly School, to be published in 2003 jointly by WHO and UNICEF to help school personnel assess the extent to which their school environment supports emotional and social well-being. The document contains a checklist and scoring instructions to help school personnel identify environmental qualities that support emotional and social well-being among students and school personnel. The document helps school personnel to determine the extent to which those qualities exist in their own school.

Sun Protection: An essential element of a Health-Promoting School, WHO/NPH/02.6, published in 2002 jointly by WHO/PHE, WHO/NPH, and UNESCO to help school personnel assess the extent to which their school environment informs students and staff about the harmful effects of the sun and enables them to protect themselves from these effects.

Alcohol Abuse Prevention: An important element of a Health-Promoting School, to be published in 2003 jointly by WHO/MNH and WHO/NPH to help schools use the four basic components of FRESH to prevent the abuse of alcohol by students.

Active Living: An essential element of a Health-Promoting School, to be published in 2003 by WHO to help individuals advocate for and implement efforts to promote active living (physical activity, sports and recreation) through schools. It describes strong arguments for addressing active living; concepts and qualities of a Health-Promoting School; and specific ways in which schools can use their full organisational capacity to promote active living among students and school personnel.

Model School Tobacco Control Intervention, to be published in 2004 jointly by WHO/NPH and WHO/TFI to help schools implement school tobacco control programmes that are sharply distinguished from tobacco industry programmes and that engage youth in global, national, and local efforts to prevent tobacco use. The document places strong emphasis on actions that students can take to support the WHO Framework Convention on Tobacco Control.

Creating a Health Supportive School Environment: An important responsibility of a Health-Promoting School, to be published in 2003 jointly by WHO/PHE and WHO/NPH to help school officials create a safe and secure environment for students and school personnel, and to engage students in efforts to create a safer and healthier environment for all.

Family Life, Reproductive Health and Population Education: Important responsibilities of a Health-Promoting School, to be published in 2003 jointly by WHO/NPH, WHO/RHR, UNESCO, and EDC to help school officials address the controversies and problems inherent in school-based efforts that deal with these issues. It will help officials work with community members to decide on the most appropriate ways to educate students about these issues.

ADVOCACY

Communication and Advocacy Strategies: Adolescent Reproductive and Sexual Health. Booklet 2: Advocacy and IEC Programmes and Strategies. Booklet 3: Lessons Learned and Guidelines (2001), co-published by UNESCO and UNFPA, available from UNESCO Principal Regional Office for Asia and the Pacific, P.O. Box 967, Prakanong Post Office, Bangkok 10110, Thailand. Booklet 2 includes advocacy strategies such as generating interest and commitment of decision-makers, winning the support of various sectors, and developing recommendations and other documents. Booklet 3 summarises lessons learned for advocacy and communications as well as a discussion of factors that help and hinder in advocacy.

After Cairo: A Handbook on Advocacy for Women Leaders (1994), available from the Centre for Development and Population Activities (CEDPA), 1717 Massachusetts Ave. NW, Suite 200, Washington, DC 20036, USA. This handbook describes how to plan and implement strategies for advocacy in the following chapters: "Planning for Advocacy," "Taking Your Message to the Public," "Forging Alliances," "Advocating for Resources," and "Advocacy Profiles."

TB Advocacy: A Practical Guide (1998), WHO/TB/98.239, available from the Global Tuberculosis Programme at the World Health Organisation, Geneva, Switzerland. Even though it is written from the perspective of a different topic, this practical handbook contains useful step-by-step information for planning advocacy efforts: documenting the conditions, packaging the message, working with the media, and mobilising others.

Why should we invest in adolescents, by Martha Burt (1996), published by the Pan American Health Organisation (PAHO) (1998), Washington, DC. This document, which focuses on Latin America and the Caribbean, makes a case for the importance of investing health and other supportive resources in the lives of adolescents in order to strengthen future health outcomes and productivity. It provides a framework for working with adults, reviews the circumstances and needs of Latin American and Caribbean youth, discusses expected payoffs from investing in activities that promote adolescent health, and offers recommendations for shaping and targeting investments in adolescents.

Communications Briefings: 101 Ways to Influence People on the Job (1998), published by Briefings Publishing Group, 1101 King Street, Suite 110, Alexandria, VA 22314, USA. This is a practical guide on how to influence people. It gives guidance on the role of the influencer, messages, and audience, and includes tactics for how to persuade others, especially in workplace settings.

Influence: The Psychology of Persuasion (1993), by Robert B. Cialdini, published by William Morrow, New York City. This book explains the six psychological principles that drive our powerful impulse to comply to the pressures of others and shows how we can put the principles to work in our own interest and defend ourselves against manipulation.

PLANNING AND EVALUATION

Coming of Age: From Facts to Action for Adolescent Sexual & Reproductive Health, WHO/FRH/ADH/97.18, WHO (1997), available from Adolescent Health & Development Programme, Family & Reproductive Health, World Health Organisation, Geneva, Switzerland. This manual includes steps for planning, conducting, and using a situation

analysis specifically for adolescent sexual and reproductive health. Steps for conducting the analysis include collecting existing information; collecting new information; managing collected information; analysing collected information and data; and drawing conclusions.

Tips for Developing Life Skills Curricula for HIV Prevention Among African Youth: A Synthesis of Emerging Lessons. Technical Paper No. 115 (2002), published by the U.S. Agency for International Development, Bureau for Africa, Office of Sustainable Development. For information or copies, contact the Africa Bureau Information Center, 1331 Pennsylvania Avenue NW, Suite 1425, Washington, DC 20004-1703; or e-mail to abic@dis.csdi.org. This document offers practical guidance for people who are planning, implementing, or strengthening skills-based health education and life skills curricula for young people in sub-Saharan Africa. Section I provides background information on the issues of adolescent sexuality and vulnerability as well as implementation of HIV prevention with young people. Section II offers practical tips for implementing life skills programmes for young people, divided into "Tips for Planners," "Tips for Curriculum Designers," "Tips for Teacher Trainers and Head Teachers," and "Tips for Administrators." Section III is a bibliography of the documents reviewed, and Annex A contains a list of example life skills curricula and contact information.

Getting to Scale in Young Adult Reproductive Health Programmes (2000), published by FOCUS on Young Adults, available through Pathfinder International, 9 Galen Street, Watertown, MA 02472, phone: 1-617-924-7200; fax: 1-617-924-2833; <http://www.pathfind.org/focus.htm>. This document describes four models of scaling up and presents four specific examples from different countries as well as key ideas and lessons learned. This is complemented by a section with practical tools that includes ten worksheets to help managers scale up young adult reproductive health programmes.

Learning to Live: Monitoring and Evaluating HIV/AIDS Programmes for Young People, by Webb, D. & Elliott, L. in collaboration with the UK Department for International Development and UNAIDS, published by Save the Children Fund, UK (2000). Available from: Save the Children UK, 17 Grove Lane, London SE5 8RD UK; phone: 00 44 20 7703 5400; fax: 00 44 20 7793 7626. This is a practical guide to developing, monitoring, and evaluating practise in HIV/AIDS-related programmes for young people, based on the experiences of projects around the world. It focuses on recent learning from work with young people in: peer education; school-based education; and clinic-based service delivery working especially vulnerable children and children affected by HIV/AIDS. Offers examples of good practise throughout.

A Guide to Monitoring and Evaluating Adolescent Reproductive Health Programmes (2000), published by FOCUS on Young Adults, available through Pathfinder International, 9 Galen Street, Watertown, MA 02472, phone: 1-617-924-7200; fax 1-617-924-2833; <http://www.pathfind.org/focus.htm>. Also available in Spanish: FOCUS on Young Adults/Pan American Health Organization (2002). Manual de monitoreo y evaluación. Washington, DC. The document can be viewed at <http://www.paho.org/Spanish/HPP/HPF/ADOL/monitoreo.htm>. This 450-page document is a how-to of monitoring and evaluation. It explains how to develop and monitor an evaluation plan and covers indicators, evaluation design and sampling, and data collection and analysis. It also contains 15 different instruments and questionnaires that can be adapted to particular monitoring and evaluation needs.

APPENDIX 3: SELECTED SKILLS-BASED HEALTH EDUCATION INTERVENTIONS

TARGET/COUNTRY/ REFERENCE	INTERVENTION METHODOLOGY	EVALUATION METHOD	IMPACT ACHIEVED
<p>Adolescents attending ten secondary schools in two districts in Namibia</p> <p>Fitzgerald, A. M., Stanton, B. F., Terreri, N., Shipena, H., Li, X., Kahihuata, J., Ricardo I.B., Galbraith, J. S., and DeJaeger, A. M. (1999). Use of Western-based HIV risk-reduction interventions targeting adolescents in an African setting. <i>Journal of Adolescent Health</i> 25, 52-61. Reference ID: 8586.</p>	<p>Content: The programme consisted of 14 two-hour sessions over seven weeks which focused on basic facts about reproduction and risk behaviours such as alcohol, drug abuse, and violence.</p> <p>Skills: The sessions were derived from protective motivation theory and emphasised communication and decision-making skills.</p> <p>Participatory methods: The sessions were facilitated during after-school hours by a volunteer teacher and an out-of-school youth (either a student teacher or a youth who had completed grade 12) in a classroom to groups of 15 to 20 mixed-gender students.</p>	<p>Pupils were asked to volunteer for study. Eighty percent agreed; 515 youth (median age 17 years; median grade 11) were given a baseline self-completed questionnaire and randomly assigned to the control or intervention group. A follow-up questionnaire was given immediately after the intervention. The questionnaire measured knowledge, attitudes, intentions, and HIV risk behaviours. Following the post-intervention questionnaire, controls were given the intervention.</p>	<p>Knowledge increased significantly among intervention compared to control youth (88% versus 82%; correct responses, $p < 0.001$). At post-intervention follow-up, more intervention than control youth believed that they could be intimate without having sex ($p < 0.05$), could have a girlfriend or boyfriend for a long time without having sex ($p < 0.01$), could explain the process of impregnation ($p < 0.05$), knew how to use a condom ($p < 0.0001$) and could ask for condoms in a clinic ($p < 0.05$). Fewer intervention than control youth believed that if a girl refused to have sex with her boyfriend it was permissible for him to strike her ($p < 0.01$) and that condoms took away a boy's pleasure. More intervention than control youth anticipated using a condom when they did have sex ($p < 0.05$), and fewer expected to drink alcohol ($p < 0.05$). Finally, after intervention, there was a trend for increased condom use (but not significant). There were significant gender-related differences at baseline, although the intervention method had similar impact on both sexes.</p>

TARGET/COUNTRY/ REFERENCE	INTERVENTION METHODOLOGY	EVALUATION METHOD	IMPACT ACHIEVED
<p>80,000 pupils in 800 secondary schools in KwaZulu, South Africa</p> <p>Harvey, B., Stuart, J., & Swan, T. (2000). Evaluation of a drama-in-education programme to increase AIDS awareness in South African high schools: A randomised community intervention trial. <i>Int. J. STD AIDS</i> 11, 105-111. Reference ID: 8726.</p>	<p>Content: HIV/AIDS prevention</p> <p>Skills: Communication and decision-making skills.</p> <p>Participatory methods: During the first phase, teams composed of qualified teachers/actors and nurses presented a play incorporating issues surrounding HIV and AIDS. The second stage involved team members running drama workshops in the schools, with teachers and students using participatory techniques such as role play. The programme ended with a "school open day" focusing on HIV and AIDS through drama, song, dance, poetry, and posters all prepared and presented by the students.</p>	<p>Two schools separated by more than 10 km in each of five districts (four rural and one urban) were selected to be intervention (receiving the drama programme) and control schools (receiving a 10 page booklet on AIDS). A self-completed questionnaire was given to the same standard 8 class pupils before (n=1080) and 6 months later after the intervention (n=699) –mean age 18,3 in range 13-25 years. The questionnaire included sections on knowledge about HIV/AIDS, attitudes relating to personal susceptibility, immediacy of threat and perceived severity, attitudes toward people with AIDS, self-efficacy and reported behaviour, including whether have had sex, condom use, and number of partners.</p>	<p>There was a greater increase ($p<0.0002$) in mean percentage score on attitudes relating to HIV/AIDS; increased from 38.1 (n=491) to 50.5 (n=305) in intervention schools compared with the control schools (50.0, n=585 to 51.8, n=394). There was also a greater increase ($p<0.0000$) in mean percentage score on attitudes with the intervention schools (38.1, n=491 before and 50.5, n=305 afterwards) compared with the control schools (40.5, n=586 and 40.3, n=392). There was a slightly higher behaviour change among the sexually active students in the intervention group, but the increase was significant only for increased condom use ($p<0.01$). There was no evidence of an increase in sexual activity as a result of the educational programme. The main limitations in this study, which the authors noted, were the lack of linking of pre- and post-test (because the questionnaires were anonymous), the use of outcomes based on self-reporting, and the loss of pupils from the original pre-test sample. However, it is important to note that the achievements measured had been sustained over the six-month period between pre-and post-test, showing that the intervention had achieved more than merely short-term improvements.</p>

APPENDIX 3: SELECTED SKILLS-BASED HEALTH EDUCATION INTERVENTIONS

TARGET/COUNTRY/ REFERENCE	INTERVENTION METHODOLOGY	EVALUATION METHOD	IMPACT ACHIEVED
<p>Primary schools in Soroti district of Uganda</p> <p>Shuey, D. A., Babishangire, B. B., Omiat, S., & Bagarukayo, H. (1999). Increased sexual abstinence among in-school adolescents as a result of school health education in Soroti district, Uganda. <i>Health Education Research: Theory and Practice</i> 14, 411-419. Reference ID: 8437.</p>	<p>Content: School health curriculum with AIDS prevention.</p> <p>Skills: Decision-making skills.</p> <p>Participatory methods: Formation and meetings of school health clubs, application of child-to-child health education techniques (peer education), and competitions in plays, essays, poems, and songs on health-related issues.</p>	<p>A cross-sectional sample of ten students (five boys/five girls) per school, average age 14 years, in their final year of primary school, was drawn from 38 randomly selected schools. They were given a self-completed questionnaire in English (but questions were explained in local language). The questionnaire was given to a similar sample of children after two years of interventions.</p>	<p>The percentage of students who stated they had been sexually active fell from 42.9% (123 of 287) to 11.1% (31 of 280) in the intervention group ($p < 0.001$), while no significant change was recorded in a control group. The changes remained significant when segregated by gender or rural and urban location. Students in the intervention group tended to speak to peers and teachers more often about sexual matters ($p = 0.34$). Increases in reasons given by students for abstaining from sex over the study period were associated with a rational decision-making model rather than fear of punishment. The project had aimed to achieve sustainability through working through the existing structures and only employed one additional full-time person.</p>
<p>Egyptian primary school children</p> <p>Kotb, M., Al-Teheawy, M., El-Setouhy, M., & Hussein, H. (1998). Evaluation of a school-based health education model in schistosomiasis: A randomized community trial. <i>Eastern Mediterranean Health Journal</i> 4, 265-275. Reference ID: 8384.</p>	<p>Content: Health education consisted of three modules presented over three days, covering the risks from contaminated water, the life cycle of schistosomiasis, and the nature and importance of preventive health behaviours.</p> <p>Skills: Skills for preventive health behaviour, including screening.</p> <p>Participatory Methods: The methods included health talks, stories, case histories, role-plays, and drama.</p>	<p>A randomized community trial of three pairs of comparable schools in rural areas was implemented. One school in each pair received screening, treatment, and health education, whereas the other received treatment and screening only. A baseline study was carried out on 422 and 378 children from three intervention and three control schools, respectively. The first post-intervention survey was carried out one month after the health education programme on 212 children in the intervention schools. A second post-intervention survey was carried one year after the intervention with 394 and 360 children in the intervention and control schools.</p>	<p>The study revealed a significant improvement in knowledge and attitudes as well as a reduction of schistosomal infection one year post-intervention in the intervention schools of pairs 1 and 2 ($p < 0.05$). However, the improvements in knowledge in the intervention school of pair 3 were not accompanied by significant changes in attitude or schistosomal infection.</p>

TARGET/COUNTRY/ REFERENCE	INTERVENTION METHODOLOGY	EVALUATION METHOD	IMPACT ACHIEVED
<p>Schoolchildren in Brazil</p> <p>Albandar, J. M., Buischi, Y. A., Oliveira, L. B., & Axelsson, P. (1995). Lack of effect of oral hygiene training on periodontal disease progression over 3 years in adolescents. <i>Journal of Periodontology</i> 66, 255-260. Reference ID: 6135.</p>	<p>Content: Two oral hygiene training programmes for the control of plaque and the prevention of gingival inflammation in adolescents were evaluated. The first group received a comprehensive programme based on individual needs that included information sessions pertaining to the etiology and prevention of dental diseases.</p> <p>Skills: Self-diagnosis and oral hygiene skills.</p> <p>Participatory methods: Skills training. In addition, an information session was arranged for parents and teachers of these children.</p>	<p>A population of 227 Brazilian schoolchildren was examined clinically at baseline and annually over the next three years (1984-1987) to assess plaque and gingival bleeding. The data were analysed by a multi-level variance component analysis and divided into three groups: controls (n=76), test 1 (n=79), test 2 (n=72); 4% of the sample left the programme.</p>	<p>All children showed a perpetual improvement in their oral hygiene and gingival state during the course of the study. The improvements observed in the comprehensive group were significantly better than those of the control group. Results from the less comprehensive group did not differ significantly from those of the control group. Longer exposure to the programmes appeared to produce more improvement; children with higher plaque and gingivitis scores prior to the programme showed less favourable results; girls exhibited better results than boys. The impact at the end of three years was greater than after one year, showing importance of duration. More impact was obtained with girls.</p>
<p>Primary school children in Tanzania</p> <p>Nyandindi, U., Milen, A., Palin-Palokas, T., & Robison, V. Impact of oral health education on primary school children before and after teachers' training in Tanzania. <i>Health Promotion International</i> 11(3):193-201, 1996. Reference ID: 4160.</p>	<p>Content: Modified oral health education and teacher training workshops were carried out in one district by a dental team in liaison with school administrators.</p> <p>Skills: Tooth-brushing skills; making dietary choices.</p> <p>Participatory methods: Pupils actively studied the concepts and practical skills for dietary choices and tooth brushing.</p>	<p>The impact of the sessions was assessed in terms of changes in the pupils' oral health knowledge, attitudes, and practices. Three random samples, each with 300 pupils, including conventional and modified session groups and a reference group not given oral health education at school, were interviewed and examined</p>	<p>The group that received modified oral health education had better knowledge of oral health ($p<0.001$), reported reduced consumption of sugary foods ($p<0.01$) and increased self-reported tooth brushing frequency ($p<0.001$), and had better "mswaki" (chewing stick)-making skills ($p<0.001$) and slightly improved oral hygiene; in comparison with the referents. The group with conventional oral health education had better oral health knowledge, but their practices were no better than the referents'.</p>

APPENDIX 3: SELECTED SKILLS-BASED HEALTH EDUCATION INTERVENTIONS

TARGET/COUNTRY/ REFERENCE	INTERVENTION METHODOLOGY	EVALUATION METHOD	IMPACT ACHIEVED
<p>Female student teachers in Zimbabwe</p> <p>Wilson, D., Mparadzi, A., & Lavelle, E. (1992). An experimental comparison of two AIDS prevention interventions among young Zimbabweans. <i>Journal of Social Psychology</i>, 132(3), 415-417.</p>	<p>Skills-based AIDS intervention</p> <p>Content: HIV/AIDS and sexual health.</p> <p>Skills: Focus on relationship skills and condom use.</p> <p>Participatory methods: One group experienced a passive lecture on the topic, and the other experienced interactive group work.</p>	<p>Comparison between lecture and interactive group on knowledge and skills before and after the interventions.</p>	<p>Female student teachers who participated in skills-based AIDS intervention were more knowledgeable about condoms and their correct use, had a higher sense of self-efficacy, perceived fewer barriers, and reported fewer sexual partners four months after the intervention than their colleagues who participated in a lecture. The researchers concluded that interactive teaching methods are "better than lectures at increasing condom use and confidence in using condoms and at reducing the number of sexual partners."</p>
<p>6,000 students from 56 schools in the United States</p> <p>Several studies by Botvin, G. J.; See http://www.lifeskillstraining.com/LST1.html and http://www.cdc.gov/nccd-php/dash/rtrc/eval6.htm</p> <p>Contact information: National Health Promotion Associates, Inc., 141 S. Central Ave. Suite 208, Hartsdale, NY 10530; USA tel. +1-914-421-2525 or 1-800-293-4969; fax +1-914-683-6998</p>	<p>Content: Substance abuse prevention/competency enhancement programme designed to focus primarily on the major social and psychological factors promoting substance abuse. It consists of 15 classes that can be implemented in the first year of middle school. It also includes ten and five booster sessions for the following two consecutive years, respectively.</p> <p>Skills: Skills include resisting social (peer) pressure to smoke, drink, and use drugs; coping with social anxiety and anger; decision-making skills; communication skills; and social skills.</p> <p>Participatory methods: The curriculum is based on a person-environment interactionist model that assumes there are multiple pathways leading to</p>	<p>Students were randomly assigned either to receive the Life Skills Training (LST) programme (treatment condition) or the control condition. The study began when the students were in the seventh grade and continued in the eighth and ninth grades with LST booster sessions. Tobacco, alcohol, and other drug use, as well as other factors associated with substance abuse risk, were assessed by questionnaire at the beginning of the semester, before programme implementation, and at the end of the semester. Breath samples were collected to increase the reliability of self-reports. Programme implementation was monitored by project staff in randomly selected classes taught by the teachers in the intervention group. In the third-year intervention study, data were analysed to determine differences in cigarette,</p>	<p>The results of the third-year intervention study showed that LST had a significant impact on reducing cigarette, marijuana, and alcohol use for those students whose teachers taught at least 60% of the programme. Results of the six-year follow-up indicated that the effects of the programme lasted until the end of twelfth grade. Specifically, there were 44% fewer LST students than controls who used tobacco, alcohol, and marijuana one or more times per month, and 66% fewer LST students who reported using all three substances one or more times per week. The strongest prevention effects were produced for the students who received the most complete implementation of the LST programme, including the two booster sessions. Other significant findings include the following: LST reduced the</p>

TARGET/COUNTRY/ REFERENCE	INTERVENTION METHODOLOGY	EVALUATION METHOD	IMPACT ACHIEVED
	tobacco, alcohol, and drug use. The curriculum impacts social risk factors, including media influence and peer pressure, as well as personal risk factors such as anxiety and low self-esteem. It includes skills training and practise of the skills mentioned above.	alcohol, and drug use prevalence between treatment and control groups. Later, data were analysed to determine the long-term effectiveness of the prevention	use of inhalants, narcotics and hallucinogens. LST increased levels of assertiveness, self-mastery, personal control, self-confidence, and self-satisfaction
<p>Students in grades K-6 in the United States</p> <p>http://www.ed.gov/pubs/EP/TW/eptw9/eptw9d.html</p> <p>Contact information: The American Health Foundation, 800 Second Avenue, New York, NY 10017; USA tel. +1-212-551-2507 or 551-2509.</p>	<p>Content: The Know Your Body (KYB) School Health Promotion Programme consists of five basic components: (1) skills-based health education curriculum, (2) teacher/coordinator training, (3) biomedical screening, (4) extracurricular activities, and (5) programme evaluation. Through its substance abuse, healthy relationship, and skills modules, the programme can help reduce drug use and violence. As part of the training, programme coordinators learn how to improve their school food service as well as how to achieve a smoke-free campus, thereby creating an environment conducive to learning.</p> <p>Skills: The programme stresses individual responsibility for health and provides the basis for making health-promoting and disease-preventing decisions. Skills are related to age-appropriate outcomes, such as making healthy breakfast and snack choices and asking adults not to smoke in the presence of the young people.</p> <p>Participatory methods: Age-appropriate skill modules, including student activity books and puppet sets.</p>	<p>Several longitudinal evaluations have demonstrated the effect of the KYB programme. It was also named as one of the "Educational Programmes That Work" by the U.S. Department of Education in 1995.</p>	<p>Evaluation results have demonstrated that the KYB programme has a significant positive effect on students' health-related knowledge, behaviour, and biomedical risk factors such as serum cholesterol levels, blood pressure, cardiovascular endurance, smoking, and diet.</p>

APPENDIX 3: SELECTED SKILLS-BASED HEALTH EDUCATION INTERVENTIONS

TARGET/COUNTRY/ REFERENCE	INTERVENTION METHODOLOGY	EVALUATION METHOD	IMPACT ACHIEVED
<p>Students in grades 9 and 10 in the United States</p> <p>http://www.ed.gov/pubs/EP/TW/eptw9.eptw9g.html</p> <p>Contact information: Stanford Centre for Research in Disease Prevention Stanford University School of Medicine 1000 Welch Road Palo Alto, CA 94304-1885; USA tel. +1-415-723-1000</p>	<p>Content: The Stanford Heart Health Curriculum is a multi-factor cardiovascular disease risk reduction/prevention curriculum for adolescents. Lifestyle factors such as cigarette smoking, diet, physical activity, stress, and personal problem-solving are targeted.</p> <p>Skills: The curriculum is guided by social cognitive theory and emphasises self-regulatory skill development, building perceptions of self-efficacy, and social pressure resistance training. Each module provides students with information on the health effects, normative information on the prevalence of unhealthy behaviours, and cognitive and behavioural skills that enable them to change personal behaviour; specific skills for resisting social influences to adopt unhealthful habits; and practise in using skills to improve performance.</p> <p>Participatory methods: The curriculum features guided role-playing simulations, an introductory video-drama focused on personal choices and consequences, discussion sessions, and personal-change student notebooks.</p>	<p>This programme was named one of the "Educational Programmes That Work" by the U.S. Department of Education in 1995.</p>	<p>Students participating in the programme make significantly greater gains in knowledge of cardiovascular disease risk factors on programme-developed and validated criterion-referenced tests; show beneficial physiological/ anthropometric effects in terms of resting heart rate, triceps skinfold thickness, and subscapular skinfold thickness; and are more likely to report that they would choose heart-healthy snack items than a comparison group. A higher proportion of baseline "non-exercisers" participating in the programme were classified as regular aerobic exercisers two months after completion of the curriculum; more baseline "experimental smokers" participating in the programme reported quitting at follow-up; and fewer reported graduating to regular smoking than their comparison group counterparts.</p>

TARGET/COUNTRY/ REFERENCE	INTERVENTION METHODOLOGY	EVALUATION METHOD	IMPACT ACHIEVED
<p>Students in grades 6-8 in the United States</p> <p>http://www.projectalert.best.org</p> <p>Contact information: BEST Foundation For a Drug-Free Tomorrow 725 S Figueroa Street, Suite 970 Los Angeles, CA 90017; USA tel. +1-213-623-0580; fax +1-213-623-0585</p>	<p>Content: Two-year drug prevention curriculum for students in grades 6, 7, and 8, called Project Alert. The 14 lessons are designed to prevent or curb drug use initiation and the transition to regular use. The curriculum focuses on the substances that adolescents use first and most widely: alcohol, tobacco, marijuana, and inhalants.</p> <p>Skills: Skills include resistance skills such as resistance to pro-drug pressures and communicating with parents.</p> <p>Participatory methods: Project ALERT uses participatory activities and videos to help students establish non-drug norms, develop reasons not to use drugs, and resist pressures to use drugs. Skills-building activities utilise the modelling, practise, and feedback strategy. Guided classroom discussions and small group activities stimulate peer interaction and challenge students, while intensive role-playing encourages students to practise and master resistance skills. Parent-involved homework assignments extend the learning process.</p>	<p>The original programme was tested in 30 middle schools from communities in California and Oregon that included different geographic areas, income and population density levels, and racial/ethnic groups. One of the leading U.S. research institutes on drug policy has longitudinally field-tested the Project ALERT curriculum, and undertook a rigorous scientific evaluation. Longitudinal testing included 6,000 students from 30 junior high schools. Project ALERT was designated as an "Exemplary Programme" by the U.S. Department of Education in 2001.</p>	<p>Project ALERT is highly effective with middle-school adolescents aged 11 to 14 from widely divergent backgrounds and communities. It has been successful with high- and low-risk youth from urban, rural, and suburban communities, with youth from different socioeconomic levels, and with Caucasians, African Americans, Latinos, and Asian Americans. The longitudinal evaluation showed that Project ALERT:</p> <ul style="list-style-type: none"> – reduces the initiation of marijuana and tobacco use by 30% – reduces heavy smoking among experimenters by 50 to 60% – is effective for both high- and low-risk students, including minorities – performs equally well in a variety of socioeconomic settings

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TARGET/COUNTRY/ REFERENCE	INTERVENTION METHODOLOGY	EVALUATION METHOD	IMPACT ACHIEVED
<p>Preschool through junior high school students in the United States</p> <p>http://www.cfchildren.org/violence.htm</p> <p>Contact information: Committee for Children 2203 Airport Way South, Suite 500 Seattle, WA 98134, USA; tel. +1-206-343-1223 or 1-800-634-4449 Fax +1-206-343-1445</p>	<p>Content: Second Step is a school-based social skills curriculum that teaches children to change the attitudes and behaviours that contribute to violence. It also includes school and family members as part of a comprehensive approach to reducing violence.</p> <p>Skills: The curriculum teaches social skills to reduce impulsive and aggressive behaviour in children and increase their level of social competence. The same three skills are addressed in an age-appropriate way at each grade level: empathy, impulse control, and anger management.</p> <p>Participatory methods: The main lesson format is a photo lesson card. Lesson techniques include discussion, teacher modelling of the skills, and role plays. Lessons are divided into foundation lessons and two levels of skill building that include discussions and live-action video. These three levels allow for a comprehensive, multi-year training in pro-social skills.</p>	<p>A one-year evaluation involved 12 schools that were randomly assigned either to an experimental group or to a control group. Investigators examined the impact of the programme on aggression and positive social behaviour among elementary school students. Second Step was designated as an "Exemplary Programme" by the U.S. Department of Education in 2001.</p>	<p>Behavioural observation indicated that physical aggression decreased from autumn to spring among students who were in the Second Step programme, and increased in students in the control classes. Friendly behaviour, including pro-social and neutral interactions, increased from autumn to spring in the Second Step classes but did not change in the control classes. Six months later, students who had received the programme maintained the higher levels of positive interaction.</p> <p>The investigators concluded that Second Step leads to moderate decreases in aggression and increases in neutral and pro-social behaviour in school. Without the Second Step curriculum, student behaviour worsened, becoming more physically and verbally aggressive over the course of the school year. Formative assessments on Second Step have shown positive changes in student attitudes regarding aggression in middle school and junior high school as well as improvements in social skills and knowledge in grades pre/K-9 students.</p>
<p>Students aged 10-15 in Colombia</p> <p>Maria Luisa Vazquez Navarrete. (1999). Regional Study on School Health and Nutrition in Latin America and the Caribbean. Life Skills Training in Columbia: A case study. Washington,</p>	<p>Content: This programme, carried out by the NGO Fe y Alegria on behalf of the Ministry of Health, focuses on the cultural roots of violence and unhealthy behaviour.</p> <p>Skills: The life skills training modules address such skills as coping with emotions,</p>	<p>No formal evaluation has been carried out as of this writing, but interviews with programme participants revealed the following indicators of success:</p> <ul style="list-style-type: none"> • positive changes in student behaviour • increased problem-solving • increased coping with emotions 	<p>Parents noticed positive changes in their children that in turn had a positive influence on family relationships. A child was able to stop a fight between his or her parents using the expressions from the workshop. The levels of aggressiveness in class decreased. The children</p>

TARGET/COUNTRY/ REFERENCE	INTERVENTION METHODOLOGY	EVALUATION METHOD	IMPACT ACHIEVED
DC: World Bank/ Pan-American Organization.	<p>problem-solving, and effective communication.</p> <p>Participatory methods: Participatory methodology is employed at every level; this includes workshops with parents.</p>	<ul style="list-style-type: none"> • changes in teachers' attitudes and behaviours • spontaneous demand for life skills training • Increased coping with difficult situations <p>involvement of teachers, students, school principals, education officials, parents, and other community members (evaluation details were not provided)</p>	<p>have learned to speak in public and to express their emotions. Teachers increased their capacity to listen and became more sensitive toward the students. Students who did not participate in the training requested to be trained in life skills. After a massacre, life skills workshops helped cope with the difficult situation.</p>
<p>Primary and secondary school students in Myanmar</p> <p>Report provided by UNICEF Myanmar</p>	<p>Content: SHAPE (School-based Healthy Living and HIV/AIDS Prevention Education) is a school subject taught in grades 2 through 9 using a spiral curriculum that provides continuity. The curriculum aims to equip people with knowledge and skills to promote healthy living and prevent the transmission of HIV/AIDS.</p> <p>Skills: Life skills such as communication, cooperation, coping with emotions and stress, decision-making, and problem-solving as well as counselling are promoted.</p> <p>Participatory methods: SHAPE uses student-centred participatory teaching and learning methods, which encourage students to practise what they have learned in the classroom and at home. Peer education, child-to-parent dissemination of information, and collaboration between schools and communities are important strategies in the SHAPE programme. Review meetings, presumably with the involvement of teachers, students, school principals, education officials, parents, and other community members (evaluation details were not provided)</p>	<p>Review meetings, presumably with the involvement of teachers, students, school principals, education officials, parents, and other community members (evaluation details were not provided)</p>	<p>The successes of SHAPE affected whole communities. In one case, a whole community is now consuming iodised salt as a result of what students learned from SHAPE and shared with their parents, who in turn got together and convinced the shop-keeper to change the type of salt he sold. In another community, an AIDS orphan was recognised as a full-fledged member of the village after students learned and shared the truth about AIDS. These examples illustrate the long-term impact that SHAPE can have, and show that one or two people changing their behaviour as a result of what they have learned can affect the behaviour of the greater community over time. The immediate challenge is to understand what conditions encourage "positive deviance" and to replicate these conditions.</p>

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