

## **“A CRITICAL STUDY OF THE BIOLOGY CURRICULUM AT SENIOR SECONDARY STAGE WITH RESPECT TO LIFE SKILLS EDUCATION AND THE HIV/AIDS EDUCATION”**

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### **ABSTRACT**

#### **The Life Skills Concept**

The life Skills program is a comprehensive behaviour change approach that concentrates on the development of skills needed for life, such as communication, decision making, thinking, managing, emotions, assertiveness, self esteem building, resisting peer pressure, and relationship skills. It addresses the development of the whole individual, so that a person will have the skills to make use of all types of information, whether it is related to HIV/AIDS, STD's, reproductive health, safe motherhood, other health issue and communication, decision making.

**KEYWORDS:** Life Skills, Education and the HIV/AIDS Education

### **INTRODUCTION**

The World Health organisation has defined life skills as “The abilities for adaptive and positive behaviour that enable individuals to deal effectively with the demands and challenges of everyday life.”

UNICEF defines life skills as “a behaviour change or behaviour development approach designed to address a balance of three areas: knowledge, attitude and skills.”

Life skills are essentially those abilities that help promote mental wellbeing and competence in young people as they face the realities of life. There can be utilized in many content area : prevention of drug use, sex violence, teenage pregnancy, HIV/AIDS prevention and suicide prevention. In short, life skills education empowers young people to take positive action to protect themselves and promote health and positive social relationships.

UNICEF, UNESCO, and WHO list the ten Core life skills strategies and techniques as : problem solving, critical thinking, effective communication skills, decision making, creative thinking, interpersonal relationship skills, self-awareness building skills, empathy and coping with stress and emotions. Self- awareness, self-esteem and self- confidence are essential tools for understanding one's strengths and weaknesses. Consequently, the individual is able to discern available opportunities and prepare to face possible threats. This leads to the development of a social awareness of the concerns of one's family and society. With Life skills, one is able to explore alternatives, weigh pros and cons and make rational decisions in solving each problem or issue as it arises, it also entails being able to establish productive interpersonal relationships with others.

### **NEED AND RATIONALE OF THE STUDY**

Unlike the past when education only catered to a single specified area, the life skills based education encompasses

and evaluates the skills of a student and thereafter provides necessary support in the form of tools and material to enhance the respective skills. Our present and growing generation of youngsters are faced with the threats of deadly viruses such as HIV/AIDS as well as social issues of conflicts, violence, gender and ethnic discrimination. Over 5 million people each year are newly infected with HIV/AIDS; Human development gains painstakingly accrued over generations have been wiped out in a matter of few years in the worst affected countries.

Developing life skills helps adolescents translate knowledge, attitudes and values into healthy behaviour such as acquiring the ability to reduce special health risks and adopt healthy behaviour that improve their lives in general such as planning ahead, career planning decision making and forming positive relationships. The adolescents of today grow up surrounded by mixed messages about sex, drug use, alcohol and adolescent pregnancy. On one hand parents and teachers warn of the dangers of early and promiscuous sex, adolescent pregnancy, STDs/HIV/AIDS, drugs and alcohol, and on the other hand messages and behaviour from entertainers and peer pressure contradicts those messages. Often they even promote the opposite behaviour. It is through life skills that teenagers can fight these challenges and protect themselves from teenage pregnancy, STD's/HIV/AIDS, drug violence and sexual abuse and other health related problems.

In the absence of a vaccine against HIV/AIDS, education is society's best defence against the ailment. The educated and skilled young people are more likely to protect themselves against these infections and problems. The best school based defence against the HIV/AIDS addresses the issue as part of comprehensive Life skills programmes established as a core part of the mainstream curriculum. These offer young people gender specific information on HIV and about the steps of prevention from infection. These programmes train them to analyse situations critically, challenge gender stereotypes, communicate effectively and make responsible divisions. These skills enhance their abilities to make healthy choices, resist negative pressures and avoid risky behaviour.

Developing life skills among adolescents empower girls to avoid pregnancy until they reach physical and emotional maturity, develop in both boys and girls responsible and safe sexual behaviour, sensitivity and equity in gender relations encourage adults, especially parents to listen and respond to young people, help young people, help people avoid risks and hardships.

The host of factors that promote high risk behaviour such as alcoholism, drug abuse and casual relationships are boredom, rebellion, disorientation, peer pressure and curiosity. The psychological push factors such as the inability to tackle emotional pain, conflicts frustrations and anxieties about the future are often the driving force for high risk behaviour. Life skills training is an efficacious tool for empowering the youth to act responsibly, take initiative and take control.

The Life skills programme is a school based programme where Life Skills are imparted in a supportive learning environment. They are applicable for all ages of children and adolescents in school. The target age group is 10-18 years since young people of this age group seems to be most vulnerable to behaviour related health problems. The method used in teaching of Life Skills builds upon the social learning theory and on what we know of how young people learn from their environment; from observing others how they behave and what consequences arises from this behaviour.

The present study is an attempt to critically study the curricula of senior secondary school with respect to life skills education and HIV/AIDS education i.e. to analyse curricular activities pertaining to life skills education. Success of life skills approach depends on a fully worked out curriculum, teaching learning materials, training programme. Therefore

it is important to critically study the curriculum of life skills education and HIV/AIDS education to articulate educational implications for future curriculum planning and development.

### **Statement of the Problem**

“A Critical Study of the Biology Curriculum at Senior Secondary Stage with respect to Life Skills Education and the HIV/AIDS Education.”

### **Operational Definition of Key Terms**

#### **AIDS**

AIDS is an acronym for acquired Immuno deficiency Syndrome. It is a disease due to infection with human immune deficiency virus (HIV).

Webster’s New World Medical Dictionary, 3<sup>rd</sup> edition May 2008

#### **HIV**

Acronym for the Human Immuno deficiency Virus, these cause of AIDS. HIV has also been called the human lymphotropic virus type III, the lymphodemopathy associated virus and the lymphodemopathy virus. No matter what name is applied it is a retro virus. A retrovirus has an RNA genome and a reverse transcriptase enzyme. Using the reverse transcriptase the virus uses its RNA as a template for making complementary DNA which can integrate into DNA of the host organism.

Although the American research Robert Gallo at the National Institute of Health (NIH) believed that he was the first to find HIV, it is now generally accepted that the French physician Luc Montagnier (1932) and his team at the Pasteur Institute discovered HIV in 1983-84.

#### **Life Skills**

The abilities for adaptive and positive behaviour that enable mental well -being and competence in young people as they face the realities of life.

World Health Organisation

### **Objectives of the Study**

- To examine the syllabi of Biology with respect to Life skills education and HIV/AIDS education at senior secondary stage.
- To analyse the different curricular activities employed by teachers for Life Skills education and HIV/AIDS education.
- To deduce and articulate educational implications based on the findings for science curriculum development.

### **Research Questions**

1. What is the extent of Life Skills and HIV/AIDS education in the syllabus of science at senior secondary level?
2. What are the various activities employed by teachers for transacting the curricula of Life Skills education?
3. How can Life Skills be Imparted through the Curriculum?

4. How does the teacher transact the curriculum to relate it with Life Skills?
5. How one can use the findings of the present study to allocate our future resources for Science Curriculum planning and development with respect to life skills and HIV/AIDS education in a better way ?

### **Research Design**

The present study falls in the ambit of descriptive research of qualitative nature. Descriptive research studies are designed to obtain pertinent and precise information concerning the current status of phenomena and, whenever possible, to draw valid general conclusions from the facts discovered. Descriptive studies are more than just collection of data; they involve measurement, classification, analysis, comparison and interpretation.

The present study employs documentary survey. In documentary survey variety of information resources are used to answer the research question. These sources can be, books, official records, articles, hand outs, institutional reports, individual experiences etc. These surveys are used to analyze the present events based on the records available to the researcher.

### **Sampling**

Universe: Set of objects are finite i.e. students.

Sampling Unit: Sampling Unit is students of schools of Delhi.

Sampling Frame: Students of Class XII of science Stream (Biology)

Sample Size: 30 Students of Class XII of science, Biology, NCERT Textbook of Class XII for Content Analysis.

Sampling Technique: Purposive sampling Technique in which samples are expressly chosen because these mirror some larger group with reference to one or more characteristics.

### **DEVELOPMENT AND DESCRIPTION OF TOOL**

The Observation Schedule is self prepared by the researcher and its validity and reliability is checked by the experts in the field.

#### **Collection of Data**

The data is collected by administering the tool in schools of Delhi. The Observation Schedule is provided to 30 students of class XII of different schools of science stream and studying biology as a subject.

#### **Evaluation and Scoring of Tools**

Content analysis technique was adopted to analyze the data. Frequency and Percentage analysis of the data collected through observation schedules is done. Each parameter is assigned and score and scoring is done.

#### **Review of Related Literature**

Every researcher has to go through and present a review of the literature related with his research problem. A literature review is usually a highly synthesised critique of the status of knowledge on a careful defined educational topic. Review is undertaken to gain a broad perspective of knowledge in the field, critically analyse the context and the matter in which knowledge has been developed. It helps in defining and delimiting the problem. It helps in selection of appropriate

methodology and design, avoids wastage by avoiding repetition and duplication of effort, it fill the gaps in knowledge in the field and provide useful hints for further research.

Spoth, R. L., Randall, G., Trudeau, L., Shin, C., Redmond, C. (2008). **Substance use outcomes 5 1/2 years past baseline for partnership-based, family school preventive interventions..** *Drug and Alcohol Dependence*, 96, 57-68.

This article reports adolescent substance use outcomes of universal family and school preventive interventions 5½ years past baseline. Participants were 1677 7th grade students from schools (N= 36) randomly assigned to the school-based Life Skills Training plus the Strengthening Families Program: For Parents and Youth 10–14 (LST + SFP 10–14), LST-alone, or a control condition. Self-reports were collected at baseline, 6 months later following the interventions, then yearly through the 12th grade. Measures included initiation—alcohol, cigarette, marijuana, and drunkenness, along with a Substance Initiation Index (SII)—and measures of more serious use—frequency of alcohol, cigarette, and marijuana use, drunkenness frequency, monthly poly-substance use, and advanced poly-substance use. Analyses ruled out differential attrition. For all substance initiation outcomes, one or both intervention groups showed significant, positive point-in-time differences at 12th grade and/or significant growth trajectory outcomes when compared with the control group. Although no main effects for the more serious substance use outcomes were observed, a higher risk subsample demonstrated significant, positive 12th grade point-in-time and/or growth trajectory outcomes for one or both intervention groups on all measures. The observed pattern of results likely reflects a combination of predispositions of the higher-risk subsample, the timing of the interventions, and baseline differences between experimental conditions favouring the control group.

Griffin, K. W., Botvin, G. J., & Nichols, T. R. (2006). **Effects of a school-based drug abuse prevention program for adolescents on HIV risk behaviors in young adulthood..** *Prevention Science*, 7, 103-112.

Early onset of substance use among adolescents has been found to be associated with later risky sexual behaviors. This study examined long-term follow-up data from a large randomized school-based drug prevention trial to (1) investigate the long-term impact of the prevention program on drug use and sexual behaviors that put one at elevated risk for HIV infection; and (2) use growth modeling procedures to examine potential mechanisms of intervention effects. Self-report survey data were collected from students in the 7th grade, prior to the intervention in 1985, and in grades 8, 9, 10, and 12. Participants in the intervention condition received a 30-session drug prevention program in 7th through 9th grades. Follow-up surveys were completed by 2042 young adults (mean age = 24) in 1998. As young adults, participants were considered to be engaging in high-risk behavior for HIV infection if they reported having multiple sex partners, having intercourse when drunk or very high, and recent high-risk substance use. The intervention had a direct protective effect on HIV risk behavior in the overall sample in young adulthood. Furthermore, among participants receiving 60% or more of the prevention program, analyses showed that the intervention significantly reduced growth in alcohol and marijuana intoxication over the course of adolescence, which in turn was associated with a reduction in later HIV risk behavior. The behavioral effects of competence-enhancement drug prevention programs can extend to risk behaviors including those that put one at risk for HIV infection.

Fraguela, J. A., Martin, A. L., & Trinanes, E. A. (2003). **Drug-Abuse prevention in the school: Four-year follow-up of a programme..** *Psychology in Spain*, 7, 29-38.

This work presents the results obtained on applying a drug-abuse prevention programme, an adaptation of Botvin’s “Lifeskills training” programme. The initial sample comprised 1029 adolescents from five secondary schools in

the city of Santiago de Compostela (NW Spain), distributed in three experimental conditions, two treatment, in which the programme was applied by teachers or by members of the research team, and a control condition. The article presents the results on the use of different drugs over four years of follow-up. The results obtained show how for the treatment condition lower levels of tobacco and alcohol consumption are found after a year of follow-up. In later evaluations these effects fade, but important differences emerge in the use of other drugs, such as cannabis, tranquilizers or amphetamines

Zollinger, T. W., Saywell, R. M., Muegge, C. M., Wooldridge, J. S., Cummings, S. F., & Caine, V. A. (2003). **Impact of the Life Skills Training curriculum on middle school students tobacco use in Marion County, Indiana, 1997-2000.** *Journal of School Health, 73, 338-346.*

Evaluation of school-based tobacco prevention and control programs have yielded mixed results. This study assessed the impact of the Life Skills Training curriculum on Marion County, Ind., middle school students' knowledge, attitudes, and ability to make good lifestyle decisions. From 1997 to 2000, students in grades six to eight in the study schools received the Life Skills Training curriculum. Survey data (n = 1,598) were used to compare tobacco use behavior, attitudes, and knowledge of those exposed with those not exposed to the program. Of the students surveyed, 12.5% were currently smoking. There were significantly fewer current smokers, and more students exposed to the program indicated they intended to stay smoke-free. Fewer of those participating in the program "hung out" with smokers and more said they should easily refuse a cigarette if offered one. Students completing the Life Skills Teaching curriculum were more knowledgeable about the health effects of smoking. Program effects were different for male and female student as well as for White and Black students.

### **EDUCATIONAL IMPLICATIONS (BASED ON FINDINGS OF THE RESULTS)**

The concepts like virginity, fertilization and reproductive health etc are well described in the NCERT textbook of class XII. Although mostly the teachers in classroom do not deal with these concepts in required depth and rigor.

The topics like IVF, Test Tube Baby and MTP are mostly skipped during classroom transaction as according to the findings less than half of the students in the sample think that they have not been taught extensively in class.

Adolescence suffers from the problem of peer pressure and indulges in drug addiction and alcoholism mostly because of peer pressure. The findings show that only half of the students feel that the teacher taught them about ways to deal with peer pressure. This means more workshops and programmes have to be organized for teachers as well as students related to Life Skills education.

The STDs and HIV/AIDs are spreading in our country like fire in forest. Soon there will be tsunami of HIV/AIDs and STDs patients in our country. The most vulnerable group are adolescents. It can be seen through findings that students of class XII are not taught about these and awareness among students is less. Teachers need to be competent enough to communicate these information in class effectively. There was too much use of the lecture method which was not good for the course. It was difficult for the students to simultaneously listen to the lecturer, look at the slide presentation and take notes. There should be more video cassettes used in teaching the course, and that these should be made accessible to the students at any time.

There should be more class discussions so as to address the problems of dealing with the several myths that exist about this pandemic.(HIV/AIDs). There should be more field trips to places dealing with certain aspects of the pandemic,

such as VCT centres, care points, etc. so that students can see and experience the impact of the pandemic. More guest speakers need to be invited, to address the students on what they know and to share their experiences with the students because they have first hand information and experiences on certain aspects of HIV/AIDS.

## **CONCLUSIONS**

The National Curriculum Framework (NCF) 2005, recommends that children’s life at school must be linked to their life outside the school. This principle marks a departure from the legacy of bookish learning which continues to shape our system and causes a gap between the school, home and community. The syllabi and textbooks developed on the basis of NCF signify an attempt to implement this basic idea. They also attempt to discourage rote learning and the maintenance of sharp boundaries between different subject areas. We hope these measures will take us significantly further in the direction of a child-centred system of education outlined in the National Policy on Education (1986).

The success of this effort depends on the steps that school principals and teachers will take to encourage children to reflect on their own learning and to pursue imaginative activities and questions. We must recognise that, given space, time and freedom, children generate new knowledge by engaging with the information passed on to them by adults. Treating the prescribed textbook as the sole basis of examination is one of the key reasons why other resources and sites of learning are ignored. Inculcating creativity and initiative is possible if we perceive and treat children as participants in learning, not as receivers of a fixed body of knowledge.

The methods used for teaching and evaluation will also determine how effective this textbook proves for making children’s life at school a happy experience, rather than a source of stress or boredom.

Adolescents have diverse needs and all adolescents are healthy and well adjusted. Poor information and skills, lack of a safe and supportive environment, being sexually active, substance abuse, violence and injury, early and unintended pregnancy and infection with HIV and other sexually transmitted infections threaten the health and lives of adolescents. These also adversely impact the learning potential of significant numbers of students by undermining the physical and emotional well being that is not only necessary but crucial for learning. The education is a major stakeholder in promoting adolescent wellness. The adolescents require guidance and assistance both covert and overt from their parents, teachers, peers and society. They have a right to a safe and supportive environment, accurate and age appropriate information, skills building, positive role models, empowerment and friendly health services and counselling. Informed and skilled youth is likely to make better decisions concerning not only their careers and relationships , habits , physical and mental health , but will be socially adept , successful and an asset to the society.

There is growing evidence that access to information and services is necessary , but not sufficient , to prevent these problems and that in addition to these short term interventions it is essential to focus on the longer term interventions such as education and livelihoods.

In our society there are various myths and evils related to reproductive health and various such issues. Talking about HIV/AIDS and other related issues is a subject of shame. But this is the time we need to talk and spread awareness about these topics like STDs , fertilization , copulation and HIV/AIDS . This could be done only through well designed and effectively implemented curriculum. As it is said “education starts where medicine ends.’ Also HIV/AIDS is spreading at a very fast rate in India and there is no vaccine against it. So prevention is the only cure. There are various Life Skills programmes introduced at school level like YUVA Slp Adolescent education programmes. But water shed effect of the



information can only occur when teachers communicate the knowledge to students during curriculum transaction. Class XII biology textbook has sufficient information about STDs, Reproductive Health, HIV/Aids and infertility issues, Drug Addiction and Alcoholism. According to the results of the study teachers lacks in proper transaction this information extensively, effectively. There is a need of Pre service and inservice training programmes for teachers related to Adolescence education and Life skills education. They should be provided with more resources handbook and modules about how to teach such topics in class.

NACO have prepared a brilliant module on HIV/AIDS for introduction in schools throughout the country in response to the spread of reported AIDs cases amongst adolescents .NACO estimates that 34 percent of reported cases are in the age group 15-29 years and almost three quarters of young people do not know how to protect themselves. School Adolescence Education Programme devised by MHRD and NACO addresses all the aspects related to HIV/AIDs.

There was a unanimous opinion that awareness and correct knowledge in some areas just had to start early for example information about menstruation .At the same time , it is realized that the year's corresponding broadly to standard 6 to12 are enormous in terms of growth of the adolescent and his/her ability to deal with information. This led to inevitable conclusion that all information has to be age specific; the requirement of the child in standard 6 is very different from that of a student's of class 12 so the material has to be elaborated and presented accordingly in the class.

## REFERENCES

1. Best, John W., & Kahn, James v. (2008) Pearson Education Research in Education (pp.13, 17-23,313-320) India, Delhi.
2. Ciccarelli Sandra K & Meyer Glenn E (2004) .In Pearson, Psychology (pp 330-334), India: Delhi.
3. Chauhan, S.S., 2005 Advanced Educational Psychology. Vikas Publishing House Pvt Ltd.
4. Cohen & Manion, Developmental Research, Surveys, Sampling. Research Methods in Education (pp67-68, 83-87).
5. Dandekar, W.N., Makhijja Sanyonglata (2007). Adolescence. In Mac Millan India Ltd, Psychological Foundations of Education (pp72-86). India, Delhi.
6. Facilitators Guide On Adolescence Education and Life Skills Education: A Handbook for Teachers, NACO, MHRD, New Delhi July 2005.
7. Kalra, R.M., Drug education (pp 477-479). Encyclopaedia of Indian Education Vol.1 (A-K), Rajput, J.S., NCERT, 2004, India: Delhi.
8. Life Skills in Non –Formal Education: A Review, United Nations Educational Scientific and Cultural Organization, New Delhi. Indian National Commission For Cooperation with UNESCO, MHRD.
9. Learning for Life, A Guide to Family Health and Life Skills Education – for Teachers and Students (2000) ,NACO, NCERT, UNICEF and UNESCO , New Delhi.
10. Miyan Mohd. Introduction. from NCTE , Handbook of Educational Research , Edited by Dewal , O.S., India: Delhi, 198(pp 13-18, 22-24)



11. Mangal S.K., (2007) Advanced Educational Psychology , in Prentice Hall of India Pvt. Ltd (pp 96-98) , India : Delhi.
12. Teachers Manuals on Life Skills , Central Board Of Secondary Education, First edition Dec 2010, New Delhi.
13. Thomas, Gracious 2010 Life Skills Education and Curriculum, New Delhi: Shipra publications (pp 169-215).
14. Yadav, Saroj B., Adolescence Education. Encyclopaedia of Indian Education Vol. 1 (A-K) , Rajput, J.S., NCERT , 2004 , India : Delhi .(pp10-20)
15. YUVA School Adolescence Education Programme , Handbook For Teachers Vol1 , Published by Directorate Of Education , New Delhi, 2005.(pp xvii-xxi)
16. Wool Folk Anita (2006) .In Pearson Education Ninth Edition, Educational Psychology (pp130, 523) India: Delhi.
17. Walia J.S (2007). In Ahim Paul Publishers, psychology of Teaching and Learning (pp58, 72, 81-103). India: Punjab.
18. Awasthi and Kumari (2011) Developing Life Skills for Reproductive Health among Adolescent Girls. Evaluative studies .Source: [http// www.lifeskills training.com](http://www.lifeskills training.com).
19. Adeniyi , S.O. Oyewumi, A.M. Fakolade, O.A. (2011) An Assessment of the Level of Influence of family life and HIV/AIDS Education on Knowledge, Attitude and decision Making among Adolescents with Hearing Impairment in Some States in Nigeria. International Journal of Special Education. Vol 26, no.3
20. Ayodhya (2007) Blending Problem Solving Skills to learner’s Achievement Journal Of educational Psychology.
21. A., & Diaz, T.(1994) Effectiveness of Culturally Focussed and Generic Skills Training approaches to alcohol and drug abuse prevention among Minority youth .Psychology of Addictive Behavior 8, 116-127.
22. Boujauwah, Arriage, Abowd and Isbell (2010). Training Social problem solving skills in adolescents with high functioning Autism. Evaluative Studies .[www.lifeskillstraining.com](http://www.lifeskillstraining.com)

