NEW CHALLENGES FOR SCHOOL AIDS EDUCATION WITHIN AN EVOLVING HIV PANDEMIC[1]

Inon Schenker

HIV/AIDS, as a major life-taking pandemic, strikes us with the epidemiological figures of the infected, ill and dead. The numbers are frightening: over 36 million infected world-wide, of whom 50% are 15- to 24-year-olds; over 22 million have already died and the rate of new infections among young people is growing by the minute.

These overwhelming numbers represent women, men and children. They are the sad human dimensions of the AIDS pandemic: every number is a person, with family and friends, with relatives and colleagues, with needs, emotions, thoughts and rights. Statisticians are concerned with numbers. Schoolteachers and educators must, however, go beyond the numbers and be alert to the impact HIV/AIDS has on the education system. Meanwhile, they should acknowledge the tremendous impact the education system may have on the future course of the epidemic. School leaders must not only be knowledge conveyors but also community leaders in the fight against HIV/AIDS.

Original language: English

Inon Schenker (Israel)
Ph.D., Hebrew University in Jerusalem; Master in Public Health, Hebrew University-Hadassah. Certified AIDS educator and trainer; senior consultant to governments, private and public agencies and NGOs. His applied research and his extensive experiences are in cross-cultural HIV/AIDS prevention interventions and training programmes, with a focus on youth, conflict areas and policy-making. These are reflected in academic publications, presentations at key international conferences and fieldwork in Latin America, Asia and the Middle East. He is currently working with the World Health Organization in Switzerland. E-mail: schenkeri@who.ch

Schools are key contributors to our ability to halt the spread of HIV infection. To succeed, they must reach children and youth in a timely manner to reinforce positive health behaviours, while altering risky ones. Schools cover most children between ages of 5 and 18 and have excellent resources for delivering effective education: skilled teachers, a long-term interactive educational process, various learning opportunities and the potential of good parent involvement.

`Education about HIV may be most appropriate and effective when carried out within a comprehensive school health education programme that establishes a foundation for understanding the relationship between personal behaviour and health' (CDC, 1988). Nearly fifteen years after this statement was written, its message is still valid. In combating HIV infection, the crucial responsibility of schools is how to base HIV-related policies on the most current scientific knowledge about HIV and AIDS, and to teach young people how to avoid HIV infection or transmission. In doing so, schools are capable of significantly improving the quality of health education for youth world-wide.

This paper, therefore, will describe the evolution of school-based HIV prevention programmes and their theoretical frameworks, as well as present barriers to their implementation. Examples of several best practices will highlight the key role of the education sector in mitigating the impact of HIV/AIDS. The paper concludes with an innovative suggestion for the establishment of a new profession: the AIDS educator.

The evolution of school AIDS education programmes

Since the mid-1980s, school AIDS education has been evolving from fear-driven and local to well co-ordinated and transnational. Its content has evolved from information-based to theory-based. Today, the fifth generation of the programme is characterized by three inter-related strategies aimed at reducing the impact of HIV/AIDS on the education system

1. Effective school health programmes that provide school health policies to reduce the risks of HIV infection and related discrimination; a healthy, safe and secure physical and psycho-social environment conducive to risk reduction and the prevention of discrimination; skill-based health education that enables students to acquire the knowledge, attitudes, values, life skills and services needed to avoid HIV infection; and school health services with linkages to other relevant services to reduce risk and provide HIV-related care, counselling and support.

   Formal and non-formal HIV/AIDS prevention programmes that address sexuality, reproductive health and substance abuse, especially in schools without effective health programmes, in areas of high or increasing incidence of infection, and in settings available to youth who do not attend school.

3. Co-ordinated school/community HIV/AIDS prevention programmes that increase access to information, resources and services in forms that are likely to be

appealing and acceptable to young people (students and non-students)-peer education, distance learning, anonymous learning and new technologies for learning.

Education policy-makers and planners must therefore embrace health promotion activities to achieve their goals. Schools must not only be centres for academic learning, but also venues for the provision of essential health education and services.

The FRESH approach

A new initiative-Focusing Resources on Effective School Health (FRESH)-was launched at the World Education Forum in Dakar, Senegal (April 2000). This partnership, sponsored by UNESCO, UNICEF, the World Bank and the World Health Organization, signals their commitment to help national governments to implement school-based health programmes in efficient, realistic and result-oriented ways. There is a core group of cost-effective activities which, implemented together, provide a sound starting point for intensified and joint actions (Barthes-Hoffman, 2001):

- Clear school health policies on HIV/AIDS discrimination;
- A healthy environment;
- Skill-based education for the prevention of HIV/AIDS;
- School-based counselling and health clubs for HIV/AIDS.

Expected outcomes are:

- *Delay o f first sex in adolescence.* Examples from Senegal (UNAIDS, 2001) demonstrate that this goal is achievable. Senegalese women in their early 20s did not have sex until they were almost 19 or older. For their mothers' generation, the median age was closer to 16.
- *Encourage abstinence.* In Uganda, the proportion of 15-year-old boys or girls reporting that they had never had sex rose from around 20% to around 50% from 1989 to 1995 (ibid.).
- *Promote condom use.* The `100 % Condom Use' campaign in Thailand (ibid. ) resulted in a drop of 90% in `non-use' of condoms among young people.

School AIDS education: theories

An artificial separation of frequently used theories about behavioural changes is as follows (UNAIDS, 1999a):

- Theories that focus on the individual's psycho-social processes;
- Theories that emphasize social relationships;
- Theories discussing structural factors explaining human behaviours.

A summary of these theories can be found in *Life skills approach to child and adolescent health development* (Mangrulkar et al., 2001) and a recent review by UNAIDS (1999b). They include: social learning theory (Bandura, 197 7, 1994); health belief model (Becker, 1974); problem-behaviour theory (lessor & lessor, 1977); social influence theory ;Howard & McCabe, 1990); multiple intelligences theory (Gardner, 1993); resiliency and risk theory (Luthar, Cicchetti & Becker, 2000) among others

(Ajzen & Fishbein, *1980;* Prochaska et al., *1994;* Rogers, *1983;* Fisher & Fisher, *1993).*

School AIDS education: effective practices

The vast experience gained internationally over the last decade and a half in developing and implementing interventions and programmes to educate schoolchildren on HIV prevention has yielded a well-established set of at least twelve essential considerations.

PARTICIPATORY AND SKILL-BASED

For education on HIV prevention to achieve its goals, teaching methods must evolve from ordinary teaching, in which teachers lecture to their students, to participatory methods, in which students play an active role in the learning processes. Teachers, in the same way as pupils, need to realize that AIDS classes are different. Participatory methods in education are the key to moving from information-based programmes to skill-based ones.

The set of skills for HIV prevention has been under debate for several years, and is value-based. When assessing the essential HIV prevention skills that should be taught and practised in every school the following are recommended: communication skills, value clarification, decision making, negotiation, goal setting, self-assertion and stress management skills.

In conservative communities, there is wide acceptance of the notion that condomuse skills are absolutely unnecessary, while in most other communities these skills are regarded as essential. This is just one example of our need to develop culturally appropriate interventions that would gain wide acceptance.

WELL-TRAINED HIV/AIDS PREVENTION EDUCATORS

HIV prevention and anti-discrimination are complex issues. They demand well-trained, experienced educators with particular characteristics that may allow them to be effective behaviour-change agents in schools. Not every schoolteacher is a `good' school AIDS educator. In recent years various groups have promoted peer AIDS education, based on selected high-school students, trained to provide AIDS education to their schoolmates. Little consideration, however, is given to the characteristics of schoolteachers or peer educators.

Four key virtues of an effective AIDS educator, as desired by students, were reported (Schenker & Greenblatt, *1993):* wealth of knowledge about HIV/AIDS, openness, sincerity and a sense of humour. These examples highlight two key elements in the preparation of effective AIDS educators: first, the need to pre-select them according to criteria that have yet to be defined; and second, the severe lack of preand in-service training.

Human resources are central to capacity building for school AIDS education world-wide. There are plenty of examples demonstrating the enormous influence a

few well-trained and capable individuals can have on large student populations (Schenker et al., 1998, Kirby, 1995). The training of AIDS educators can begin during teacher training, and is followed up by in-service training for sub-populations within the education sector (e.g. curriculum developers, senior policy makers, inspectors).

DISCUSS CONTROVERSIAL ISSUES

Teaching HIV prevention and anti-discrimination in school presents several challenges to every educator. A primary one has to do with the ability to discuss controversial issues openly with pupils in class. Educators who feel comfortable with their sexuality, adhere to human rights values and respect their students are better at discussing important controversial issues related to HIV/AIDS in class, such as disclosure of HIV status, pre-marital sex and homosexuality, (Janz & Zimmerman, *1996;* Basch, 1989). Crosby (1996) adds that development of an open and honest atmosphere and a caring relationship between teacher and students is critical.

PROVIDE MULTIPLE SESSIONS THROUGH MULTIPLE MEDIA

For school-based AIDS education to be effective, it must not be based on a quickfix approach. Successful programmes suggest that at least four class sessions should be essential for achieving a minimal effect on students' knowledge, attitudes and behaviour-change intentions; ten to fourteen sessions are better.

Classes on HIV/AIDS should be different. Employing multiple media (e.g. stories, role-play, lectures, self-tests) provides an opportunity for engaging students actively in the learning process (Ragon et al., 1995). Effective repetition of basic AIDS messages requires clarity, consistency and sufficient variety to hold learners' interest over time. Co-operative learning also provides an opportunity for active learner participation, enhancement of social skills, increased retention and enjoyable learning.

Haffner (1996) asserts that AIDS education should not be the responsibility of any single sector of the community. Designing local programmes should involve parents, community opinion and local religious leaders, teachers, school administrators, community and youth agencies, health organizations and the adolescents themselves to ensure that it is culturally relevant and consistent with religious and social values (Siegel et al., 1996).

Soliciting participant involvement into all phases of the AIDS prevention intervention supports its marketability, enhances its credibility and helps participant learning and behaviour change. The parent community could also participate. Parents' self-efficacy as sexuality/AIDS educators for their children can be enhanced if schools involve them during AIDS education activities, while teachers should provide parents with guidelines for home discussions on health topics.

In addition, positive, non-judgemental attitudes on the part of school personnel, using a combination of communication strategies, are essential in maintaining parent involvement in school activities (Hahn et al., 1996).

RELEVANCE TO ALL PUPILS

As a sexually transmitted disease, HIV should be taught in contexts that are gender-sensitive and gender-appropriate, taking into account the fact that more than *75%* of infections world-wide are due to unprotected heterosexual intercourse. Schools will often provide separate sex education classes to boys and girls. This should not be encouraged in HIV/AIDS education. Recent studies provide very little evidence to support the contention that sexual health and HIV education promote promiscuity. Of sixty-eight reviewed reports, twenty seven reported that HIV and sexual health education neither increased nor decreased sexual activity, while twenty-two showed a delay in the onset of sexual activity, a reduced number of sexual partners or reduced unplanned pregnancies and sexually transmitted infection rates (Grunseit et al., *1997)*. Teaching HIV prevention to boys and girls should encourage them to talk about HIV and sexuality among themselves.

CULTURALLY SPECIFIC AND LINGUISTICALLY APPROPRIATE

Prevention efforts should consider community norms and sensitivities. Working closely with the target group of young people and key elements from the community during development, planning, implementation, evaluation and redesigning of a school-based AIDS education curriculum provides an opportunity for them to assume ownership of the problem and solutions to it (Levy et al., *1995)*. In addition, paying attention to the norms, values and traditions of the target population will allow for wider dissemination of the messages. It is advisable to combine vernacular with formal terminology to ensure understanding of important concepts in HIV prevention, support and counselling.

SOCIAL AND PEER INFLUENCES AND PRESSURES

From a survey of thirty-seven projects on successful approaches and barriers to AIDS prevention programmes in the United States, Janz and Zimmerman *(1996)* report that providing unique forums for open discussions of health-promoting information increases group norms supportive of safer sex and diminishes drug use behaviours. Open discussions give participants increased control and may reduce pluralistic ignorance (the belief that one is alone in one's beliefs or experiences). It was shown that teachers are able to create a safe physical space for children and adolescents to engage in candid discussions. Unlike mere lecturing, open discussions get children involved (O'Hara et al., 1996).

REINFORCING BEHAVIOUR AGAINST UNPROTECTED SEXUAL BEHAVIOUR

Group norms and behaviours are key factors in adolescents' development.
The contribution of the social environment in supporting healthier behaviour represents a key component in maintaining that behaviour.
Group pressure can effectively support

an individual's decision to act in a given way, and group support is necessary to reinforce responsible actions (Basch, 1989).

By using social influence approaches (O'Hara et al., 1996), a social consensus model, peer education and small-group discussions (Cenelli et al., 1994; Janz & Zimmerman, 1996) desirable group values can be achieved. Given the nature of HIV and the controversy surrounding its discussion, targeted interventions could be complemented by reaching out to a wider audience than those considered at risk, and changing the social consensus of the larger communities in which youth are embedded.

LINKAGES WITH PARENTS, HEALTH AND COMMUNITY SERVICES

The `triangular model', developed as part of the `Immune System Approach to AIDS Prevention' (ISYAP), provides an important assertion (Schenker, 1988): school-based AIDS education should focus on the pupils at school, but in close linkages with their parents and the community at large. These linkages will strengthen, on the one hand, the protective influences on the young people, coming from both school and home, and on the other better inform parents of HIV infection and its prevention.

The need to strengthen the links between the education and health sectors is best presented in the FRESH approach (B arthes -Hoffman, 2001).

TEACH LIFE SKILLS AS A COMPONENT OF A SKILL-BASED APPROACH

In addition to imparting accurate information and knowledge, and dispelling AIDS fears and misconceptions, the theoretical frameworks developed in recent years emphasize what several authors had already identified at the beginning of the 1990s (Bosworth & Jadara, 1993): AIDS education curricula should provide learners with problem-solving skills, decision-making skills, and communication, refusal and negotiating skills, as well as skills helping them avoid alcohol and drug use. Ogletree et al. (1995) suggested that published AIDS education curricula in the United States have increasingly focused on building general personal and social skills, though specific skills, such as conflict management and refusal skills, still need greater attention. Developing self-efficacy may help individuals to act on their motivation (Ashworth et al., 1992).

INTEGRATION WITHIN COMPREHENSIVE HEALTH EDUCATION

Integrating AIDS education as part of a comprehensive health education programme that begins in the early years of elementary school and continues until high school has been favoured (Maier et al., 1992; Ogletree et al., *1995).* Several other authors affirm that success of HIV/AIDS prevention programmes is possible when AIDS education is comprehensive and integrated with other risk reduction issues (such as drugs and sexuality) and with anti-discrimination (O'Hara et al., 1996; Zaccone-Tzannetakis, *1995).*

PEER COUNSELLING AND PEER SUPPORT

Peer education has been cited as a most promising strategy for delivering AIDS education to children and adolescents (Cenelli et al., 1994; Siegel et al, 1996). Trained peer educators serve as role models in reducing misconceptions about HIV risk and for initiating communication about protective behaviour. Peer educators can be effective messengers of AIDS education and effectively contribute to AIDS awareness in the school population (Arnold, 1995), provided that they are carefully selected and properly trained. This approach still needs to be properly evaluated.

Barriers to skill-based AIDS education in schools

The elements distinguishing school-based programmes from other interventions for youth are clearly the supportive structural aspects played by schools and teachers, and the interaction between school, parents, pupils and the community at large. However, AIDS education in school is often denied to children and young people because of barriers that are identified at three levels: the community level, the organizational level and the psychological level. At the community level, the following barriers have been identified:

DENIAL OF THE HIV/AIDS PROBLEM

The infection rates of HIV in the most-affected countries make it impossible not to recognize its enormous effects on the community. Nevertheless, denial of HIV/AIDS as a problem prevails among communities and leaders in these countries. In countries less affected by the current wave of the HIV/AIDS pandemic, it receives low priority on national agendas.

Schools do not exist in isolation. Community attitudes make their way into policy-making processes, both in the individual school and at the national education system level. In societies where there is denial of HIV/AIDS as a public health problem, schools find little support in developing policies on prevention.

The social environment is also the repository of social meanings and norms for behaviour, including the behaviours relevant to avoiding health risks (Mann et al, 1988). However, if the socially shared values of the community are in conflict with the principal messages of HIV/AIDS prevention, there may be a strong barrier to delivering AIDS education in schools. Basic discrepancies between the beliefs and opinions of decision-makers and the epidemiological and social realities of a country may constitute important barriers to the implementation of effective preventive campaigns.

AIDS IS A HEALTH SECTOR RESPONSIBILITY

The initial conception that HIV/AIDS is a health sector issue hampered the education sector's response. Ministries of education and other sectors of society felt less urgency in responding to the epidemic, arising partly out of early erroneous expectations

that, although catastrophic, the disease would spread much more slowly than has in fact been the case. Likewise, for many governments, responding to security needs received higher priority than dealing with the pandemic.

NEGATIVE PARENTAL ATTITUDES

Varying from country to country, parents have a lot to say about the education of their children. Organized structures (e.g. parent/teacher associations, governing bodies, parents' briefings) allow parents to influence the content, structure and length of the education their children receive at primary and secondary schools. Involving parents in the process of development, implementation and monitoring of school-based AIDS education may be a good strategy to diminish or manage potential conflicts with parents (Schenker & Yechezkiyahu, 1991). Unfortunately, this strategy is seldom used (Haignere et al., *1996;* Schenker & Greenblatt, 1993).

ABSENCE OF A HIV/AIDS EDUCATION POLICY FOR SCHOOLS

When a clear, binding, evidence-based and culturally appropriate policy on school-based AIDS education is developed, schools receive enormous support in implementing effective programmes.

In the early years of the epidemic, model policies were unavailable. For example, in an assessment of 232 American School Health Association members, Kerr, Allensworth and Gayle (1989) showed that 71 % of the respondents reported a need for model policies on appropriate levels of AIDS education within school settings, while 66% indicated a need for model policies on confidentiality relating to the HIV status of students. Since then, wide ranges of policies have been developed internationally (Closen, Sy & Schenker, *1995;* WHO, 1992; UNAIDS, 1999b), nationally (CDC, 1988,) and locally. Yet, there is a gap between policies and implementation, especially adaptation to the evolving facets of the epidemic. In many developing countries, however, there are still no policies at all.

Within schools, questions remain unanswered as to whose responsibility it is to teach about AIDS. Where in the school curricula should the topic be taught? And how will schools recognize, assist and support teachers' commitment to preventing HIV/AIDS through education?

A clear understanding as to who (if at all) in the school community should know that a child is infected with HIV deserves more attention (Ballard et al., 1990). Some 20% of the respondents in a pre-service teachers' population stated that no one should know; 30% felt all school personnel should know. One-half of respondents suggested that only the principal, nurse and teacher need to be informed.

LACK OF PRE-SERVICE AND IN-SERVICE HIV/AIDS TEACHER TRAINING

The emergence of school programmes on HIV/AIDS was not planned. In many cases individual, often local, initiatives started the `snowball' process of national action. Thus, many teachers are not prepared to teach HIV/AIDS prevention in the recommended

context of school health education or as a topic in human sexuality. The simple reason is that this subject, as well as active teaching methods necessary for effective behavioural education, is not included in the curricula of most teacher-training colleges (Haignere et al., *1996)*. The authors suggest that lack of materials and lack of time, as well as difficulty in adapting traditional classroom structures, are creating barriers to using alternative teaching strategies, such as role play and small-group discussions. This leads to differences in the quality of teaching among teachers in the same town, or even in the same school (Siegel et al., 1994; Gingiss & Basen-Engquist, 1994).

This perceived lack of knowledge, skills and self-confidence among teachers hinders effective delivery of AIDS instruction in the classroom (Ballard et al., 1990). Teachers cannot be expected to adapt well to new roles without adequate training and time for practice and reflection, which too often is not available (Basch, 1989). High rates of teacher and administrative turn-over, reassignments, competition from other lessons, lack of teachers' commitment and reluctance of less innovative teachers are other barriers (Gingiss & Basen-Engquist, 1994). This striking factor has only recently been addressed through a collaborative effort by Education International and several United Nations agencies, aimed at providing new dimensions to teacher training in facilitating skill-based AIDS education in schools (Strickland, 2000).

LACK OF PROPER AGE-APPROPRIATE CURRICULA

In most countries, we note a process in which curricula were first developed for high-school students, followed by modifications to meet the needs of younger pupils, outof-school youth and, lately, students with special needs. Only a few examples exist (e.g. Uganda, Israel) in which the direction was upward from the start: age-appropriate curriculum development from primary to secondary schools to university level.

Reviews of current school curricula in various countries merit the following observations (DiClemente et al., *1993;* Van Oost et al., 1994; Gingiss, 1992; Holtzman et al., 1992; Aggleton et al., 1989; UNAIDS, 1997).

- Curricula are often not developed to be appropriate for the intended student audience.
- Many existing school-based HIV-prevention programmes offer brief interventions that may not be sufficient to motivate adolescents to adopt HIV-preventive behaviours, particularly among younger adolescents.
- Teachers tend to devote a considerable amount of time to providing basic information on sex and drugs education, rather than on preventing AIDS.
- Critical risk reduction skills for young people when they may most be needed are often not addressed.
- School-based HIV-prevention lessons that emphasize didactic instruction may severely restrict interaction among students. Most teachers prefer verbal teaching methods (recitation, lecturing) to active, participatory teaching techniques, such as role play and group work, which are important for securing attitude and behaviour change.

- Not enough time is dedicated to exploring peer pressure, and practising resistance and refusal skills.
- Most teachers providing AIDS education are self-taught and use self-developed teaching materials owing to lack of resources.
- Lack of standardized AIDS education curricula may result in education of unstable quality and quantity.
- International guidelines and modules are not disseminated globally, owing to either a lack of dissemination strategies or a lack of funds to translate good materials into other languages.
- The preparation of materials, modules and exercises does not follow basic rules in developing health education materials (e.g. focus groups, pre-test, needs assessment).

At the psychological level the following barriers have been identified:

TEACHERS' FEARS

Teaching AIDS prevention is a tough job. It demands excellent and updated knowledge of the specifics of immunology, behaviour change, epidemiology and clinical aspects. It also asks one to look into one's own beliefs, attitudes, conceptions (and misconceptions) and sexual behaviours, substance (ab)use, human rights concerns and inter-personal relationships. For many teachers this is too demanding.

Surveys of teachers' attitudes reported a lack of comfort discussing homosexuality, bisexuality, death and partner communication about AIDS, correct condom use and explicit sexual behaviours (Haignere et al., *1996;* Kerr, Allensworth & Gayle, 1989).

For others, there is a simple fear of HIV/AIDS. Ballard et al. (1990) surveyed preservice elementary teachers' opinions about school-related HIV/AIDS issues. The authors found that 44% of their respondents indicated they were afraid to think that they would one day have a student with AIDS in their class; 30 % indicated that they would feel personally threatened by such a situation. One-fifth indicated that they should have the right to refuse to have a child with AIDS in their classroom. Strouse and Phillips (1987) affirmed that teachers have refused to instruct HIVinfected students.

While these reports come from less affected countries, they alert us to the need to study, think of and appropriately address the fears of teachers in many countries when trying to overcome existing barriers to the implementation of effective prevention programmes in school.

FALSE SENSE OF SECURITY

HIV/AIDS is a latent disease. Because of the long incubation period, infected individuals continue to function and appear healthy for many years before succumbing to the disease. This creates a false sense of security. As AIDS became a chronic disease, its impact was diluted by detrimental effects being experienced in piecemeal fashion. Only lately has the cumulative effect of this steady, constant erosion of human resources drawn attention to the urgent need for national action.

LIFE SKILLS AS PART OF SKILL-BASED AIDS EDUCATION

In preparing students for the twenty-first century, schools cannot simply equip pupils with basic literacy and numeracy. More advanced skills are required. Skills for living are critical, particularly in regions where no one but schoolteachers can convey them in a meaningful way.

Based on research and on theories of human development, three key skill categories were identified (Vince Whitman et al., *2001):*

- Social or interpersonal skills;
- Cognitive skills;
- Emotional coping skills.

These skills may be used simultaneously. The interplay between them is what hopefully produces powerful behavioural outcomes. In HIV/AIDS/STI prevention, these skills may be further refined. Within the social skills domain, we may include:

- Communication skills: effectively expressing a desire to delay the initiation of intercourse; influence others to practise safer sexual behaviours and to prevent discrimination against HIV/AIDS victims.
- Negotiation/refusal skills: refusing sexual intercourse or negotiating the use of condoms.
- Interpersonal skills: be caring and compassionate when interacting with someone who is infected; practise healthy dating and relationships.

Within the cognitive skills domain the following skills may need to be addressed:

- Decision-making skills: seek and find reliable sources of information about sexual anatomy, puberty, conception and pregnancy, sexually transmitted diseases, HIV/AIDS, local prevalence rates, alternative methods of birth control; analyse a variety of potential sexual situations and determine a variety of actions that may be taken and the consequences of such actions.
- Critical thinking skills: analyse myths and misconceptions about HIV/AIDS, gender roles and body image perpetuated by the media; analyse social influences regarding sexual behaviours.

Within the emotional coping skills we may wish to include:

- Managing stress;
- Seeking services to help with sexual issues, such as unplanned pregnancy;
- Increasing internal locus of control;
- Establishing a personal value system that is independent of peer influence.

The debate on what `life skills' mean in practice is not over. There are several sets of proposed skills defined by various stakeholders. What is essential is to note that skill-based school AIDS education is a must for programmes to achieve their goals. There is an urgent need to develop curricula that will include an agreed (locally) set of skills, which pupils should know and practise.

Several national examples

Given the absence of a vaccine and the inability of medical science today to contain the AIDS virus, education is one of the most effective ways to combat the pandemic. It is unanimously recognized that education has a key role to play, not only as a means of passing information, but also as a means of changing attitudes and behaviour concerning AIDS, both as a disease and as a social phenomenon. In exchanging information on best practices, Member States of UNESCO are able to learn from each other.

UGANDA

Uganda may serve as a very good example of a country where political commitment at the highest level was translated into action-yielding results. HIV infections in Uganda are declining. In one site in Kampala, the HIV prevalence rate among urban pregnant women, aged 15-19, was 29.5% in 1992. It declined to 14-10% in 1996 and stagnated thereafter (Malinga, 2000). An increase in the age of first sex, a reduction in the number of casual sex partners and an increase in general condom use, especially between casual sex partners, were documented in surveys conducted by the Ministry of Health. This less risky behaviour among young people may well be correlated with the responses to the epidemic by the education sector in Uganda dating back to 1986.

Uganda was one of the twelve first countries to implement a comprehensive school AIDS education. In 1986, the Ministry of Education launched a major campaign (SHEP) that included the development of school curricula for primary and secondary schools, seminars, training workshops for teachers, AIDS drama shows and, above all, the inclusion of HIV prevention education into national policy-making. Two educational programmes on HIV/AIDS in Uganda gained wide publicity:

Straight talk is a widely distributed newsletter, targeting secondary school students (15-19), as well as young adults in colleges and universities (20-24). It advocates safer sex, including abstinence, masturbation, non-penetrative sex and condom use. Its counterpart for younger people, *Young talk, is* aimed at upper primary school pupils and young adolescents aged 10-14. In primary schools, teachers are encouraged to use *Young talk* as a teaching tool. An evaluation in *1995* found that that 8 % of the 1,682 adolescents surveyed cited *Straight talk* as their main source of information on HIV. (Radio was ranked first at 43%.)

Madarasa AIDS Education and Prevention Project (MAEP) was implemented by the Islamic Medical Association of Uganda (IMAU) and UNICEF. Its objectives ar° to provide HIV/AIDS education to young people in Muslim religious schools and to teach young people both to empathize with persons living with HIV/AIDS (PLWHAs) and to help victims in their own. communities. MAEP works with 350 Madarasa schools, informal schools attached to mosques that teach young people up to 15 years of age Islamic culture and behaviour. Madarasa teachers are Imams

or Assistant Imams, and some are members of the Uganda Muslim Teachers' Association. Classes include in-school as well as out-of-school children. They are taught how to care for HIV/AIDS patients and are encouraged to help them in their own communities. Parents and guardians are encouraged to talk to their children about HIV/AIDS. The curriculum includes the following subjects: understanding adolescence; adolescent friendships; peer pressure; understanding sexuality; facts and myths about HIV/AIDS; Islamic teachings on safe sex; responsible healthy living; breaking the stigma; peer counselling; building positive dreams; and discussing HIV/AIDS with parents. IMAU gives training in the use of the HIV/AIDS education curriculum to Imams in each district. Overall, 20,000 Muslim children have been given HIV/AIDS education in Madarasa schools since *1995.*

ISRAEL

Israel was also one of the first countries to introduce a comprehensive AIDS education programme into its school system, starting in *1986* with primary schools and scaling up to university and non-formal education. It is now ranked among the lowest on the scale of HIV incidence and prevalence, with fewer than 100 new reported cases a year.

The Jerusalem AIDS Project (JAIP) is a volunteer-based, national and international NGO. In Israel, since its inception in *1987,* JAIP has specialized in school-based AIDS education, developing two curricula for elementary and high schools. It has also initiated peer AIDS education programmes in which medical students are trained as AIDS educators for schoolchildren and out-of-school youth. These programmes make use of self-contained and self-explanatory AIDS educational kits, which are based on the Immune System Approach (ISYAP) Model (Schenker et al., *1998; WHO, 1987).* JAIP also conducts five-day workshops for teachers, physicians and nurses. So far over 3,000 people in Israel have been trained as AIDS educators by JAIP. JAIP has also been involved in AIDS education training projects in twenty-five countries of Asia, Eastern Europe, Latin America, Africa and the Middle East (Erbstein, Greenblatt & Schenker, *1996).* This unique feature of an NGO with a strong local/national arm and, at the s ime time, a second strong international arm created vast opportunities for experimenting with cross-cultural transfer of HIV/AIDS messages, campaigns and school curricula. It is estimated that more than 600,000 pupils have been taught to date by the modules developed by JAIP, based on the ISYAP approach.

In *1995* JAIP initiated a Middle East regional project which promoted the establishment and on-going functions of a regional network of AIDS educators from the Middle East countries. Remarkably, the participants came from communities hostile to each other. JAIP has demonstrated that the common combat against HIV/AIDS can be a bridge for peace (Schenker et al., 1998).

THAILAND

The decline of HIV infections in Thailand represents a major national achievement. prevalence rates in 1995 were *34.91* per 100,000 and in *1999* they were *29.84.* New

infections were reduced each year in Thailand from almost 143,000 in 1991 to 29,000 in 2000 (Thai Working Group, 2000). It is notable that in Thailand there is active involvement by every level concerned: government, academic institutions, NGOs, the private sector and families as well as individuals (Cleesuntorn, 2000).

The multi-sector and multi-disciplinary strategy to raise awareness was further complemented by high-level co-ordination (prime minister level), the formation of extensive networks to reach every community and a special budget allocation for HIV/AIDS prevention activities.

The early recognition of AIDS as a national problem has enabled Thailand to respond to it effectively. HIV/AIDS education was integrated into the national curriculum at all levels as early as in 1987.

As the epidemic evolved, so did the approaches used to tackle it within the school system. At first, HIV education was introduced as a single subject within health education classes. This was followed by content to develop more responsible attitudes and behaviours. Later on came the application of real-life issues and a greater emphasis on sex education. In recent years, a new concept was introduced into the curricula: `living with HIV/AIDS'.

To strengthen efforts by the education system, co-ordinated campaigns were launched involving the mass media, non-formal education, indigenous learning networks and the national training of community leaders and government officials.

CANADA

Skills for Healthy Relationships (SHR) is a curriculum providing AIDS education and prevention for junior-high school students. Initiated in 1990, it aims at delaying sexual activity, increasing protective measures taken by sexually active youth, creating compassion for persons living with HIV/AIDS (PLWHAs), improving communications and negotiating skills, and combating homophobia. It is funded by Health Canada and the Council of Ministers of Education. The curriculum was designed to meet the needs of Grade 9 students (mostly 14-year-olds) and fit with the curriculum objectives for this grade level.

Workshops for teachers to introduce the curriculum were provided. Funding was provided to the Northwest Territories Association for School Health to develop a specific aboriginal adaptation of the curriculum.

The programme also included a two-phase evaluation. The implementation evaluation comprised feasibility assessment and implementation monitoring. The impact evaluation sought the stakeholders' reactions to the programme through focus groups, interviews and questionnaires. The outcomes evaluation assessed not only outcome behaviours but also the extent to which factors such as relevant attitudes, knowledge and motivational supports and skills enabled students to act in a health-conscious manner.

An evaluation of the project indicated that the SHR programme was very well received by participants (students, teachers, parents, administrators). Two years after participating in the programme, a majority of the demonstration group students

reported that they had gained in assertiveness, compassion, confidence and comfort in talking about condoms and personal rights.

A new profession: HIV/AIDS educator

A new concept in developing human resources is required in order to handle the crises of HIV/AIDS. I would like to suggest that education systems rethink about engaging ordinary schoolteachers in teaching about HIV prevention and anti-discrimination. Teachers, when properly trained and provided with the appropriate materials, are able to conduct effective skill-based AIDS education, but their other responsibilities might distract their work. In scaling up our fight against HIV/AIDS, we need a specialized group of `AIDS educators', whose only task will be to ensure 100% coverage of schoolchildren and young adults with AIDS education. The `squad concept' may be helpful in systematically reaching that goal. Teams of `AIDS educators' will assume responsibility for covering, one by one, schools in rural and urban areas, using a pre-tested, culturally appropriate and well-defined curriculum, over an effective period of time that will allow knowledge acquisition and behavioural change in the target population.

The `AIDS educators squad' can be composed of schoolteachers and people from other professions (e.g. social work, nursing, public health). We may even wish to consider using well-selected and trained medical students to perform this task. This concept may be challenged by the following questions:

- Who will train AIDS educators? How?
- What kind of rapport will they have with the pupils, being outsiders to the school?
- Will a new structure be needed for co-ordinating this effort, or could existing structures be used?
- What will be the incentive for the new profession? Why should it be supported?
- Is this going to be cost-effective in comparison with teacher-based approaches?
- What effect will the development of the profession have on the new approaches for strengthening skill-based and life skills education? Can it complement and strengthen these efforts?

This discussion is beyond the scope of this paper. The International Conference on Education (September 2001) may be a first platform to debate this concept, within the framework of living together in the twenty-first century.

Note

1. This paper is based on research work carried out between 1992 and *1999,* and on a presentation given at the UNESCO Senior Experts Meeting, held in Elmina, Ghana, in March 2001. The views expre :.d in this paper are solely the responsibility of the author, and do not necessarily represent the views or opinions of the World Health Organization.

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