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एन सी ई आर टी
NCERT

राष्ट्रीय शैक्षिक अनुसंधान और प्रशिक्षण परिषद्
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CONTENTS

CHILDREN'S BILL OF RIGHTS

A child is every person under the age of 18 years. Parents have the primary responsibility for the upbringing and development of the child. The State shall respect and ensure the rights of the child.

Dignity and Expression

- I have the right to know about my Rights. *(Article 42)*
- I have rights being a child and no matter who I am where I live, what my parents do, what language I speak, what religion I follow, whether I am a boy or a girl, what culture I belong to, whether I am disabled, whether I am rich or poor. I should not be treated unfairly on any basis. Everyone has the responsibility to know this. *(Article 2)*

- I have the Right to express my views freely which should be taken seriously, and everyone has the Responsibility to listen to others. *(Article12, 13)*
- I have the Right to make mistakes, and everyone has the Responsibility to accept we can learn from our mistakes. *(Article 28)*
- I have the Right to be included whatever my abilities, and everyone has the Responsibility to respect others for their differences. *(Article 23)*

Development

- I have the Right to a good education, and everyone has the Responsibility to encourage all children to go to school. *(Article 23, 28, 29)*
- I have the Right to good health care, and everyone has the Responsibility to help others get basic health care and safe water. *(Article 24)*
- I have the Right to be well fed, and everyone has the Responsibility to prevent people from starving. *(Article 24)*
- I have the Right to a clean environment, and everyone has the Responsibility not to pollute it. *(Article 29)*

- I have the Right to play and rest. *(Article 31)*

Care and Protection

- I have the Right to be loved and protected from harm and abuse, and everyone has the Responsibility to love and care for others. *(Article 19)*
- I have the Right to a family and a safe and comfortable home, and everyone has the Responsibility to make sure all children have a family and home. *(Article 9,27)*

- I have the Right to be proud of my heritage and beliefs, and everyone has the Responsibility to respect the culture and belief of others. *(Article 29,30)*
- I have the Right to live without violence (verbal, physical, emotional), and everyone has the Responsibility not to be violent to others. *(Article 28,37)*
- I have the Right to be protected from economic exploitation and sexual exploitation, and everyone has the Responsibility to ensure that no child is forced to work and is given a free and secure environment. *(Article 32,34)*

- I have the Right to protection from any kind of exploitation and everyone has the Responsibility to ensure that I am not being subjected to be taken advantage in any manner. *(Article 36)*

IN ALL ACTION CONCERNING CHILDREN, THE BEST INTERESTS OF THE CHILD SHALL BE A PRIMARY CONSIDERATION

All these rights and responsibilities are enshrined in the United Nations Convention on the Rights of the Child, 1989. It contains all the rights which children have all over the world. The Government of India signed this document in 1992.

Source: National Commission for Protection of Child Rights (NCPCR), Government of India

EDITOR'S NOTE

Quality of School Education is directly or indirectly correlated with the operations of various factors – philosophical and sociological thinking and priorities, cultural diversity, quantity and quality of human resources which also include emotional and attitudinal aspects as well as adequacy and quality of infrastructure as well as learning resources. This is why, the matter of school education concerns most of us as a parent, a teacher, a teacher educator, a philosopher, a sociologist, an economist, a research scholar, a doctor , even stake holders like civil and computer engineers.

One of the forums, where these ideas converge and help initiating dialogues among various players in education is *Journal of Indian Education*. Compiling writing works of the authors to present before the readers in a meaningful way is a challenging but interesting task.

Once again the issue is before you, containing articles by Saroj Yadav on the theme of using educational activities for promoting health awareness in schools; Narayan Prasad Behera and Sukanta Kumar Mohanty on the theme 'Integration of Emotional and Spiritual Intelligence in Teacher Education Curriculum.' This issue also contains a write up from memorial lecture series entitled 'Culture and Development: Implications for Classroom Practices' by T.S. Saraswathi.

The issue also contains a paper on 'Psychological Stress and Achievement of Science Students' by Narendra Kumar and Rajive Kumar, who have attempted to study senior secondary students of Kendriya Vidyalayas, and an article by Manisha Subba entitled 'Addressing the Notions of Reality, Representation and Relevance in Manipur State History Textbooks.'

Virendra Pratap Singh contributed in the issue with his research paper entitled 'Conditions of School Buildings in India: An Empirical Study' K. Abdul Gafoor has written on Differences in Students' Interest in Physics by Gender and Stage of Schooling in Kerala. Prabha Hariharan has contributed with an article entitled 'Best Interest Principle for the Education of a Child', who presents a framework which brings together three major factors that provide guidance for the processes and practices in the education system.

We hope this issue will motivate you to join this forum as a contributor.

Academic Editor

Do You Know?

According to the 86th Constitutional Amendment Act, 2002, free and compulsory education for all children in 6-14 year age group is now a Fundamental Right under Article 21-A of the Constitution.

EDUCATION IS NEITHER A PRIVILEGE NOR FAVOUR BUT A BASIC HUMAN RIGHT TO WHICH ALL GIRLS AND WOMEN ARE ENTITLED

Give Girls Their Chance !

Health Promotion in Schools through Educational Activities

Saroj Yadav*

Abstract

Education is the key to awareness generation among people about various issues including health. The most crucial role that education, particularly school education, is expected to play in this context is to provide information and develop positive attitude among learners towards health related issues and influence their value orientation in respect of these issues so that they take informed and rational decisions for observing better quality of life. In this context, school education, especially Health and Physical Education occupies a central position by making students not only aware–but also in attitude formation and skill development among learners towards holistic health including reproductive and sexual health. Given the multidimensional nature of health, many opportunities for cross–curricular learning are provided through subjects like sciences, social sciences, and activities such as National Service Scheme, Bharat Scouts and Guides and various programmes like National Population Education Project (NPEP,) Adolescence Education Programme (AEP), and Comprehensive School Health Programme (CSHP).

Introduction

Health and physical well-being, especially of children and youth, has been one of the important concerns of all societies. Since health, nutrition and education are important for overall development of children and youth, these have been considered one of the core curricular concerns of school education in India since long. The importance of educational inputs in this context has been realised not only as a means to ensure sound health, physical fitness and well-being of students but also as a significant concern to be made an integral part of

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education. It is pertinent to note that there is a reciprocal relationship between health, nutrition and education, especially when it comes to children. Studies have shown that poor health and nutritional status of children has been a critical barrier to attendance and educational attainment and therefore, plays a crucial role in enrolment, retention, and completion of school education.

Health Needs of Children

A review of surveys and studies conducted on the state of health indicates that health needs of children continue to demand interventions. It is well acknowledged that health is a multidimensional concept and is shaped by biological, physical, psychological, mental, social, economic, cultural and political factors. Access to basic needs like food, safe water supply, housing, sanitation and health services influences the health status of a population and this is reflected through mortality and nutritional indicators. The major cause of mortality and morbidity among children even now are a group of disease conditions like diarrhoea, pneumonia and fevers that are related to poor living conditions and lack of access to basic needs (IIPS: 2000).

Under-nutrition and communicable diseases have been a major problem among majority of school going children. NFHS-3 data indicates that obesity is also emerging as a problem at least in some of the States. The age specific data on major causes of mortality shows that low birth-weight, respiratory infections and anaemia are the major causes of mortality for the under-five age group. Respiratory infections and anaemia become the major causes for the age group 5-14. Respiratory infections, especially tuberculosis, becomes the major cause of mortality for females after the age of 15 (Gopalan & Shiva, 2000; p.162).

There is also a growing realisation that the health needs of adolescents, particularly their reproductive and sexual health needs require to be addressed urgently. Since these needs are predominantly related to sexuality, which is culturally a very sensitive area, these are not addressed appropriately.

Findings from the National Family Health Survey 3 (NFHS 3, 2005-06) also show that young people are poorly informed on issues related to HIV prevention. Only 28% of young women and 54% of young men in the age group of 15-24 had comprehensive knowledge about HIV/AIDS. This is worrisome in the light of the fact that over 35% of all reported AIDS cases in India occur among young people in the age group of 15-24 years and more than 50% of the new HIV infections also occur among young people (NACO, 2005).

Substance abuse among young people is also a matter of concern. Findings from NFHS-3 show that in the age group of 15-24, 40% young men and 5% young women had used tobacco, while 20% of young men and 1% of young women had consumed alcohol.

Although young people are considered healthy, findings from NFHS

3 indicate that a proportion of young people suffer from anaemia (56% of females and 25% of males in the 15-24 age group) that can adversely affect their physical growth, cognitive development, performance in school and at work, as well as reproduction. The findings from NFHS-3 do not indicate progressive gender role attitudes; 53% women and 56% men in the 15-24 age group felt that wife beating is justified under specific circumstances.

Sexual harassment in public spaces, institutions of education, in and around home and at the workplace is also a well established fact. Child abuse, bullying and ragging are also common and more so among boys.

Adolescent children, therefore, are in urgent need to be empowered by acquiring authentic knowledge about their specific concerns, inculcating rational attitude and developing life skills in order to manage peer pressure, avoid risky behaviour and practice responsible behaviour. In recent times, a great deal of importance has been given to adolescent health in school curricula, but it is yet to be properly institutionalised.

During the last two decades several National Health Programmes like the Reproductive and Child Health, HIV/ AIDS, Tuberculosis and Mental Health have been emphasising health education and children are viewed as a potential 'target group' for preventive and promotive activities. The concern with this approach is that the focus is on giving information and each of these programmes is independent of the other. This creates demands on the teachers and children to deal with each of these concerns and they are not integrated into the existing curriculum. It is suggested that the curriculum on Health and Physical Education must identify major communicable and non -communicable diseases for which health information be provided at the appropriate developmental level of the child.

Various programmes and activities are undertaken for the promotion of health of children through education. Let us discuss these one by one.

National Policy on Education

National Policy on Education 1986, as revised in 1992, recognises the holistic nature of child development, viz., nutrition, health and social, mental, physical, moral and emotional development. The policy emphasises that Early Childhood Care and Education (ECCE) needs to receive a high priority and be suitably integrated with the Integrated Child Development Services programme, wherever possible. Day-care centres will be provided as a support service for universalisation of primary education, to enable girls engaged in taking care of siblings to attend school and as a support service for working women belonging to poorer sections (5.2).

Health planning and health service management should optimally interlock with the education and training of appropriate categories of health manpower through health-related

vocational courses. Health education at the primary and middle levels will ensure the commitment of the individual to family and community health, and lead to health-related vocational courses at the +2 stage of higher secondary education. (5.18)

What National Curriculum Framework Says

The National Curriculum Frameworks developed since 1975 at regular intervals have responded to the health needs of school going children. The *National Curriculum Framework (1975)* developed in the context of the *Policy Resolution on Education 1968*, *National Curriculum Framework (1988)* developed as a follow-up of the *National Policy on Education, 1986* and *National Curriculum Framework for School Education (2000),* while delineating the details of the curricular area of Health and Physical Education also recommended that medical inspection be made compulsory at each school stage with follow up in cases where deficiencies are noticed. The recent *National Curriculum Framework 2005* provides a holistic definition of health within which physical education and yoga contribute to the physical, social, emotional and mental development of the child. It recommends that the midday meal programme and medical check-ups be made a part of the curriculum (NCERT Position Paper 2006).

National Curriculum Framework, (NCF) 2005 recognised that the 'pre condition for all development is healthy physical growth of all children. This requires that the basic needs in terms of adequate nutrition, physical exercises and other psycho-social needs are addressed. Participation of all children in free play, informal and formal games, yoga and sports activities is essential for their physical and psycho-social development. The range of abilities as a result of games, sports and yoga will improve stamina, fine and gross motor skills and dexterity, self-awareness and control, and coordination in team games. Simple adaptation of playgrounds, equipment and rules can make activities and games accessible to all children in the school. Children can achieve high levels of excellence in sports, athletics, gymnastics, yoga and performing arts such as dance. When the emphasis shifts from enjoyment to achievement, such training can make demands of discipline and practice that can create stress at this stage. Whereas all students must be involved in health and physical education activities, those who choose to excel in games and sports need to be provided adequate opportunities.

Health and Physical Education as a Subject Area

The curriculum and syllabus for this subject has to adopt a 'need based' approach to a child's development. This is the framework that will guide the inclusion of physical, psycho-social and mental aspects that need to be

addressed at different levels of schooling. A basic understanding of the concerns need to be delineated but this subject has an applied dimension that needs strengthening through experiential learning, acquiring skills to recognise and cope with demands, expectations and responsibilities of daily living, the collective responsibilities for health and community living also need to be emphasised. *National Curriculum Framework 2005* emphasises that :

- recognising this subject as a core subject, Health and Physical Education must continue to be a compulsory subject from the primary to the secondary stages, and as an optional subject at higher secondary stage. However, it needs to be given equal status with other subjects, a status that is not being given at present.
- the 'need based approach' could guide the dimensions of physical, psycho-social and mental aspects that need to be included at different levels of schooling. A basic understanding of the concerns is necessary, but the more important dimension is that of experience and development of health, skills and physical well being through practical engagements with play, exercises, sports, and practices of personal and community hygiene.
- it should be possible to organise the utilisation of the school space at the block level at least, for a special sports programme both before school hours and after school hours to enable children with special talent for sports to go there for special training, and during vacation time. It should also be possible to develop these sports facilities so that many more children can avail of these for leisure time sports activities and engage in team games such as basketball, throwball, volleyball, and local forms of sports.
- it should be given equal status with other subjects and the essential physical space and equipment need to be available in every school. Doctors and medical personnel should visit schools regularly.
- school health programme must be an integral part of Health and Physical Education.
- growing realisation of adolescents' health needs in an age appropriate context and specific intervention in adolescents' reproductive and sexual health concerns.

Provide children opportunities to construct knowledge and acquire Life Skills under Health and Physical Education, the following broad themes are identified :

- We and our environment
- Human body; physical fitness and health
- Food and nutrition
- Social health and relationships with others
- Safety and security
- Consumer health; vocational and leadership aspects.

Table 1
Status of Health and Physical Education in States/ UTs

Status	*Name of States/UTs*		
	Primary	*Upper Primary*	*Secondary*
Compulsory	A&N Islands, A P,, Arunachal Pradesh, Assam, Bihar, Chandigarh, Dadra & Nagar Haveli, Daman & Diu, Gujarat, Haryana, Himachal Pradesh, J & K, Jharkhand, Karnataka, Kerala, Manipur, Lakshadweep, Maharashtra, Meghalaya, Mizoram, Nagaland, Orissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamilnadu, Uttar Pradesh, Tripura, Uttrakhand, West Bengal (31)	A&N Islands, A P, Arunachal Pradesh, J & K, Assam, Bihar, Chandigarh, Chhattisgarh, Dadra & Nagar Haveli, Daman & Diu, Gujarat, Haryana, Jharkhand, Karnataka, Kerala, Lakshadweep, Maharashtra, Manipur, Mizoram, Nagaland, Orissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamilnadu, Tripura, Uttrakhand, Uttar Pradesh, West Bengal (30)	A&N Islands, Andhra Pradesh, Arunachal Pradesh, Assam, Bihar, Chhattisgarh, Jammu & Kashmir, Jharkhand, Kerala, Lakshadweep, Maharashtra, Manipur, Mizoram, Nagaland, Orissa, Pondicherry, Punjab, Rajasthan, Sikkim, Tamilnadu, Tripura, Uttaranchal, Uttar Pradesh (23)
Optional	Chhattisgarh, Delhi, Goa, Madhya Pradesh	Delhi, Goa, Madhya Pradesh	Dadra & Nagar Haveli, Delhi, Goa, Gujarat, M.P, Haryana, W.B.

Source : A study conducted by Department of Teacher Education and Extension, NCERT, 2004

The analysis of status of Health and Physical Education in states / UTs has been shown above. It is a compulsory area in majority of states/ UTs.

Other Projects

Components of School Health Programme

- School health and hygiene services
- Preventive and curative health services: routine medical checkup by specialists
- Hygienic environment in and around school: personal hygiene and hygienic environment
- School Midday Meals (MDM) Programme
- Coverage be extended up to Upper Primary Stages
- Yoga, physical activities and sports and games
- Teacher preparation

Health Related Content is an Integral Part of School Textbooks

Given the interdisciplinary nature of the area there is a need for cross curricular planning and need to be integrated with science, social sciences, language and other relevant subjects from the primary to senior secondary levels addressing

both the theoretical and applied dimensions.

"As stated in the position paper, given the multi casual understanding of health, many of the health education concepts are dealt by various subjects in the school curriculum that includes environmental studies, social science, science, physical education, yoga and population education. It also needs to be treated according to the developmental needs and intellectual ability at different levels of schooling. For example, at the primary level the focus is more on individual and environmental hygiene whereas at the secondary and higher secondary stage diseases and even reproductive health has been discussed."

An analysis of textbooks of NCERT (2011) shows content related to health has been integrated in different subject areas as shown in the tables given below. NCERT textbooks are also used in many states/ UTs.

Table 2

Analysis of NCERT textbooks from Health Education point of view

Primary Stage

Class/ Subject	*Chapter Title*	*Contents*
IV EVS	Nandita in Mumbai	Problems of overcrowded city like Mumbai; lack of space, scarcity of water and other basic amenities due to unplanned migration.
	Too Much Water, Too Little Water	This lesson throws light on the problems of dirty and unclean water and its impact on health. People get sick with diarrhoea, and vomiting. Need for making water clean and drinkable.
V EVS	From Testing to Digesting	This story introduces children to the importance of balanced diet and impact of non-nutritious foods and snacks like pizzas, burgers, chips and soft drinks and their effects on health (including illustration) also in text questions on hunger and food storage. (Pages 31-33)

Upper Primary

VII Social and Political Life-II,	Role of the Government in Health	Meaning of health care, health care in India. Cost of cure shown through cartoon and picture. Public and private health care services. According to UNICEF, more than two million children die every year in India from preventable infections. Health care and equality: adequate facility of health care to all. Health care in India. Comparative situation of health facilities and health problems. What can be done? – It is clear that most people of India do not get quality healthcare services. Role of government in providing information of good healthcare services to the poor and the disadvantaged.
VIII	Public Facilities	Public Facilities: Like water, healthcare and sanitation are necessary for human beings (with illustration.)(Page-109)

Secondary

IX Economics	Food Security in India	Large sections of people suffer from food and nutrition insecurity in India. A large proportion of pregnant and nursing mothers and children under the age of 5 years constitute an important segment of the food insecure population. According to the National Health and Family Survey 1998-99, the number of such women and children is approximately 11 crore. National Food for Work programme. Boxes, tables and graphs showing poverty, typical hunger, production of food grains, features of PDS and central food grains stock and minimum buffer norm.
IX Geography	Population	Population growth and processes of population change: Population growth, processes of population change/ growth, birth rate, death rate, age composition, sex ratio, literacy rates, occupational structure, health, adolescent population, National Population Policy, NPP 2000 and adolescents.
X Science	Lesson- 8 How Do Organisms Reproduce? (Pages 127-141)	Reproduction in human beings. Male reproductive system, female reproductive system, If egg is not fertilised, the thick and spongy layer of the uterus breaks as blood and mucous, which is called menstruation. Reproductive Health-Educating the children about sex organs and sexual acts, awareness about STDs, HIV-AIDS, precautions to be taken, use of condom, copper-T, contraceptives, surgical method, female-male sex ratio must be maintained; because of reckless female foeticide, child sex ratio is declining at an alarming rate in some sections of our society, although prenatal sex determination has been prohibited by law. Reproduction - process by which organisms increase their population. Birth and death in a given population determine its size. Expanding population makes it harder to improve everybody's standard of living. However, if inequality in society is the main reason for poor standards of living for many people, the size of the population is relatively unimportant.

Higher Secondary

XI Economics	Indian Economy on the Eve of Independence	Stage of demographic transition. Stages of various social developments. Indicators-literacy both male and female. Public health factors- IMR, Life expectancy etc. (Page-9-10)
	Human capital formation in India	Sources of human capital: Health is also considered as an important input for the development. Relationship of human capital and economic growth. Education and health indicators of development. Human capital and human development
	Infrastructure	Definition of health. State of health infrastructure. Indicators of health, infrastructure, indicators of health in India in comparison with other countries, maternal health is cause for concern.

XII Biology	Reproductive Health (Pages 57-66)	Concept of reproductive health, problems and strategy. Clarifying myths and misconceptions about sex related aspects, adolescence and related changes, safe sexual practices, STDs, AIDS, help adolescents to lead a healthy life. Counselling and creating awareness about available birth control options, care of pregnant women, post-natal care of the mother and child, importance of breast feeding, social evils like sex abuse and sex related crimes. STDs. Pelvic Inflammatory Diseases (PIDs), still birth, infertility, use of condoms, precautions to avoid contracting STDs, birth control, IMR /MMR, Contraceptive measures (all types), Slogan, "Hum Do Humare Do". Side effects of (oral) contraceptives. STDs, STIs, HIV and AIDS, cure and prevention.
XII Biology	Human Health and Disease	AIDS, cause, transmission, prevention, high risk group, stigma associated with AIDS ("Don't die of ignorance"), prevention of AIDS, role of NGO and NACO. Role of WHO, Making blood safe from HIV, need for disposable syringes in public/private hospitals and clinics, free distribution of condoms, controlling drug abuse, advocating safe sex, regular health check ups, Drugs and Adolescence. Alcohol abuse and its effects. Adolescents attracted towards it. Addiction and dependence. Prevention and control of drug abuse–How to avoid peer pressure, education and counselling, parental help and medical help.
XII Psychology	Human Development	Definition and challenges of adolescence. Primary and secondary sexual characteristics. Menarche, physical changes during adolescence, psychological - interests in opposite sex, body image, role of parents, peers, and society, lack of adequate knowledge about sex and sexuality, about the risk of AIDS, and other STDs. Sexual identity, sexual orientation and guides to sexual behaviour. Delinquency, substance abuse and its effects. Eating disorder: Anorexia nervosa. Risk of STD and AIDS.
	Meeting Life Challenges	Effects of Stress on psychological functioning and health: Emotional, psychological cognitive and behavioural effects, Stress and health, and immune system:. Coping with stress. - HIV, the virus causing AIDS Life Style: - Promoting positive health and well- being: Life skills: - Assertiveness, time management, rational thinking, improving relationship, self care, overcoming bad habits, diet, exercise, positive health, positive attitude/ thinking, social support.

	Psychological Disorders	Substance use disorders, Substance dependence, Alcohol abuse and dependence, Effects of Alcohol:-some facts in box 4.3. Commonly abused substances, and dependence.
	Psychology and Life	Human influence on the environment, noise pollution, crowding and natural disaster. Measures for mental health. WHO definition of health. Traditional cultures about health, harmonious balance of various elements in the body for health, WHO report about diseases like HIV/AIDS, TB, Malaria, respiratory infections, and nutritional deficiencies. Behavioural risk factors- drug abuse, and unsafe sexual behaviour, incidence of coronary heart disease (CHD), cancer, and HIV/AIDS, Social and cultural factors and gender roles greatly influence health behaviour in Indian society, medical advice by or for a female is often delayed because of reasons- less valued, or the shame associated with the disease. Need for diet and physical exercise.
XII Economic	Human Development	Concept of Human Development - social, economic, environmental and quality of life. Human development in India. Indicators of healthy life, and social empowerment. Human development index in India.
XII Indian Society	The Demographic Structure of the Indian Society	The birth rate, death rate, fertility rate, infant mortality rate, maternal mortality rate, sex ratio, age structure of the population and dependency ratio. Size and growth of India's population. Table and graph showing population of India and its growth during the 20th century. The global influenza pandemic of 1918-1919. Improvements in medical cures for these diseases. Programmes for mass vaccination. Efforts to improve sanitation helped to control epidemics. National socio demographic goals for 2010.

Comprehensive School Health Programme

However, with a view to supporting the process of actualisation of the efforts through school curriculum and responding to those health needs that cannot be covered through curricular interventions alone, a need is strongly felt to plan and implement a **Comprehensive School Health Programme** addressed to the following four categories of health needs of children.

a. Medical check ups of children, their treatment and follow up;
b. Tackling under-nutrition and malnutrition among children;
c. Promotion of the state of health and physical well-being of children through physical and yoga activities, sports and games and maintenance of personal as well as community hygiene; and
d. Strengthening of the area of Health and Physical Education in school curriculum and teacher education.

The following may be considered for their inclusion as major components of the Programme:

School Health and Hygiene Services

It may include

(i) Prevention and Curative Health Services: (a) a routine medical check-up of all school students and also medical examination by specialists like physicians, paediatricians, ENT, ophthalmologists, dentists, pathologists; (b) necessary follow up treatment and supplementary nourishment, where necessary;

(ii) Creating and Maintaining Hygienic Environment in and around the School:

(a) Promoting personal hygiene among children; (b) maintaining sanitation and hygienic environment in the school as well as the community;

School Mid-Day Meal Programme

The existing National Programme of Nutritional Support to upper Primary Education may be reinforced to ensure universal coverage.

Teacher Preparation

There is a need for training and orientation of teachers: (a) to organise yoga and physical and sports related activities, (b) to assist in the medical check-up of school students and the follow up, including the maintenance of records of their health, (c) to ensure personal hygiene among children and cleanliness and sanitation in schools and the community.

National Population Education Project

Under National Population Education Project (NPEP) a number of activities are organised. The objective of NPEP is to develop understanding of the criticality of essential conditions of population stabilisation for achieving better quality of life for present and future generations and therefore, it also aims at making children understand the crucial aspect of not only population growth and structure but also about health and education as key determinant for population change. There are six major themes of population education (NCERT 2009 Source Book on Population Education). These are as follows:

- Population and sustainable development
- Gender equity for empowerment of women
- Adolescent reproductive and sexual health (Adolescence Education)
- Family; social, cultural factors and quality of life
- Health and education key determinant of population change
- Population distribution, urbanisation and migration.

Two of the above themes of population education focus on reproductive health. The content covered under these themes is as follows.

Health and Education: key Determinants of Population Change

Under this theme the children are made aware of concept of health, determinants and indicator of health and various policies and programmes undertaken by the Government to improve health,

not only physical but also social and mental health. It covers :

- Health, Morbidity and Mortality: Interrelationship between health, morbidity and mortality, population change and quality of life.
- Child Survival: Linkages between child survival and timing, spacing, number of births and reproductive health of mothers.
- Health of Women and Safe Motherhood**:** Health of women as a key factor for the quality of life in family and society.

Adolescent reproductive and sexual health (Adolescence Education)

This includes –

- Process of Growing Up: Physical change and development during adolescence; Socio-cultural development; Gender Roles.
- HIV/AIDS: Basic information on HIV/AIDS; prevention and control; care for the affected.
- Drug Abuse: Causes of drug abuse; drug addiction; drug dependence, effects of drug abuse; prevention and responsibility.

Education is considered one of the key determinants influencing the health of the population and thereby determining the population change. L. Summers in an essay (1994) who summarised national case studies from different developing countries, states that infant mortality is higher if the mother is illiterate and decreases with increase in mother's education.

Thus education helps in achieving better health, reducing fertility and thereby helps in population stabilisation.

Adolescence Education Programme

NCERT is also implementing AEP as a part of NPEP as well as under UNFPA funding. Under this project it is universally accepted that the health needs, and particularly the Adolescents Reproductive And Sexual Health (ARSH) needs of adolescents, continue to be ignored and neglected. As they stand at the threshold of adulthood, they need authentic knowledge that helps them understand the process of growing up with particular reference to their reproductive and sexual health needs.

By developing a critical understanding, they have to be well equipped to cope with the problems which they confront. They need guidance and independence simultaneously, education as well as opportunities to explore life for themselves in order to attain the level of maturity required to make responsible and informed decisions**.**

The overall objective of Adolescence Education is to provide adolescents with accurate, age appropriate and culturally relevant information to promote healthy attitudes and develop skills to enable them to respond to real-life situations effectively.

The Adolescence Education Programme (AEP) was launched by Ministry of Human Resource Development (MHRD), Government of India in 2005, as a follow up of the decisions of the Inter-Ministerial Group. This Program has two major facets: (i) AEP being implemented in States and Union Territories through SCERTs/ State Boards with support of SACS; and

(ii) AEP supported by United Nations Population Fund (UNFPA), being implemented by national agencies Central Board of Secondary Education (CBSE), Kendriya Vidyalaya Sangathan (KVS), Navodaya Vidyalaya Samiti (NVS), National Institute of Open Schooling (NIOS) and Council of Boards of School Education in India (COBSE). National Council of Educational Research and Training (NCERT) is the coordinating agency on behalf of MHRD. The ultimate goal of the Programme is to empower adolescent learners to have knowledge of their needs and concerns related to the period of adolescence and develop in them life skills that will enable them to practise informed and responsible behaviour.

In view of the above, the following strategies are adopted to facilitate the institutionalisation of this curricular area in the content and process of school education and teacher education:

Awareness Building

The first and foremost step is to create a favourable environment for accepting the need to impart adolescence education in schools. Past experience has indicated that in most cases, the resistance to adolescence education has been because of the lack of proper appreciation of the needs of adolescents in the changing context and also of this educational area. This requires organisation of awareness building activities with a wide variety of stakeholders, including, policy framers, opinion leaders, media persons, curriculum developers, teacher educators, teachers and parents.

Integration in the School Curriculum

Adolescence education can be effectively provided only when its elements are integrated in the school curriculum. Effort has been made to facilitate effective integration of adolescence education in the content and process of school education.

Use of Activities to Promote the Objectives of Adolescence Education

The integration of elements of adolescence education in syllabi and textbooks may have to wait till they are revised in due course of time. There is also an overall paucity of teachers and specifically trained teachers in the education departments. Therefore, the teaching learning process may be initiated forthwith by utilising curricular modalities with life skills focussed activities like Question-Box, Group Discussion, Value Clarification, Role Play, Case Study, Painting/Poster Competition, Essay Competition and Quiz Contest. These prove very effective in not only providing accurate and adequate information to learners but also inculcating in them positive attitude and creating an enabling environment and more importantly developing the ability to apply the needed life skills (NCERT 2011).

These activities initiated from schools to districts to states and national level are National Painting Competition, held in 1984 on the theme: "India in 2000 AD", National Essay Competition, organised in 1986, National Population Education Quiz Competition held in 1989-90, National

Competition on Role Play was organised for Class IX students of all government schools of 30 States/UTs. Role play was focused on three broad areas of adolescence education which covered four major themes. The competition was held at four levels (school, block, district, state) by states/UTs and regional and national level competition was organised by NPEP, NCERT. It covered schools in 257 districts during 2009-10 and in 344 districts during 2010-11. The remote rural areas and schools in slums from urban areas participated in the National Role Play Competition.

Summary

As a part of school education, component of health has been integrated in different subject areas as well as Health and Physical Education has been recommended as a compulsory subject up to Secondary and optional at Higher Secondary stage. The need of the hour is to promote health – physical, mental, emotional, and social by putting them into experiential learning situations and providing real life experiences enhancing skills for psycho social competencies at different stages of child development and this can be possible if there is a adequate teacher preparedness which need to be addressed through the pre service and in service training programmes at all levels. Much has been done at the policy and programme level, what is required is the strong implementation at all levels. The involvement of Non-governmental Organisations (NGOs) and Self-Help Groups (SHGs) along with government efforts in the implementation of the components like School Health and Hygiene Services, School Mid-Day Meals Programme, Yoga, Physical Activities and Sports and Games, and also Teacher Preparation may be considered for coverage.

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Integration of Emotional and Spiritual Intelligence in Teacher Education Curriculum: a Holistic Approach

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Abstract

This article analyses the existing teacher education curriculum critically and counsels inclusion of emotional and spiritual intelligence as a core necessity to meet the educational challenges. Some suggestions are delineated for inclusion of emotional intelligence (E.I) and spiritual intelligence (S.I) in our teacher education programme.

The Context

The domain of knowledge has expanded to such a great extent that conventional educational methods have become inadequate to serve the diverse demands of the knowledge based global society today. The Education Commission (1964-66) rightly observed that yesterday's education system cannot satisfy the present needs and even less so tomorrow's need. A great deal of present day education is dominated by the cognitive domain (head). However, the most important aspect of human life i.e. affective domain (heart) and psychomotor domain (hand) are neglected. Whatever information, experience or knowledge our children gather from our school curriculum neither matches adequately their life skills nor caters appropriately to their needs and interests. This, in turn, has created an impasse in shaping their destinies and the destiny of the country at large. Mahatma Gandhi had envisaged this and defined education as the all round drawing out of the best in child and man, body, mind and spirit. But, till date, we have not accomplished this defined goal.

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Moreover, professional identity has always been a salient concept for educators. We see 'teacher' and 'teaching' as more than simply a category of employment: As teachers, we have chosen this field and tend to feel that it has chosen us (Beijaard, Meijer, & Verloop, 2004). Many discussions of teacher professionalism emphasise the cognitive aspects with great sensitivity; it could be argued that the more influential factor at work in our professional identity is emotion: It is our experience of *affect* which forms the basis for our sense of professional self, as Andy Hargreaves (1998, p. 835) says, "Emotions are at the heart of teaching". Therefore, it is essential to consider all the three components – 'the brain' (hardware aspect of individual), 'the heart' (software aspect of individual) and 'the hand' (action part of individual), while developing teacher education programmes.

Teacher Education and Challenges before the Country

During the last decade of the twentieth century there were revolutionary changes in teacher education programmes across the world because of globalization, liberalisation and privatisation of education, and India was not an exception to this. Today, consequent to these changes, our teachers, teacher educators, researchers, policy makers and curriculum framers are facing various challenges – economic, social, cultural, political, moral, ecological and educational. CABE Committee in its report on "Universalisation of Secondary Education" (Tiwari 2005, p.31) has stated that India is emerging as the fastest growing economy in the world. Several international reviews have predicted that the twenty-first century belongs to Asia, India and China, as much as the twentieth century belonged to the USA, and the nineteenth century to Europe. But the impasse is: Can this be achieved without a committed, competent and effective teacher? Are our prospective teachers competent enough to overcome the above mentioned challenges? Do our present teacher education programmes represent our multi-religious and multi-ethnic society? To answer these questions, we need a critical analysis of the existing teacher education programme.

Existing Teacher Education Curriculum: a Critical Analysis

Ever since our Constitution was framed and adopted in 1950, the focus of our educational programme has been on school education. But we are far from the realisation of our goals. We are to be blamed for the obsolete ways in which we have framed our teacher education programmes and the ways in which we train our teacher educators and teachers. These are out of context of the contemporary society, thoroughly isolated from the community needs, far away from the relevant content areas; inappropriate stage-specific theoretical and practical components and transactional modalities; lack of in-service training in developmental activities; inadequate orientation for new pedagogy and evaluation techniques; negative attitudes towards information and communication

technology; unspecific curriculum for pre-service and in-service education of teachers; lack of proper planning and orientation of education of teacher educators; lack of opportunity for inter-disciplinary enquiry; little scope for research in areas such as curriculum inquiry and design, pedagogic studies, epistemological concerns and issues related to school and society; faulty selection of candidates who wish to take teaching as a profession due to job permanency, who, consequently, enter into this profession by chance and/or by force rather than by choice; poor coordination between teacher training colleges and recognition authority; non-availability of schools for conducting internship programmes and very short duration of training programmes.

A literature survey carried out in this regard confirms the short-fall of our school education programmes. The Chattopadhyaya Committee Report (1983-85, p. 48) observed that ". . . what obtains in the majority of our Teaching Colleges and Training institutes is woefully inadequate. ....." "If teacher education is to be made relevant to the roles and responsibilities of the New Teacher, the minimum length of training for a secondary teacher . . . should be five years following the completion of Class XII." A study conducted by (Sengupta & Chugtai 2003, p.4) proposed that the two year B. Ed. programme would provide more effective training than the one at present and also help pupil-teachers to gain proficiency in content and pedagogy. A B.Ed. programme for one year which includes 30 days of practice teaching at a stretch is inadequate to NCTE's requirement of 210 regular working days. Moreover, The Yashpal Committee Report (1993, p.26) on "Learning without Burden" pointed out that "inadequate programme of teacher preparation leads to unsatisfactory quality of learning in schools". It is unfortunate that the recent National Curriculum Framework on Teacher Education (NCTE 2009) did not give any priorities for training of affective domain components in the curricular provision. The content of programme should be restructured to ensure its relevance to the changing needs of school education. The emphasis in these programmes should be on enabling the trainees to acquire the ability for self-learning and independent thinking. The teacher education curriculum should be based on a holistic approach.

Integration of Emotional and Spiritual Intelligence in Teacher Education Programmes: our Immediate Need

National Curriculum Framework (NCERT 2005, pp.95-96) in its position paper on teacher education for curriculum renewal suggested that an integrated model for teacher education should comprise of core components that would be common to all teacher education programmes (pre-primary, elementary and secondary) followed by specialization of professional development specific to the stage of education. Such an integrated model is possible only by the harmonization of 'Body', 'Mind' and 'Soul' of the learner-teacher. Therefore, our teacher education programmes should be framed in such a manner that all the three faculties get opportunities

to be trained. In order to achieve this need, it is necessary that the Intelligence, E.I (Emotional Intelligence) and S.I (Spiritual Intelligence) are integrated in our teacher education programmes. Mahajan (2003, p.212) has emphasised this point demarcating the coordinates as mental, relational and spiritual smarts. He has recommended the following proportions of these three new-learning factors.

Proportion and Importance of the New-Learning Factors

IQ	Mental Smarts	20%
EI	Relational Smarts	50%
SI	Spiritual Smarts	30%

According to Mahajan, IQ contributes only about 20 percent to the factors that determine success whereas EI and SI contribute about 50 percent and 30 percent respectively to the factors that ensure success. But we have been emphasizing IQ at the cost of EI and SI in our teacher education programmes. It is indispensable that future teacher education programmes should be framed according to the relative importance of these factors.

Besides, NCTE (2001) has stated that "no innovation or change can be implemented without teachers' awareness, involvement and commitment." Similarly, Chattopadhyaya Commission (1983-85) has observed that *"if school teachers are expected to bring about a revolution in their approach to teaching . . . that same revolution must precede and find a place in the Colleges of Education."* It is obvious that our teacher education courses need to be amended, they need to be modified in such a way as would enable our future teachers to understand the attributes of modernity and development, to create necessary awareness about their new roles and responsibilities, to build the necessary competencies to reconstruct as well as transmit the dynamic and responsive components of cultural heritage and develop the artistic capacity to cultivate the moral development in a secular, multi-religious and multi-ethnic society. In short, integration of emotional and spiritual intelligence is our instant, critical need.

Further, the question bothering a teacher educator is, what determines success in teaching? Is it intelligence (IQ) or emotional intelligence (EI), or spiritual intelligence (SI) or is it a combination of all the three? Researchers have studied over this question from various points of view without arriving at a definite answer. However, inferences based on theory and research in the realm of psychology and teacher education indicates that all the three constructs are required to become a successful teacher.

Intelligence Quotient (IQ) is the level of knowledge a teacher possesses. In his/her career, every teacher has to make umpteen number of decisions every day. He/She needs to make decisions and devise strategies based on the "new learning factors" to make teaching/learning useful and memorable. This is possible only when the teacher possesses right kind of knowledge, rational thinking and logic. Therefore, integration of IQ in an appropriate ratio in teacher education programmes is essential. This also

makes a teacher think rationally, act purposefully and deal effectively.

Moreover, teacher stress has increasingly been recognised as a widespread problem in different educational settings (Boyle, Borg, Falzon, & Baglioni, 1995; Dick & Wagner, 2001; Kyriacou, 1987; Kyriacou, 1998; Kyriacou 2001). In recent years, it has become a global concern, considering that about as many as one third of the teachers surveyed in various studies around the world reported that they regarded teaching as highly stressful (Borg, 1990). However, it has also been agreed that there is no single source of teacher stress, different investigators in different settings have come up with a diversity of stress factors that include students' misbehaviors and discipline problems, students' poor motivation for work, heavy workload and time pressure, role conflict and role ambiguity, conflicting staff relationships in school management and administration, and pressure and criticisms from parents and the wider community (as cited in Chan, 2006). Conclusively, it is argued that teacher education programmes have to be structured in such a coordinated manner that these stressors could be minimised and enable a teacher to understand his/her own emotions as well those of others and act accordingly to reach at desirable solutions.

On the other hand, learning is not a purely cognitive process involving solely the brain; rather it is an affective process involving the emotions. Learning with a loved teacher or a respected tutor is different from learning under a hated teacher or clinical supervisor (Gabriel & Griffith 2002, p. 221). Competent teachers committed to joint effort and teamwork with fellow colleagues, children, and adults are our requirement today. Numerous studies have identified emotional intelligence and teacher efficacy as critical behavioural factors that would make teaching effective in a school/classroom environment (Adeyemo 2005). Perry (2004, p 175) has identified emotional intelligence as directly related to the understanding of teaching motivation and self-directed learning of student-teachers. Similarly, (Lazarus 1991, p. 19) has found comprehension and application of emotional intelligence as essential components of successful teaching. In Lazarus' opinion, understanding and managing by balancing (not suppressing) one's own emotion with that of others is vital for all teachers. (Nelson, Gary & Nelson 2005, p.13), has observed that an emotionally intelligent teacher would learn and apply emotional intelligence skills like stress management, self-esteem, confidence and positive personal change, decision making, leadership, assertion, comfort, and commitment to raise the quality of education. Studies have also reported that teachers who understand and improve their emotional intelligence are able to develop professional and personal strength as well as resolve their failings. Therefore, possibly, different professions require different emotional intelligence levels and to be successful in the teaching profession a teacher needs to have high emotional intelligence. (Bansibihari & Pathan 2004, p. 29). However, emotional intelligence is crucial in order to

function effectively in a classroom as the learners in a classroom are also human beings with emotion.

Educationists are also of the view that academic brilliance of a teacher without emotional intelligence will not help him/her to achieve success in teaching (Dash & Behera 2004, p. 2). Upadhyay (2006, pp. 38-39) studied the personality of emotionally intelligent student-teachers on a sample of 78 student-teachers and found that high emotionally intelligent student-teachers were more confident, persistent, supportive, enthusiastic and divergent as compared to the less emotionally intelligent student-teachers. Similarly, Mishra (2006, p.41) who studied the teaching-work motivation among emotionally intelligent student-teachers found that the less emotionally intelligent student-teachers had less teaching work motivation and vice versa. Moreover, Behera (2010) found the group of teachers with high level of emotional intelligence to be better in teacher effectiveness in comparison to the group of teachers with moderate and low level of emotional intelligence.

Eventually, it is very clear that integration of emotional intelligence is fundamental to any teacher education programme, as thought and emotional processes are inextricably linked with each other and help teachers in analysing attitudes, feelings and behaviour at the intrapersonal as well as interpersonal levels (Gardner, 1993; Goleman, 1995; Nias, 1996).

Studies counsel further that in addition to I.Q and E.I; S.I needs to be addressed immediately as spirituality is necessary for discernment in making spiritual choices that contribute to psychological well-being and overall healthy human development. Certain spiritual beliefs and practices are positively associated with physical and mental health (Murphy & Donovan, 1999; Richards, 1999; Shapiro & Walsh, 1984; Walsh & Vaughan, 1993; Vaughan 2002; Wilber, 2000). According to Goleman and others, different kinds of intelligence are associated with different areas of the brain. Although little research has been done to isolate areas of the brain associated with spirituality, numerous studies in meditation research indicate that significant physiological changes result from even limited practice (Murphy & Donovan, 1999; Shapiro &Walsh, 1984; Walsh & Vaughan, 1993). Studies that measure the effects of intensive, long-term practice point to significant psychological benefits in addition to deepening emotional and spiritual sensitivity. Nevertheless, it has been considered that human affection, or compassion, is the universal religion. Whether a believer or a nonbeliever, everyone needs human affection and compassion, because compassion gives us inner strength, hope and mental peace. Thus, it is indispensable for everyone (as cited in Grey, 1998, p. 177). However, it is assumed that spirituality can decide teacher's moral development and ethical behaviour. Ethics in a teacher is linked to the highest level of guidance such as the spirit of love, joy, peace, patience, gentleness, faith, goodness and self-control to carry out his duties honestly. (Anastoos, 1998; Wilber, 2000). A teacher can attribute to students as a

spiritual, emotional, intellectual, dynamic and creative human being. On the contrary, despotism or tyranny of a teacher makes a student stressed which is against the norms. Hence, teachers must practice moral values all the time in and out of the school. This will help in moulding a virtuous generation of youth. Zohar and Marshall (2000, p.17) are of the opinion that spiritual intelligence is just like a platform needed to operate human brain and emotions effectively. This implies that with high spiritual intelligence, a teacher at first will be able to control his/her own emotions well, and later inculcate good thinking in his/her students. The purity of one's heart may cause one's mind to control his/her actions.

Morality or spiritual intelligence is also a key element in providing guidelines towards individual's achievement. One's level of intelligence does not depend only on his level of intellectual and emotional intelligence; it also depends on his spiritual intelligence which is seen as the element that could influence his level of achievement. Spiritual Intelligence is capable of making a student a cultured being (Saidy *et al.* 2009). Saidy sees spiritual intelligence as very much required along with emotion and intellect in order to make a student a refined citizen. A good and pure spiritual posture will cause one to have a deep desire to achieve a particular wish and this will encourage him or her to work hard to achieve his or her dreams. Therefore, a student who wishes to master language skills well should increase his or her level of spiritual intelligence. With high spiritual intelligence, students could avoid negative attitudes, shed their laziness, and stay away other emotional disturbances that would obstruct their ambitions. The prime responsibility of a teacher is to produce good and faithful people who will steer the nation to further prosperity. Hence, an individual's morality is very much related to his emotions and they work in coordination. Therefore, it is necessary to integrate spiritual intelligence (S.I) as a core component in teacher education programmes. However in terms of intelligence, it would seek to integrate the emotional intelligence with the rational intelligence and subsume them to the spiritual intelligence.

Based on the facts, ideas and empirical evidence discussed above the conceptual frame work of holistic approach in teacher education curriculum is highlighted in the subsequent pages. Fundamentally, this frame work has been embedded with three basic psychological constructs – IQ, EI and SI.

Intelligence Quotient (IQ) is predominantly cognitive with little or no concern for emotional and motivational components of behaviour. Therefore, intelligence may be defined as yardstick to measure one's capacity to understand, learn, recall, think rationally, solve problems and apply logically what one has learned. Two basic components can be deduced from the above-stated activities which are knowledge and power of reasoning. Traditionally, these two components were considered as essential factors for success in any

profession but over the last few years it has been recognised that emotional intelligence and spiritual intelligence are more contributive than these two components (Goleman 1996, p.110; Mahajan 2003, p.212).

Emotional Intelligence (EI) is the ability to perceive and express emotion, assimilate emotion in the thought, understand and reason with emotion in the self and others (Mayer and Salovey 1997, p.4). However in the present paper, the term "Emotional Intelligence" includes dimensions like self-awareness, self-motivation, empathy, and social skills like conflict management.

Self-awareness: this component of emotional intelligence emphasises the observation and recognition of one's ego and feeling. It enables, for example, a teacher to answer questions like: Who am I? What am I doing? What is my responsibility? Therefore, a teacher should be familiar with his self; be competent enough to build up self-control and self-confidence; and be able to express his feelings in a teaching-learning environment quite judiciously. As a result, the learner will be able to know the sequential relationship between his thoughts, feelings, actions and reactions and how these four aspects together lead to self- awareness.

Self-Motivation: this dimension mainly helps to maintain zeal throughout the long process of hard-work involved in problem solving. As teaching involves difficult tasks, a teacher must optimistically and uncomplainingly strive to accomplish his personal as well as common goals in spite of obstacles and setbacks.

Empathy: people with empathy are attentive to emotional cues. They listen well, show sensitivity and understand others' perspectives and are willing to help. A teacher has to be kind and considerate to his students' feelings and concerns as teaching involves active interaction between the teacher and the student.

Social Skills: people with social skills are able to control and channelise the emotions of other people; they are capable of complex strategies to build up consensus and support. Such social skills have to be included in our teacher training curriculum so that the teachers will be ably doubling as conflict managers. Lord Shiva is known for managing the un-manageable: he had *Nandi* (the bull), lion, peacock, rat and snake in his *darbar* (palace). These were enemies to each other, but lived happily in the Lord's *darbar*. A school today is like Shiva's darbar consisting of children from diverse ethnic groups based on religion, caste, creed, sex and ability. A teacher needs to possess the required social skills to gather these divergent children into a homogenous group.

Spiritual Intelligence (SI) is one of several types of intelligence and it can be developed relatively independently. Spiritual intelligence calls for multiple ways of knowing and for the integration of the inner life of mind and spirit with the outer life of work in the world. Like emotion it has varying degrees of depth and expression. It may be conscious or unconscious, developed or undeveloped, healthy or pathological, naive or sophisticated, beneficial or dangerously distorted (Vaughan 2002, pp.16-17).

According to Oxford Advanced Learner's Dictionary, spiritual is something abstract concerned with the human mind, feelings and character, rather than the body or physical things. It is, thus, something that can only be felt in the hearts and minds of men and women but not seen or touched. Further, spiritual intelligence can be defined as the faculty with which we access our deepest meanings, purposes, and highest motivations (Zohar & Marshall 2000, pp.45-49). Eventually, spirituality involves first the highest levels of any of the developmental lines, for example, cognitive, moral, emotional, and interpersonal; second, spirituality is itself a separate developmental line; third, it is an attitude (such as openness to love) at any stage; and fourth, it involves peak experiences, not stages. An integral perspective would presumably include all these different views and others as well (Wilber, 2000).

Finally the chief idea has been drawn from Danah Zohar's (2005) thinking on the principles of spiritually intelligent leadership. Primarily, an attempt has been made to find out how a teacher as an effective facilitator of knowledge construction could potentially be rich ethically and spiritually by maintaining principles such as: Self-awareness — knowing what he/she believes in and value, and what deeply motivates him; Spontaneity — living in and being responsive to the moment; Being value-led — acting from principles and deep beliefs, and living accordingly; Holism — seeing larger patterns, relationships, and connections; having a sense of belonging; Compassion — having the quality of 'feeling-with' and deep empathy; Celebration of diversity — valuing other people for their differences, not despite them; Field independence — standing against the crowd and having one's own convictions; Humility — having the sense of being a player in a larger drama, of one's true place in the world; Tendency to ask fundamental 'why?' questions — needing to understand things and get to the bottom of them; Ability to reframe — standing back from a situation or problem and seeing the bigger picture; seeing problems in a wider context. Positive use of adversity — learning and growing from mistakes, setbacks, and suffering; Sense of vocation — feeling called upon to serve, to give something back (Zohar, 2005). However, it can be asserted that a person with a pure heart will be able to control all his actions. In nutshell, spiritual intelligence is comprised of eleven major components — self-awareness, spontaneity, being value-led, holism, compassion, celebration of diversity, field independence, humility, tendency to ask fundamental 'why?' questions, ability to reframe and sense of vocation. Spiritual dimensions of a teacher cannot be ignored in the present educational context as spirituality helps to reduce stress, expand mental horizon and restores the balance between the head and the heart, the intellect and the instinct, knowledge and emotion.

How Can We Integrate IQ, EQ and SQ: some Suggestions

1. It is said that the three formative components of Bharat are *Bha-Bhava*, *Ra-Raga* and *Ta-Taal.*

These three cardinal principles are also the essence of Bhajan, Kirtan and Mantra. These three artistic mechanisms are anticipated to extinguish negative qualities, develop positive thoughts and enlighten the inner consciousness by sowing the seeds of spirituality within the individual. Besides, these can upscale his wisdom. It is common observation that many students murmur some sweet songs while solving difficult mathematical problems. This simple practice gives them *anand* or real pleasure as well as raises their mental health. Thus, whether it is Bhajan, Kirtan, Mantra, Drama, Role-play or Puppet-show, it influences feelings, relationships and problem-solving. Hence, self-management programmes have to focus on co-curricular activities.

2. Poems, prose and stories based on different emotions need to be analysed by the trainees as they need to critically analyse the different emotions and feelings of students before starting the instructional process in the class and along with this all teacher-trainees have to deposit some charts and models depicting different emotions and feelings related to the subject-content areas. As a result of this practice, they will be able to identify the emotions of their students easily. In addition to that an interactive session between local performing artistes and teacher educators/ teacher trainees has to be organised once a month.
3. Teacher-educators who are warm, genuine, and empathic are best able to engage the teacher trainees in the change process. Therefore, teacher-educators need to be selected not by merely testing their cognitive abilities but by testing their affective as well as spiritual competencies. It has also to be ensured that they make use of these abilities when working with the teacher-trainees.
4. Provision of positive classroom climate and use of relapse prevention would help teacher-trainees to learn from their mistakes and prepare themselves for further exercises if they felt emotionally supported by their teacher-educators, administrators and higher authorities of the institute as well as the class room context.
5. Tentative strategies have to be listed on how to manage different conflicts in different situations like the use of live or videotaped models that would clearly show how different conflicts are being managed in different realistic situations. This strategy will lead the teacher-trainees to study, analyse, and emulate the models. Apart from it, a list of films - documentaries and feature films - that promote the values of justice and peace has to be compiled.
6. Peer meditation and conflict resolution techniques must be inculcated by introducing Yoga as

a core subject along with provision of giving first hand experiences related to the specific emotional situations and programmes and lessons on stress management, self-control methods, parenting skills need to be imparted by organising summer training courses.

7. Time should be allotted in the time-table for practising skills/ qualities like affection, warmth, caring and kindness for children by creating anger and stress management groups

Conclusion

Teacher is a responsible individual with extraordinary capabilities. He/she can mould students to be better human beings by bringing out the best in them. Teachers today have greater responsibility of developing the human capital of the country to face the increasing challenges thrown to them. As pointed out by Darwin, only the fittest will survive. To make his/her pupils good citizens, a teacher has to develop superior qualities in every student and contribute to nation building. Thus, teachers play a pivotal role in nation building. They have to nourish the young minds with higher abilities. This is not an easy task as only the best can bring out the best in others. Quality teachers cannot be produced instantly. This needs a coordinated approach in which general intelligence, emotional intelligence and spiritual intelligence have to be integrated. This, in turn, will make us meet the challenges of the country in particular and humanity in general.

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Culture and Development
Implications for Classroom Practices*

T.S. Saraswathi**

Abstract

Theoretically, psychological differences among human groups can be accounted for in three distinct ways: (a) exposure to different local ecological conditions may cause underlying psychological mechanisms to be expressed differently (evoked culture); (b) people may acquire psychological tendencies through socialisation and enculturation (cultural transmission); and (c) population differences in gene frequencies may be associated with particular behaviour tendencies (non-cultural genetic variation). An understanding of the role of culture in development of psychological processes has significant implications for teacher training and classroom practices. These include: (a) the fallacy of stereotyping and treating groups as monolithic; (b) viewing culture as immutable and essentialised, contrary to evidence of change amidst stability; (c) the constraints of evaluative comparisons and the importance of tolerance for differences; and(d) greater appreciation of the richness of cultural differences which can serve to enhance rather than diminish the classroom climate. During the past four decades, cross-cultural and cultural psychologies have built a rich landscape of knowledge related to the role of culture in human development. While cross-cultural psychology views culture as an independent variable that influences behaviour and development, cultural psychologists have viewed culture and individual activity as co-constructive. Cross-cultural psychology in particular has sought to: (a) test existing theories in various cultural contexts; (b) explore new cultural systems to discover psychological phenomena not available in cultures studied so far; and (c) generate a more universal theory of human development based on the first two sets of activities. The present paper will: (a) examine the nature of the construction of knowledge regarding culture and development;

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and (b) profile the existing knowledge base regarding cultural variations and similarities in various domains of human functioning. A significant portion of the information is drawn from a recent review by Heine and Norenzayan (2006) with their kind permission to use their review with due acknowledgement. The main thrust of the arguments will be on the explanations offered to understand cultural group differences and their implications for classroom practices in multi-cultural settings.

Culture as Man-made Environment

There are varied definitions of culture in the existing literature. (Berry, Poortinga, Segall, and Dasen, 2002). One comprehensive and classic definition is presented here to highlight the fact that culture is an integral part of human development.

"Culture consists of patterns, explicit and implicit, of and for behaviour acquired and transmitted by symbols, constituting the distinctive achievements of human groups, including their embodiments in artifacts: the essential core of culture consists of traditional (i.e. historically derived and selected) ideas and especially their attached values; cultural systems may be, on the one hand, considered as products of action, and on the other, as conditioning elements of further action" (Kroeber and Kluckholm, 1952, p.181, cited in Berry *et al*, 2002).

Culture is seen as 'in here' (in our heads and the result of individual activity (co-constructive and participatory) or as 'out there' (outside our skin) and as the antecedent of behaviour. The former is the basic assumption of cultural psychology while the latter characterises cross-cultural psychology. The rich literature from both these schools of thought have contributed to and enhanced our understanding of the interface between culture and human development.

Goals of Cross-cultural and Cultural Psychology

The goals of cross-cultural psychology are (Segall, Dasen, Berry, and Poortinga, 1999):

1. To transport current hypotheses and conclusions about human behaviour to other cultural contexts in order to test their validity.
2. To explore new cultural systems, to discover psychological phenomena not available in the first culture.
3. To integrate psychological knowledge gained from the first two activities and to generate a more open human psychology that would be valid for most if not all people.

Cross-cultural psychology adopts a positivistic paradigm and emphasises derived ethnic and cultural universalism even while accommodating cultural relativism in some respects.

Cultural psychology, on the other hand, aims to explicate how culture and individuals constitute or construct each other. The emphasis in cultural psychology is not on the search for universalism as much as in the cultural activity of meaning making, hence on intersubjectivity, interpretation and cultural relativism.

In the following sections, we will summarise how the landscapes of knowledge regarding culture and human development have been constructed, and the major substantive ideas that have emerged there from.

The primary source of the substantive information is based on Heine and Nozenzayan's (2006) article entitled "Toward Integration: Cultural Psychological Sciences." (With kind permission to do so dated, 1 November 2008). Other specific references and anecdotal examples have been added by the present author.

Two Stages of Scientific Inquiry

Most scientific inquiry proceeds through two stages. In the first stage, new theories that facilitate the observation and discovery of interesting phenomena are proposed, and various methodological confounds ruled out. In the second stage, the inner workings of phenomena are more precisely explained, and underlying mechanisms are identified. In cross-cultural/cultural psychologies, Stage I research typically propose theories that predict cultural differences, in particular, psychological processes, whereas Stage II research seeks to more precisely explain the observed cultural differences by identifying the critical variables that account for them. The two processes however, are not mutually exclusive and often overlap each other.

One of the major criticisms in the discipline has been regarding the restricted data base that has been used to understand basic psychological processes. Research has predominantly used Euro-American college students as subjects. Yet, claims have been made about universality in basic psychological processes without necessarily testing the validity of such a claim. Hence, *enhancing external validity* becomes an important goal of Stage I inquiry. Of course, there remains the trade-off between maximising internal validity with adequate controls thereby restricting *generalisability* and enhancing the scope for external validity, thereby limiting internal validity. Even when external validity is enhanced by good cross-cultural research, one needs to bear in mind that universality may be established at various levels of generalisation and may not necessarily be universal in the literal sense of the word.

Stage I – Towards Identifying Cultural *Variations in Psychological Processes*

Stage I research also helps *identify cultural variations in psychological processes*. There are a number of rich theoretical models that allow for predictions about the extent to which various models will replicate in other cultural contexts. Pronounced and theoretically meaningful cultural differences have been found in fundamental psychological processes such as preference for high subjective well-being, the manifestation of psychological disorders, the need for high self esteem, and a preference for formal reasoning. In general, the cultural differences tend to be more pronounced in studies that compare behaviours that reflect implicit psychological tendencies and less pronounced in studies that compare

explicit self-reported cultural values. One of the important components of Stage I research has been to identify specific situations in which some cultural differences in psychological processes are made manifest. For example, middle-eastern cultures which still practise 'honour killing' are not aggressive across situations but only when their family 'honour' is threatened by an illicit relation or offensive remark by the foe. Similarly, East Asians do not always prefer intuitive reasoning strategies more than Westerners do and show a preference for formal reasoning in completing abstract tasks, even though they may choose to apply intuitive reasoning in other situations.

A related key focus of Stage I research has been to conduct a systematic series of studies to rule out competing artifactual accounts of cultural differences. Efforts to *determine the validity of cultural differences* constitute a large part of the studies that are conducted in Stage I research. (See Van De Vijver and Leung, 2000 for discussions on methodological problems related to this issue). The range of identified cultural differences in psychological phenomena has expanded in recent years aided by prominent theoretical developments such as on the prototypes of independence-interdependence (Markus and Kitayama, 1991).

As a corollary to identifying cultural differences, Stage I cross-cultural research also *informs theories about psychological universals or cultural similarities.* A significant contribution in this regard comes from anthropologists (For example, Schlegel and Barry's, 1991 work on adolescence analysing HRAF data on 186 cultures) and the classic work by the Whiting group on child training and personality (Whiting and associates, 1963). Compelling evolutionary accounts of the origin of psychological processes need to consider the adaptive value of the processes at the level of abstraction where universality is more evident, or they need to specify the conditions under which they are operating (See Keller, 1997 for discussions on the evolutionary perspectives). Work by my students in Baroda with rural and urban women revealed that the standard tools of self-esteem that focussed on an individualistic perspective yielded poor scores whereas open-ended interviews highlighted that women in these communities derived their self-esteem by the collective achievement of their husbands and children. Similarly, positive self-enhancement is derived from social (family or group) approval and appreciation rather than in terms of how one describes one's self. In fact, self praise is considered arrogance in collectivistic cultures which expect the individual to underplay one's virtues.

One of the major shortcomings of the most influential researches in cross-cultural psychology has been that it has focussed on comparisons between North Americans and East Asians (the work by Markus and Kitayama, 1991 which generated a lot of interesting research is one such example). It is very likely that other cultural comparisons may throw up demographic and cultural variables of interest. Contributions by Whiting and associates (Whiting, 1963 onwards), Cole and associates (Cole,

Gay, Glick and Sharp, 1971, and later work) and Segall, Campbell and Herskovits (1966) are excellent examples of potential contributions from work with other cultures. Another often cited criticism is that cultural psychological research has been largely limited to exploration of the extent to which theories developed in the West generalise to non-western cultures. Contributions from cultural psychology (Shweder, 1990) and indigenous psychology (Sinha, 1997) address this shortcoming.

There is a pressing need to shift from exploring whether phenomena identified in the West generalise elsewhere to exploring whether other indigenously identified phenomena generalise to the West.

Ramanujan (1990) and Sinha and Tripathi (1994) discuss the example of 'tolerance for contradiction' observed among Indians who can co-exist with science and religion or science and astrology with no obvious cognitive dissonance in their individual lives. It would be interesting to see whether such a tolerance generalises to the Euro-Americans. Similarly, there has been anecdotal evidence highlighting the prevalence of mathematical concepts in the everyday life of south Indians through close contact and familiarity with classical music wherein the numerical count in the rhythm is critical as also the practice of decorating the front yard daily with drawings of intricate designs that call for an appreciation of arithmetic and geometric concepts. The perceived superiority of South Indians of both genders in mathematics both among resident Indians and Indian diaspora could lead to interesting cross-cultural research.

Stage II – Towards Explaining Cultural Differences

Stage II research seeks to explain how cultural differences in psychological processes are produced and sustained. Cross-cultural research enables the unpackaging of confounding variables. Cole and his associates' study of age, schooling and cognition in Liberia (1971) is an excellent example of segregating the role of schooling and age, something which cannot be done in cultures with universal and compulsory schooling. Absence of gender differences in mathematical abilities among South Indians and hypothesis related to everyday experience in mathematics could lead to unpackaging situational and contextual variables.

Several interesting methodological strategies have been used to ascertain the reasons for cultural differences and explain them.

1. Mediational Strategies

A frequently used strategy is to identify cultural differences on two measures and then examine whether the cultural differences in the relationship between the two measures is in the predicted direction. As the reader is well aware, there are inherent limitations with such correlational strategies, particularly with data based on self reports. Cultural variables are often not transparent and self evident to the participant who may have been encultured in the said beliefs and practices without even being

conscious of them and articulate about it. Further, correlations do not clarify causal relations nor the direction of the relationships observed leading only to tentative inferences that need further testing.

2. Experimental Strategies

An interesting strategy is to prime constructs hypothesised to vary across cultures and then examine whether such priming can lead people from one culture to respond more like those of another culture in select experimental tasks. Work in the area of independence-interdependence is of particular interest.

A variety of other experimental or quasi-experimental approaches have also been used to identify mechanisms underlying cultural differences. One approach is to identify key experiences that vary across cultures and measure whether greater exposure to these experiences leads to change in psychological variables. For example, training in Oriental or Ayurvedic medicine could foster a holistic way of thinking, with longer periods of exposure likely to impact more.

New research has gone beyond independence-interdependence to examine additional cultural affordances that may explain cultural differences in cognition. Heine and Norenzayan (2006) cite the study by Miyamoto, Nisbett and Masuda (2006) which showed that (a) randomly sampled Japanese scenes were visually more complex than randomly sampled American scenes (as judged by both objective and subjective measures); and (b) both American and Japanese participants exposed to Japanese scenes were more likely to show holistic processing in a subsequent task than were participants exposed to American scenes.

Another useful approach is the triangulation strategy. The procedure involves first examining a psychological phenomenon in two cultures A and B that differ in a theoretically predicted direction. The second step involves cultures B and C (a third culture) wherein B differs from C in another psychological characteristic, but C and A share a commonality. Heine and Norenzayan (2006) discuss an interesting example of similar ecological reasoning among Mayan villagers and Americans with expertise in biology (such as seen in park keepers) but both differed from other Americans who were not exposed to ecological reasoning that relies on knowledge about the inter relations among plants and animals.

Although still in its infancy, Stage II research has deepened cross-cultural psychologists' understanding of psychological mechanisms by broadening the horizons in the search for reasons for cultural differences.

Explanations for Group Differences

Theoretically, psychological differences among human groups can be accounted for in three distinct ways (after methodological artifacts have been ruled out): (a) exposure to different local ecological conditions may cause an underlying psychological mechanism to be expressed differently (evoked culture); (b) people may acquire psychological tendencies through social learning processes that are biased in favour of learning from in-group members (transmitted or epidemiological

culture); or (c) population differences in gene frequency may be associated with particular behavioural tendencies (non-cultural genetic variation). Each of these is explained briefly in the following section.

A. Evoked Culture

The often cited example in cross-cultural psychology of evoked culture pertains to food sharing (Berry, 1966). Where foraging and hunting success is highly variable across time, egalitarian norms for food sharing and sanctions against hoarding are strong; this is not the case where supply of food is relatively stable such as in sedentary agrarian cultures. The other example relates to mate selection where even today, in societies where infant and maternal mortality are high and where there is need for several children to assist the parents in running a farm or assisting in earning a livelihood, robust women who are physically strong and hold promise for hard work and good reproductive prospects are preferred over thin and delicate looking females (see Buss et al, 1990). Environmental factors that evoke holistic cognitive tendencies among Japanese were referred to in the previous section.

B. Transmitted and Epidemiological Culture

Cultural transmission is the primary engine that produces the bulk of stable variation across groups. Transmission is through socialisation in the family and in other socio-cultural settings, enculturation through total cultural immersion, and through formal and non-formal education. It is useful to distinguish between evoked and transmitted culture as explanation of cultural differences; yet, in actuality, these two processes reflect a continuum rather than a dichotomy. One possibility is that ecological differences evoke initial responses that vary adaptively across different environments, but then these responses are picked up and perpetuated even when the initial conditions are no longer present. A prominent example in the Indian setting is the practice among North Indian Hindus of a strict taboo regarding marriage alliances among families residing in seven villages surrounding the bride or groom. Such a practice (which is in contrast to the encouragement of cross cousin marriages in Southern India) initially aimed at prohibiting marriages among close relatives who inhabited villages close by since that could result in inheritance of genetic disorders running in the family. This practice continues even today when the demographic distribution of families has changed drastically, and the strict taboo continues, and often, one reads of honour killing by parents or close relatives when cousins fall in love, elope and marry.

Cultural psychologists could take advantage of the naturally occurring 'experiments' to isolate the effects of transmitted culture by comparing groups living in similar environments but with different beliefs and practices (See review of work in this area by Camilleri and Malewska-Peyre, 1997, and Berry and Sam, 1997). One is often surprised to note the extent to which cultural differences are preserved, for

example, among Indians who migrated to Africa some three to four generations ago and the Indian Diaspora in the USA which consciously preserves its cultural heritage in the family and home settings, even while integrating with fellow Americans in the work setting.

C. Genetic Variation as Explanation for Psychological Differences

A controversial explanation for psychological differences between cultures is that they could derive from genetic differences. This possibility should be examined with care, given the unfortunate history of racism and conquest that has often accompanied biological explanations of group differences. The words 'savages', 'primitive', 'barbarian' and so on to describe cultures different from those in the West were in usage until recently. Behaviour geneticists have repeatedly warned about the need for caution in inferences regarding genetic differences between cultures as often 'the within culture' differences exceed 'the between culture' differences. Nevertheless, a growing body of research continues to identify genes that vary systematically across populations. These include genes associated with distinct blood groups, skin colour, lactose intolerance, resistance to malaria and several other characteristics. Group differences could well result from selection pressures (survival of the fittest), the consequence of thermal regulation, pathogen resistance, diet constraints and the like. The Parsee (Zoroastrian) community in India offers excellent opportunities for genetic research, having preserved its genetic identity through monitored inbreeding. Genes related to longevity, despite the prevalence of several genetically inherited diseases, have been investigated as reported in a recent seminar organised by the PARZOR group at Bombay in December 2008. Most psychological traits and tendencies are unlikely to meet the stringent criteria for indicating genetic inheritance. What would be useful to understand is how cultural practices have sustained the influence of the genome. Empirical results typically show that immigrants and their descendents exhibit psychological processes intermediate to those of their heritable culture and their cohorts in the host culture, which evidence is consistent with a cultural, rather than genetic explanation of group differences.

Proximal and Distal Explanations of Cultural Differences

Distal explanations are historical analyses that involve social, economic and geographic factors that may have given rise to culturally stable patterns of thought and behaviour. Proximal explanations, on the other hand, involve individual level psychological processes including beliefs, knowledge and experiences with the world that have been shaped by these historical developments, and could be directly implicated in cultural differences in psychological characteristics. The former deals with culture level analysis, and the latter, individual level of analysis. An excellent example of distal explanation is seen in the 1991 work by Schlegel and Barry who examined the

secondary data from Human Resource Area files (HRAF) from 186 pre industrial cultures, to provide an anthropological account of adolescent development across cultures. A contemporary example of proximal explanation could be the perseverance of 'honour culture' in societies where men and women are executed on charges of falling in love with a stranger, an enemy's kin or eloping with an already married person, thus, bringing the family to shame. A historical precedent that evolved to preserve the group's identity and maintain taboos prescribed by the culture have sustained in practice even though the said taboos are irrelevant and serve no purpose today.

Implications for Classroom Practices

The rich data on cultures assembled by Cross-Cultural and Cultural Psychology over the past four decades have several implications for classroom practices, especially in a multi-cultural society like India where caste and religion play an important role in social interactions. Key ideas that emerge from work in this area are listed below and offer a base for reflection and practice.

- We tend to treat groups as monolithic and generalise our stereotypes regarding groups to individual pupils. For example, we take it for granted that children of a particular caste are dull and incapable of learning abstract concepts, or that members of some groups are not clean, or others whose ancestors were dacoits, will inherit the tendency to be thieves. Each one of these beliefs that openly affects classroom practices can be challenged and proved as unfounded.
- We tend to view culture as immutable and essentialised. Cultural studies as well as studies in human development in any given culture show clearly that both stability and change are characteristics of both cultures and individual ontogeny. In a society where caste prejudices are deeply rooted, change can occur in first generation learners only when teachers believe that neither culture nor individual behaviour are static. There is adequate data to support such a claim.
- Another malaise that plagues our classroom practices in the evaluative comparisons rewards children by virtue of their class, caste and occupational background advantages at the cost of those who enjoy no such privileges. Developing an attitude of tolerance for alternative life styles, belief systems and language forms pays rich dividends in terms of providing an enabling environment for learning, particularly for first generation learners from the lower castes.
- Cross-cultural psychology also offers us observations on cultural prejudice, culture blindness and multi-culturalism as options in classroom practices in a multi-cultural society such as ours. Needless to emphasise that for both teachers and pupils, a positive attitude towards multi-culturalism pays the best dividends.
- Finally, experiences in a multi-cultural classroom can lead to

greater appreciation of cultural differences in a complex society such as in India. An appreciation of differences when fostered in children by a teacher, who can transcend differences and see the richness in the diversity, can help nurture a generation that is both tolerant and appreciative of diversity in religions, ethnicity, and language as we do of cuisines, textiles, and music and dance forms.

In conclusion, I wish to emphasise that there are ethical issues involved in how we structure the landscape of knowledge, especially in the social sciences. Theoretical ideas often get *rectified*, and are reflected most clearly in the classroom teaching-learning situations, wherein as teachers, we engage both students and ourselves in shaping a shared understanding, reflecting either our prejudices or our tolerance for alternative world views.

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Psychological Stress and its Relationship with Achievement of Science Students of Kendriya Vidyalayas

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Abstract

This study attempts to assess the psychological stress and its relationship with achievement among senior secondary science students of Kendriya Vidyalayas. They were administered Psychological Stress Scale for Science Students developed by the researcher, which measures 12 dimensions of psychological stress. Results show that the stress dimension associated with examination and achievement is the major factor causing stress, while health factors cause the least stress. Achievement of science students was significantly and negatively related with the content of science while positive significant relationship was observed with dimension of society.

Introduction

Stress is an unavoidable phenomenon in every aspect of human life. It is generally an emotional imbalance which may be due to several reasons such as tests, papers and projects, competitive nature within our chosen field, financial worries about school and future prospects. It was found that science students are more passionate than arts students. They are more ambitious and need proper guidance in this particular stage. Teenagers, especially those who are students, always face learning problems, career management and also problems in solving personal and social matters. Also, the pressure to earn good grades and to earn a degree is very high.

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Stress mainly comes from academic tests, interpersonal relations, relationship problems, life changes, and career exploration. Such stress may usually cause psychological, physical, and behavioural problems.

Further, Science students have many obstacles to overcome in order to achieve optimal academic performance as compared to Humanities students. A number of researches have been done looking at the correlation of many stress factors that science students experience and the effects of stress on their academic performance. Those studies carried out with medical students show that in the academic area, heavy work load, examinations and meeting deadlines for assignments were the most common causes of stress (Evans & Fitzgibbon, 1992; Kohn & Frazer, 1986). This is further supported by Ratana Saipanish (2003) who conducted a study on 686 medical students in the Faculty of Medicine; Ramathibodi Hospital, Thailand. Obviously, test or exam anxiety is one of the main causes of academic stress and most university students seem to be more emotionally vulnerable due to examinations. Increased anxiety from tests has a debilitating effect on students' performance. When information generated by worrying about the test reduces the capacity available for performing the task, the result is that performance breaks down and the result becomes self-confirming (Fisher, 1994).

Most of the time, science students have complaint of dwelling in between their efforts for better achievement and teachers'/parents' expectations. Studies in different responses to stress have been carried out in dental, medical, nursing, university and college students (Helmers, et al.1997, Henley 1998, Sinha et al. 2000, Kuruppuarachchi et al. 2002, Polychronopoulou, Argy and Divaris, Kimon 2005). Scholars in the field of behavioural science also have carried out extensive research on stress and its outcome and concluded that the topic needed more attention (Ellison, 2004). The researcher has found out that there is not much research conducted in Indian universities particularly in Western Uttar Pradesh pertaining to this issue with regard to the students of remote areas studying in Kendriya Vidyalayas. Therefore, it is time to conduct a research to examine this particular issue. In the present study, the researcher has attempted to study the psychological stress and its relationship with achievement of science students studying in Kendriya Vidyalayas of Meerut province.

Objectives

1. To study the psychological stress of science students of Kendriya Vidyalayas.
2. To study the achievement of science students of Kendriya Vidyalayas.
3. To study the contribution of psychological stress on achievement of science students of Kendriya Vidyalayas.
4. To study the relationship between psychological stress and achievement of science students of Kendriya Vidyalayas.

Hypotheses

1. There is no significant contribution of psychological stress on achievement of science students of Kendriya Vidyalayas.
2. There is no significant relationship between psychological stress and achievement of science students of Kendriya Vidyalayas.

Method

The investigators used the descriptive survey method of research for the present study.

Participants

Science students officially enrolled in 12th standard were identified from Kendriya Vidyalayas in Meerut. Using simple random sampling, 100 science students were selected, out of which information from 95 students was finally used because 5 students did not fill the scale properly.

Materials and Procedure

Psychological Stress Scale for Science Students (PSSSS) developed by the researcher was used to measure psychological stress of science students. It was structured around the 12 dimensions of psychological stress i.e. curriculum transaction in science, content of science, infrastructure for science, science teachers, peers, workload in science, examination and achievement, home and family environment, vocational aspiration, health, communication problems and society. Thus, PSSSS is a 96 – items scale with a Likert type responses format (5= Always, 4= often, 3= sometimes, 2= rarely, and 1= never). Reliability of the scale determined by split-half method was 0.96. Achievement in Science of the students was considered as the marks obtained in science subjects in 12th class board examination.

Results

To study the nature of psychological stress, all its dimensions and achievement of all the science students (N = 95), mean, and standard deviation (S.D.) were calculated. To find out the contribution of psychological stress and its dimensions on achievement of science students, Simple and Stepwise Regression Analysis was done. To find out the relationship between psychological stress and achievement of students of Kendriya Vidyalayas, Pearson Product Moment Correlation Coefficients were calculated.

Table 1
Statistics showing the nature of distribution of psychological stress and achievement of science students of KVs (N= 95)

Psychological Stress Dimensions	*Mean*	*S.D.*
Curriculum Transaction in Science	21.33	5.40
Content of Science	18.66	5.53
Infrastructure for Science	19.31	7.99
Science Teachers	21.62	7.55
Peers	17.87	5.83

Workload in Science	20.13	6.36
Examination and Achievement	22.24	6.64
Home and Family Environment	18.63	8.07
Vocational Aspiration	20.42	6.42
Health	16.26	7.04
Communication Problems	17.84	6.66
Society	16.57	6.08
Total Psychological Stress	230.92	55.95

Table 2
Statistics showing the nature of achievement of science students of KV (N= 95)

Variable	*Mean*	*S.D.*
Achievement	125.22	24.46

Mean values of the different dimensions of psychological stress varied from 16.26 to 22.24 which were of moderate level (Table-1). The mean values of total psychological stress score of all students was found to be 230.93 which was of moderate level. Further mean stress score of the students was found to be greater on the psychological stress dimension *Examination and Achievement* in comparison to all the other dimensions, whereas the lowest mean stress score of science students was found due to psychological stress dimension *Health*. It means that science students of Kendriya Vidyalayas are more stressed due to Examination and Achievement in comparison to other dimensions and least stressed due to its dimension Health. Table 2 shows that mean value of Achievement scores of science students of Kendriya Vidyalayas was 125.22.

Table 3
Summary of regression analysis for contribution of the dimensions of psychological stress on achievement of science students of KVs

Step	*Constant*	*Variable Contributed*	*Beta*	*Adjusted R2*	*Percentage Contribution*
1.	144.22	Content of science	-0.26	0.06	6.15**
2.	131.80	Content of science	-0.35	0.16	16.78**
		Society	0.34		
3.	135.19	Content of science	-0.22	0.19	19.61**
		Examination and achievement	-0.25		
		Society	0.43		
** $p < 0.01$					

Table 3 shows that contribution of psychological stress dimension content of science on achievement was 6.15%. Combined contribution of stress dimensions content of science and society was 16.78%. Combined contribution of stress dimensions *content of science*, *examination and achievement*, and *society* was 19.61%. All contributions were significant at 0.01 level. Contribution of other dimensions of psychological stress on achievement was not significant at 0.05 level.

The achievement of Kendriya Vidyalayas students was negatively and significantly correlated with psychological stress dimension *content of science* at 0.01. It was also positively and significantly correlated with psychological stress dimension associated with *society*. Relationship of achievement with total psychological stress and its all other dimensions was not significant at 0.05 level. It means that achievement of KV students is significantly and inversely correlated with psychological stress dimension - *content of science*.

Conclusion

It is apparent from the findings of this study that science students of Kendriya Vidyalayas were found to be under stress in the process of studying science at senior secondary level. Out of 12 dimensions that have been considered for taking as factors responsible for causing psychological stress, the dimension *examination and achievement* has emerged as the major factor causing stress among science students. The reason for this is very obvious. Science students as compared

Table 4

Correlation between psychological stress and achievement of KV students (N = 95)

Variables	*Mean*	*S.D.*	*Product*	*Correlation*
Achievement	127.400	18.670	------	------
Total Psychological Stress	230.926	55.955	2799682	0.048
Curriculum Transaction in Science	21.337	5.404	257261	-0.102
Content of Science	18.663	5.538	223281	-0.265**
Infrastructure for Science	19.316	7.992	236009	0.157
Science Teachers	21.621	7.556	263101	0.106
Peers	17.874	5.837	217239	0.088
Workload in Science	20.137	6.364	243480	-0.021
Examination and Achievement	22.242	6.646	267067	-0.181
Home and Family Environment	18.632	8.074	225368	-0.009
Vocational Aspiration	20.421	6.422	247568	0.036
Health	16.263	7.041	198436	0.128
Communication Problems	17.842	6.661	217412	0.124
Society	16.579	6.080	203460	0.260*

to arts students are always pre-occupied with their performance in examination because science subject is comparatively difficult to grasp and understand. There is a consistent pressure on students' mind to secure maximum possible marks in examinations. This is seen by the general mentality where even if a student achieves 90% marks, it is not considered good enough. Curriculum transaction in science, science teachers, workload in science, and vocational aspirations have also emerged as major causative factors of stress among science students. This study corroborates Janet et al. (1995) who found that 86% of the subjects reported their top stressors to be examination, amount of class work, lack of free time, long hours of study and grades. The stress resulting due to the dimension *health* is the lowest out of the twelve dimensions. The senior secondary stage is developmentally characterises as late adolescence. The developmental needs at this stage are greater autonomy and independence. Combined contribution of stress dimensions *content of science*, *examination and achievement*, and *society* was found to be significant. Negative correlation was observed between *achievement* and total psychological stress and all its dimensions except *society*, but the significant and negative relationship was observed only with the dimensions *content of science* and positive significant relationship was observed with dimension *society*. The variation over the dimensions may be due to the academic environment, academic support system, teachers and other facilities, but the psychological stress among the students may be due to their own capacity, grasping power, scientific attitude, interests etc. The findings from the present study may help in understanding and reducing stress-related factors in schooling so that students can perform better.

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Addressing the Notions of Reality, Representation and Relevance in Manipur State History Textbooks

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Abstract

In our education system, the textbook is an important aspect through which the curriculum is selected and organised. History being a dynamic subject has varying interpretations and representations. It provides us with the platform to see whether the representation is complete and question the relevance of the texts with so many realities co-existing. In this research paper, the researcher tried to construct the reality with the help of secondary sources, and then compare the representation as given in the History textbooks. The attempt to understand the relevance of textbooks was done by problematising it and studying the social conditions on the basis of which the content is selected and organised.

Introduction

Problems and issues in the curriculum could be addressed best by looking into the content taught and learnt in schools. This could take many forms, be it the hidden or the official curriculum. There can be no single definition of the word 'curriculum', but, the definitions do help us in giving various perspectives from which we can view it. According to one perspective, it is involved in selecting and organising the content which the school helps in distributing. 'Curriculum defines what counts as valid knowledge, pedagogy defines what counts as a valid transmission of knowledge, and evaluation defines what counts as a valid realisation of this knowledge on the part of the taught' (Bernstein 1973, 266). Here, the researcher is concerned more with the curriculum aspect.

This research paper intends to look into the issue, by analysing and studying the representation of the

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reality in the textbooks. The content in the texts is generated by a select group of specialists, who select from a 'commonwealth of knowledge and skills' (Stenhouse, 1975, 6). Knowledge could exist in the form of 'academic disciplines' in schools, which are usually 'defined and defended by boundaries, demanding recognition and validation, determined by groups of scholars' (Musgrove, 1968, 101).

It is a product as well as a determinant of our social interaction because the people who are involved in the selection of the curriculum intend to 'transmit, learn and share' the dominant culture (Parsons, 1952, 15). Schools generally reflect the values of people outside the schools, mostly of the dominant group. This 'referenced groups' are looked upon, copied and imitated, and used as a standard for comparison. So, in a way, education gives learners experiences outside their own culture. This might result in less understanding as some people might not be able to relate and identify with what is given to them as the content. The 'given' reality might not be similar to their 'own experienced' reality.

One of the most common ways for the students to meet the curriculum is in the form of textbook. In fact, textbook has become the most important aspect of our school system with all the teachers and the students tied to it. It is prescribed and is one of the tools of the state's hegemonic control. It is also a powerful tool of socialisation – conveying knowledge in the forms of ideas, information and skills. Its selection is influenced by the socio-economic, political and cultural environment of the time. It may convey variety of signals in the form of subtle references, omissions, use of certain languages or repeated mentions. 'The textbook is part of a package of teaching-learning material that could be used to engage the child in active learning' (NCF 2005, 38). But, the textbook tends to dominate the curriculum in most schools.

Kumar (1988) has traced the root of the 'textbook culture' to the early nineteenth century, when the East India Company was trying to establish an education system. The education system came to be governed by the bureaucracy in all aspects - syllabi, content, teachers' training, and examinations. Colonial education aimed at morality and to develop submission of Indians to colonialism. The knowledge of the minority or subordinate class (Indians) was considered symbols of ignorance and hence, irrelevant to education. The only valid knowledge was one which 'fulfilled the agenda of acculturating the Indian student in colonial perceptions and attitudes'.

The researcher, too, agrees that the practice hasn't changed much as post-independence curriculum continues to be textbook bound. The processes of selection and representation of knowledge in the curriculum continues to be influenced by the tug-of-war between local vs. national concerns. The giving of the monopoly rights for the publication of textbooks, at least till the elementary grades, to the State corporations have been a major shift. 'The subversive role of the textbooks has not only distorted its academic purpose but also allowed it to be used as a

means of political and ideological propaganda by the state' (NCF 2005, 9).

Need for the Study

Taking a cue from Postmodernist Theory, the researcher has tried to build upon some alternatives, i.e., mini or local narratives, rather than grand narratives: '. . . the use of accounts focussing on a particular setting and with limited generalisability over space and time' (Alvesson, 2006, 32). Postmodernist politics offers a way to theorise local situations as fluid and unpredictable, though influenced by global trends. They believe truth is relative and it is for each individual to determine the truth for himself. They are sensitive to the socio-economic equality of all people, without any boundaries. The voice of even a single person is given space.

'People, who were not represented earlier, are today conscious of the importance of identity in the acquisition of political power necessary for the reasserting of their economic rights, cultural rights and social dignity' (Nambissan, 2000). The initiation by people, who were earlier not represented, to write their own history and represent themselves could be a result of this consciousness. The deliberate emphasis on their own history in the school textbooks could be an assertion of their identity, as in the History textbooks in Manipur. There should be a close connection between the needs of the society and what is being taught in the schools. But, at the same time, we need to question the relevance of the knowledge which is socially constructed and determined by the needs of a select group of people. Education has facilitated this awareness immensely. Here, we can acknowledge the role played by schools and the textbooks in (mis)representing the diversity of life experiences of people of different backgrounds within Indian society.

The main aim of any curriculum development is to help students understand the realities, in terms of their society, polity, economy, history, culture, and so on. But, we continue to be exclusive of the diversity that exists in our country. 'The extent to which the curriculum will reflect the structure of interests of different social groups will depend on the nature of relationships among the groups' (Kumar 1989, 70). People in power are likely to get larger representation; whereas, people lacking power may either get little or no representation.

The reason for choosing History textbook was because the researcher felt that the varied interpretations and representations make it a dynamic subject. Also, we are only aware of the history of the so called dominant group, we virtually tend to overlook the history, in terms of this study, of region and people who do not represent the so called dominant group. The history and people of South India and North - Eastern India are not given much representation in the national history. The researcher interest is to look into the fact that the people of Manipur have tried to assert their identity through the very textbooks which had refused to represent them.

Delimitations

1. The study is restricted to the State of Manipur.

2. The study is restricted to History textbooks of Classes VI - VIII, academic year 2008 – 2009.
3. Only the perspective of teachers of Social Sciences is taken.

Theoretical Framework

This research work deals mainly with the analysis and study of historical texts. The researcher intends to deconstruct the text and problematise the representation. The reality and culture of the dominant group is the one which gets represented, wherein, we get a misrepresentation of reality (Harris, 1979). The notion of reality is inherent in the processes of social interaction and our everyday life (Berger and Luckmann, 1966). The individual and society are in a dialectical relationship with each other, influencing and shaping each other's existence and subjective understanding. Hence, the researcher is addressing the notion of reality of Manipur's History before addressing the representation in the state History textbooks.

The History of Manipur is sought to be understood using secondary sources (Singh, 1998; Kamei, 2006). The polity, economy, society and culture are studied, along with the different ethnic groups living in the state. The reality of the state would be incomplete without the discussion of insurgency and the struggle for one's identity. Hence, the issue of insurgency, entangled with ethnicity and identity politics is being understood (Ghosh, 2003; Kumar, 2005; Nunthara, 2005). Also, the presence of insurgency in the society and its influence on the learners and schools is seen from the teachers' perspective, citing the problems and dilemmas faced in their day-to-day working. The reason for taking the perspective of the teachers was because the researcher is trying to understand the reality and its influence on the schools and the learners, and we need to acknowledge the important role of the teachers in transmitting, mediating, negotiating and opposing the given knowledge (Apple, 1993).

The search for one's sense of self arises when there is a misrepresentation or distortion of the reality one actually experiences and one is supposed to experience. The North-Eastern region is officially a part of India, but, the people in the region continue to be physically and emotionally isolated from the rest of the country. The merger of Manipur with India is believed to be a forced merger by the inhabitants of the region, as cited from the official accounts (Singh 1998). The gap between a regional and a national identity continues to haunt India in most other states of India as well. The image of a rising nationalist consciousness in the colonial period is supposed to be a part of the lore of the Nationalist Historiography, and nothing more (Khilnani, 1997). The relationship between nation and region is hard to understand, but both continue to co-exist. Within Manipur too, the presence of different ethnic groups continues to pose difficulty for the search for a Manipur identity (Kamei, 2006). The search for one's identity on the basis of one's ethnicity led to the growth of regionalism and the many self-determination movements. But, the pull of economics and development has led the Centre to acknowledge and

recognise the culture of various regions. Hence, a balance being maintained and the diversities being respected to an extent.

Schools are the sources of secondary socialisation (Parsons, 1959). In our society, the social identity of the learner supposedly determines their learning (Kumar, 1989). The learner always has to learn the knowledge and culture of the dominant group. The hegemony is maintained by the given knowledge which is to be transmitted, learned and shared (Parsons, 1952), generated by a select group of academicians, who have specialised in their respective fields (Stenhouse, 1975). Learners are socialised in the schools, either, covertly through the hidden curriculum in the form of prayers or in assembly, or, overtly in the lessons that are being taught in the classes. Here, textbooks play an important role in explaining the working of the world and have a powerful impact on the knowledge of the learners (Bennett, 1996). The 'textbook culture' is prevalent in almost all schools, where the teachers' work is to impart whatever is given in the textbooks to the learners, who will, in turn, rote memorise to pass the examination (Kumar, 1988).Here, we need to question and problematise the culture which is being taught in the textbook. It doesn't happen on its own; instead it is selected and reorganised by real people with real interests (Kumar, 1989; Apple, 1993). So, the researcher intends to address the notion of representation in the History textbooks studied in the schools of Manipur.

The reason for choosing the History textbook is because it deals with social relations, culture and the origin of human existence. 'Social relations are expressions of ideas about reality' (Winch, 1958). Through historical understanding, we begin to trace the internal relations inherent in the society, existing in the form of ideas and social structure. The politics of identity is laid bare and the space for interpretation(s) and re-interpretation(s) makes it a dynamic subject. The writing of their own historical and an alternate text to challenge the existing hierarchy of knowledge is also a process of their socio-political movement (Gramsci, 1971; Illiah, 2007). The search for one's identity has led to the search for one's history for the people of Manipur.

This can be understood by the notion of Subaltern Studies. Right from the time of the *Swadeshi* Movement in the late 19th and early 20th century, it was said that 'the real history of India was located in the *samaj* (society, community), not the *rashtra* (State) (Sarkar 1997). But again, we need to problematise the notion of *samaj* in our context – Who actually constitute our *samaj*? – in terms of class, caste, gender, region, religion. The notion of 'subalternity' in Subaltern Studies has shifted from clash of unequal cultures during colonial times, wherein, the aim was to uncover evidences of 'subaltern nationality', to one where it now acts as a means to provide 'liberating alternatives' to the oppressed people, by exposing forms of knowledge prevalent in society (Ludden, 2001). Also, our subaltern pasts can act as a supplement to our history by adding to our historical knowledge, and also, showing the limits

to our historical understanding (Chakrabarty, 2001).

The notion of relevance also needs to be addressed. The researcher intends to do by studying the curriculum framework given for the teaching of social sciences on which the History textbooks are based. The main curricular concerns are education for a cohesive society where all differences are sought to be eliminated; strengthening national identity and preserving of one's heritage by trying to understand the history of different ethnic groups and regions of the country; responding to the impact of globalisation by the study of one's civilisation along with other world civilisations and their interconnections; need to incorporate fieldwork, project work and group activities (NCF-2000). With nearly a decade old framework and a new NCF-2005 already initiated, the use of the books based on the old NCF-2000 can be questioned.

The use of facts and evidences, in the form of sources, to understand and construct one's own history is to be seen, whether the textbook gives any space to the learners to do so. The important interaction of historian and his facts, i.e., 'dialogue between present and past' is encouraged or not is to be questioned and analysed (Carr, 1961). The important role of teacher is also to be seen in the context of their mediating role in the teaching learning of controversial issues (Ballard, 1970). The obsession with learning, rather than understanding and questioning is to be addressed on the basis of whether controversial issues and discussions are given space in classroom interaction or not (Dickinson and Lee, 1978; Kumar, 1996). Also, the role of History and History textbooks in transmitting ideas about patriotism and one's sense of belonging is to be addressed. The political impact in propagating ideas, giving false or biased facts needs to be questioned (Paxton, 1999).

Hence, the attempt to understand the reality, analyse and problematise the representation, and question the relevance was made by the researcher for a holistic study of the problem. The various readings, which can never be enough, were read to form a perspective and understanding of the problem at hand. The studies on the sociology of education and the secondary sources led to the questioning of the realities which the researcher had been socialised into and had been made to believe in.

Research Design

The study is based on qualitative research. The study involves 'inductive analyses', exploring research questions with no prior hypothesis to be tested. It tries to give a 'holistic perspective' of the whole phenomenon and not reduce it to cause-effect relationships. A qualitative study involves fieldwork and takes place in 'naturalistic setting'. The researcher does not interfere, neither manipulates nor controls the study, but is open to whatever 'emerges'. The aim is not to generalise the findings but to have an 'in depth and detailed descriptive analysis of events, interviews, and the like' because it is 'context sensitive'. It takes into cognizance 'the social, historical, and temporal context in which the data was collected' (Best and Kahn, 2005, 242-43).

To ascertain the reality, in terms of its history, of the people of Manipur

The first step in this research study was to ascertain the reality, as experienced by the people. The researcher tried to look for books, journals and dissertations on the cultural, economic, political and social life in Manipur, for the understanding of the past reality. A historical descriptive study was taken up to understand the history of Manipur with the help of secondary sources. The reality of the state would have been incomplete without the discussion of insurgency and the fight for one's identity. Hence, the presence of insurgency in the society and its influence on the learners and schools is seen from the teachers' perspective, citing the problems and dilemmas faced in their day-to-day working.

To analyse if the representation is adequate in the State textbooks

In the research study, representation would be the accounts and facts as given in the History textbooks. The researcher would analyse and reread the History textbooks to understand better the selection and organisation of the content. Deconstruction, an approach dealing with identity and experience which is not present in the text is used by the researcher to analyse and problematise the textbooks. It gives a democratic platform to contest and question the omissions in a text. It is closer to the original meaning of the word 'analysis', which means 'to undo', and is synonymous 'to deconstruct'. The role of deconstruction is to identify the nature of discourse and the depictions of reality and the presence of bias if any, so as to produce an ideological critique.

To find out the relevance of the texts through teachers' perspective.

In this research study, the researcher attempts to question the relevance of the History textbooks in terms of the content. The relevance of a text could be perceived in terms of the representation of the social reality in the curriculum. It should not to be treated as given but, we need to problematise it by studying the social conditions on the basis of which the content is selected and organised.

Sample

The researcher used non probability purposive sampling for the study. The criterion used to select the sample is teachers who were teaching Social Sciences to Classes VI, VII or VIII. The sample size chosen by the researcher was 31 teachers, out of which 30 teachers responded and 1 did not respond.

Tools

In this study, a questionnaire was used so that the respondents would have to answer questions and respond in writing. Both open form and closed form questions were used by the researcher. The questionnaire was divided into three parts:

Part 1

Consisted of open ended questions on the composition of the learners of Classes VI, VII and VIII in terms of their

ethnicity; the present reality as experienced by the people and the effect of insurgency on the schools and the learners in Manipur; and the future of Manipur in terms of its economic prosperity, educational development and social change.

The researcher wanted to give the teachers ample space to voice their view in their own words. For example:

> *'Step-motherly treatment of the NE as a whole, of which Manipur is a part can be said to be the main cause why the people start to alienate themselves from India. There was no economic development brought to the NE after Independence while the mainland was developing almost in every corner. The main issue for the birth of insurgency in Manipur was the economic disparity, i.e., the state in comparison to other mainland states. Corruption and nepotism is another factor for the growth of insurgency.*
>
> *Transport and communication, education, industries, etc. suffered ... the funding is negligible. Moreover people of the state Manipur (NE) are looked down upon as inferior by the mainland people. Teaching of history and the inclusion of the NE in the textbook of (Geography) would have helped others outside the region to know better about their own country. Many people, even educated persons don't know where Manipur is, for that matter other states of the NE.*
>
> *What we need to do is to ask; whether the Govt. both in the State and the Centre has the political will to tackle this issue sincerely. The sincerity of the Govt. is yet to be seen as corruption, nepotism is still flourishing and there is no political will at all. In short lack of political will and understanding of the Indian Govt. and the mainland people can be said to be the root cause for the present debacle'.*

Part 2

Consisted of closed ended questions pertaining to issues of equitable representation of all the ethnic groups in the history textbook, classroom pedagogy, adequate and authentic selection and organisation of content, assessment, and policy.

The researcher wanted marked or restricted answers wherein the respondents had to choose one answer by marking 'Agree', 'Disagree', or 'Can't Say'.

Part 3

Consisted of open ended questions by questioning the relevance of the texts pertaining to the importance of local history, the misrepresentation of reality and the teaching of controversial issues in history. The researcher after thoroughly having read the textbooks took verbatim quotes and asked questions related to it.

Analysis and Interpretations

Qualitative data is usually analysed by giving 'detailed description, with direct quotations capturing people's personal perspective and experiences'. Hence, the answers were analysed and common themes were inducted from it, allowing 'the researcher to discover reality without having to fit it into a preconceived

theoretical perspective' (Best & Kahn, 2005, 242-43). The researcher has tried to give many direct quotations of the teachers so as to provide a rich description of the data. A simple quantitative technique, i.e., percentages was used in ascertaining the different perception of teachers regarding the notion of relevance of the texts.

1. To ascertain the reality, in terms of its past and the present, of the people of Manipur

The respondents were asked to give their view(s) about the issue of insurgency in Manipur.

How has it Affected Education System / Schools?

- ***Regression***
  'Instead of progress, there is regression in the all-round development of the education system', writes one teacher. There is 'less number of working days' due to constant strikes and closure of schools. As classes cannot be conducted, 'syllabus cannot be completed in time'. 'Lessons are taught at random in order to complete the syllabus thereby leading to poor teaching – learning'. Hence, there is no smooth functioning and the school calendar is affected, with 'schools coming to a standstill'.
- ***Monetary Demands***
  The insurgents demand money from the schools causing countless disturbances, and threats if demands are not fulfilled. 'In such a situation, schools are closed for some time and students and teaching staff hold sit in protests – requesting insurgents to withdraw the demands'.
- ***Tension due to Terror***
  There is **'constant threat and fear'** felt by the administrators, the teachers and the students. This leads to **'tension'** and the closure of schools by the school authority when they are not able to pay the money demanded. There had been cases when teachers and students were kidnapped and killed if demands were not fulfilled.
- ***Low Wages***
  The demand and collection of 'large sums have retarded the progress of infrastructure and wages of the employees'. Also, 'fixed percentages from teachers' wages are deducted . . . added to the woes of the teaching faculty', which have to be given to the insurgent groups.
- ***Cleansing the System***
  Out of 30 teachers, three have written that insurgency has 'cleansed and checked' the education system, the students and the teachers systematically. It keeps a check on 'mass copying' during Board exams. 'The exams are held freer and fair. . . conducted smoothly'.
- ***Forming of AMPSWA***
  All Manipur Private School Welfare Association (AMPSWA) has been formed, giving teachers a platform to come together and be united in their grievances. But, again it hasn't solved the problem completely with the organisation becoming more of a negotiating table.

'Extortion from schools is still there but now it is more socially accepted by

setting up of the Private School Organisation', wrote one teacher, who is also the owner of the school. Hence, he is able to voice his opinions more freely and give a clearer picture.

How has the issue of insurgency affected the learners?

- ***Fear Psychosis***
  'The learners start to develop psychological problem or disorder – restlessness, fear psychosis - leading to lack of concentration and trauma'. With cases of kidnapping of school children, 'a sense of insecurity is generated in them'.
- ***Lack of Academic and Peaceful Atmosphere***
  With frequent strikes and closure of schools, 'syllabus cannot be completed leading to demoralised students, disruption of academic calendar, loss of knowledge and time'. Students are also made to 'protest' against monetary demands of the insurgents leading to loss of time. The learners lose 'opportunity to study peacefully and contently' as there is no concentration. It diverts the mind of the learners, leading to change of behaviour 'due to negative social interactions outside school', making them 'complacent, lethargic and no spirit of competition'.
- ***Rise of Private Tuitions***
  As academic calendar is disrupted and syllabus cannot be completed in schools, parents are bound to send their children for 'private tuitions' so as to complete their course. Also, parents who can afford it, are sending their children outside the state to study. All this 'affect the income of parents', with a lot of money being spent on education.
- ***Easy Means of Livelihood***
  The presence of insurgency affects the boys more, as 'ignorant youngsters are easily distracted and can be lured towards an easy earning'. It 'impacts particularly boys reading in Classes VI – XII'. Due to 'economic and family problems, poor academic performance, and absence of proper guidance', some boys join the 'militants'.
- ***Gender Bias***
  Boys don't face 'diktats of do's and don'ts', unlike the girls, who are 'forced to follow a certain dress code' in schools (wearing wraparounds, the traditional wear for girls and women, instead of skirts and salwar-kameez in the higher classes). They are also supposed to 'maintain social moral behaviour'.

How do you see the future of Manipur, in terms of its:

Economic Prosperity?

Most of the teachers see a 'bleak future' with not much scope for any change. With economic activities coming to a halt due to 'extortion, killings, *bandhs*, strikes', there is a process of 'brain drain' with people choosing to study and work outside Manipur.

'There can be no economic prosperity in Manipur in the midst of all troubles and problems. When there is peace there is economic prosperity.'

Educational Development?

The presence of 'harassment, kidnapping, extortion, make people's

life unpredictable'. This leads to closing of schools and hence, education is 'badly affected'.

Due to 'corruption, the quality of education has gone down with the rich but less qualified getting a plum job while the poor but well qualified remain jobless'. If the 'present internal problems continue to persist' then the 'State's education would be at stake'.

Social Change

There will be 'violence, deterioration of morals and cultures, and more insurgency groups might arise due to difference in ideology, wants and demands'.

The practice of 'corruption in all spheres of life', along with 'narrow minded ethnic thoughts' will hamper the development of the state. There will 'be more and more insecurity, communalism, divisions, selfishness, killings, lawlessness and hatred among the people'.

The researcher concludes that the people of Manipur have been facing a reality full of turmoil and conflict since a long time. The diversity in terms of ethnic, linguistic, religious, and cultural contexts has led to the presence of a complex society. The existence of multiple realities of both the tribal and the non-tribal populations stands in the way of resolving the dilemma of a common identity. The politics of identity continues to be played through the demands for their respective sovereign states by the various insurgents groups. In the tussle between the government and the insurgents, the price is paid by the common people in the form of parting with their money, peace of mind, a peaceful social life, and above all, their lives. Education system and students are also not spared from this threat. Both teachers and students are affected, as they are also an important constituent of the society. People continue to live life on the edge every day. But, all this is not visible, never given a platform in the national scenario.

2. To analyse the representation of the people, as learnt by the learners, in the Manipur State textbooks

The textbooks of Classes VI, VII and VIII recommended and used in the schools of Manipur are published by the Board of Secondary Education, Manipur (BSEM). The following table gives an overview of the content in the textbooks of Classes VI, VII and VIII.

Table 1.1
Contents of Classes VI, VII and VIII

Class	*Year*	*Content*
Social Sciences, VI	BSEM (2005) Manipur	People and Society in the Ancient Period 1. Studying The Past 2. Early Man and His Life 3. Ethnic and Linguistic Groups 4. Ancient Civilisations 5. Rise of Kingdoms and Empires in India 6. Major Religions

Social Sciences, VII	BSEM (2006) Manipur	People and Society in Medieval Times 1. Medieval Period in Indian History 2. Rise of Small Kingdoms in India in Medieval India 3. The Delhi Sultanate 4. Emergence of Regional Powers 5. The Mughal Empire 6. Rise of Independent States 7. States and Kingdoms in North-East India Since the 15th Century 8. Developments Outside India 9. Religious Developments 10. Manipur Under Garibniwaz
Social Sciences, VIII	BSEM. (2006) Manipur	People and Society in Modern Times 1. Industrial Revolution: Search for Markets and Raw Materials 2. Revolutionary and Nationalist Movements in America, France, Germany and Italy 3. British Conquest of India 4. Manipur and the British 5. India Renaissance: Socio-Religious Reform Movements 6. Indian National Movement 7. Manipur Under British Rule 8. Religious Changes in Manipur 9. The Second World War and Manipur

The common features in the textbooks of the three classes are being discussed as follows:

- There is an emphasis on facts and dates, events and personalities. History is not only stories about kings and their empires, wars and conquests. There is the need to study the contribution of the common people towards the generation of historical knowledge, especially about the community from which the learners come from so they might be able to relate and understand the politics of historical representation.

In the Chapter, *Rise of Kingdoms and Empires* (Class VI, 53-70) there is emphasis on kings and their empires. In Class VII, there are seven chapters on empires, kingdoms and regional powers (21-75, 90-93). Similarly, in Class VIII, wars and conquests are discussed (26-40, 43-50, 76-87, 96-99).

- The language used is 'narrative style'. The lessons go on a flow with 'no' questions or inquiry for the learners to ponder. The textbooks rarely emphasise on 'decisions, questions, and thinking'. There is a deep silence between 'those who write history textbooks and the students who read them' (Paxton 1999). There is no space given to the learners to imagine, think and understand the pasts. Everything is 'given' with the learners having to rote memorise them. The evidences are:

' . . . The four very old civilizations grew and developed on the banks of

river or river-valleys. There are a number of reasons for this:

(a) The rivers were good source of water.
(b) The areas near the rivers were very fertile.
(c) Rivers means of cheap and easy transport.
(d) The areas near the rivers had a good climate' (Class VI, 21-22).

- Examples of literary and archaeological sources are mentioned and discussed in the chapter, 'Studying the Past' (Class VI, 2-5). But, there are no examples of folklores and picture of sources which might have contributed to the curiosity and imagination of the learners who are of 11-12 years at Class VI. Moreover, it has been found from studies that 'formal thinking develops later and History for those under 14 years of age should not be over-abstract in form' (Hallam 1970).
- History is supposed to be a construction of the past by a continuous dialogue between the past and the present using source and evidences (Carr 1961). But, in the textbooks, the learners are 'given' the details with no clear use of sources or validation of findings. The use of words likes 'we do not know exactly' and 'probably' cannot be made loosely as this might result in confusion and speculation with no use of evidences. The evidences are:

  'We do not know exactly what or how early humans worshipped. They probably worshipped their ancestors, the sun, fire, water, earth, etc.' (Class VI, 13).

  'Very little is known about the religious beliefs of the Harappan people. They probably worshipped animals and trees. The bull and peepal tree were their favourites (Class VI, 25-26).

  '. . . flourished a wonderful civilisation in the Indus Valley. This civilisation came to an end . . . We do not know exactly how it happened. Repeated floods may have driven the people . . . It may have also been due to scarcity of water. Natural calamities like earthquakes. It is also probable that some tribes . . . invaded the cities in a series' (Class VI, 26).
- There is emphasis on world history, regional history, and history of Manipur, along with national history.

Table 2

Distribution of Specific Content in the Textbooks of Classes VI, VII and VIII

Specific Content	*Class VI (No. of Pages)*	*Class VI (%)*	*Class VII (No. of Pages)*	*Class VII (%)*	*Class VIII (No. of Pages)*	*Class VIII (%)*
World History	11 pages	29 %	10 pages	28%	8 pages	20%
Indian History	22 pages	58 %	9 pages	25 %	18 pages	45%
Regional History	2 pages	5 %	12 pages	33 %	-	-
Manipur History	3 pages	8 %	5 pages	14 %	14 pages	35 %
Grand Total	38 pages	100 %	36 pages	100 %	40 pages	100 %

- The role of Manipur is highlighted wherever possible and given more space. The evidences are:

  ' . . . Megalithic culture developed in Manipur also. . . The megaliths found in Manipur are victory memorials, ceremonial status symbols and memorials for the dead' (Class VI, 47).

  'During the medieval times, Indian trade, specially with the West, was carried on both land and sea. There were some important trade routes during the said period. There were . . . a land route to China and other south – east Asian countries through Manipur, etc.' (Class VII, 8).

- There is an attempt to integrate selective elements into the dominant tradition by bringing them into close association with the values of the dominant groups.

  For instance, the role of Manipur in World War II, and the contribution of the people to the Indian Freedom Movement are asserted with a separate chapter, **The Second World War and British**. There is debate among scholars about local responses to the war with two factions: Anglo-Allied and Japanese-INA. (Singh 1998, 171). This debate is not discussed in the text. Instead, a particular event of hoisting the Indian Tricolour by the INA in a locality is interpreted to have historical importance and integrated into the 'dominant tradition'.

  '. . . the INA set up its headquarters at Moirang Kangla and hoisted the Indian Tricolour on 14 April, 1944. All the areas south of Ningthoukhong were liberated from the British rule' (Class VIII, 97).

  'Many Manipuris joined the INA and contributed to the fight for India's freedom from British rule. . . It accelerated the growth of political consciousness in Manipur. . . rousing of a sense of patriotism among the people. . . It also broke the wall of isolation that had kept the people of Manipur from the rest of the country. The relationship between the leaders of Manipur and other national leaders was strengthened' (Class VIII, 98-99).

- The Meiteis are given more space and voice, amongst all the ethnic groups due to their being the 'dominant group'. The evidences are:

  'The main source of the ancient history of Manipur is the early Manipuri literature in Archaic Meitei / Meitei script' (Class VI, 3).

  'The ancient Meitei society was divided into seven Salais (clans) as is prevalent today. Consolidation of the kingdom including all the clan principalities and most of the hill villages led to the emergence of a powerful kingdom. . .' (Class VI, 75).

  'During the time of king Khagemba (1597 – 1652 A.D.) the traditional Meitei religion flourished. . . He was a great patron of Sanamahi religion. . . Meitei religion lays stress on clean and simple food, clean and simple clothing, deep meditation, respect to the parents and good character' (Class VI, 89-90).

- The exercises at the end of the lessons are text based with the learners having to memorise the facts and definitions. There is no

space to analyse, do source reading, think, inquire, or develop historical understanding. The evidences are:

(i) **Answer briefly**
- Q. Mention two archaeological sources of History. (Class VI, 6).
- Q. A Chola king conquered the Maldives. Who was he? (Class VII, 25).
- Q. In which year was the Meitei Marup established? (Class VIII, 94).

(ii) **Write 'True' or 'False'**
1. The Harrapans loved hunting. (Class VI, 49).
2. The Pratiharas were Rajputs. (Class VII, 25).
3. Pettigrew knew Bengali and Manipuri. (Class VIII, 94).

(iii) **Write short notes**
1. Old names of Manipur. (Class VI, 78).
2. King Bhoja. (Class VII, 26).
3. American Baptist Mission. (Chapter VIII, 95).

- The projects at the end of the lessons do not provide scope for visiting historical sites and museums or helping to develop interest and understanding. The learners are to make a list, draw a picture, or collect and paste pictures. The evidences are:
  - (i) Make a list of the historical monuments of Manipur (at least 3 in number). (Class VI, 7).
  - (ii) Draw the picture of the 'Dancing Girl'. (Class VI, 52).
  - (iii) Draw a picture of the 'Boston Tea Party'. (Class VIII, 25).
  - (iv) Collect and paste the picture of a famous mosque on a chart paper. (Class VII, 20).

The researcher also tried to analyse the textbooks in terms of continuity across the three classes and the themes emerging are discussed as follows:

- ***Chronology***

  There is a strict tracing of the history of humankind from Ancient in Class VI, Medieval in Class VII, to Modern in Class VIII. The periodisation of history into Ancient, Medieval and Modern is taken as the base for each successive class of VI, VII and VIII, and discussed respectively.

  For example, the Meitei State is believed to have evolved in the ancient period:

  'The ancient Meitei society was divided into seven Salais (clans) as is prevalent today. Consolidation of the kingdom including all the clan principalities and most of the hill villages led to the emergence of a powerful kingdom. . .' (Class VI, 75).

  In the medieval times, the Meitei state is believed to have consolidated into a kingdom:

  '. . . learn about the rise and growth of the kingdom of Manipur during the period from the 15th century to the 17th century A.D. Almost all the kings of Manipur in the medieval times were conquerors'. (Class VII, 64).

  The modern period with the Burmese conquest and later, British rule is supposed to have led to devastation and loss of independence of Manipur:

  'The Burmese forces occupied Manipur for seven years, from 1819 to 1826. During this period they carried out a systematic plan of

destruction in Manipur. The people in the valley were subjected to all kinds of inhuman torture. . . This Burmese reign of terror is known as the Seven Years' Devastation in the history of Manipur'. (Class VIII, 45).

- ***Religion***

  In Class VI, there is the study of the 'Traditional Meitei Religion' (89-90) in the Chapter *Major Religions*, which include Hinduism, Buddhism, Jainism, Confucianism, Zoroastrianism, Judaism, Christianity, Islam, and Sikhism. For example:

  'During the time of king Khagemba (1597 – 1652 A.D.) the traditional Meitei religion flourished. . . He was a great patron of Sanamahi religion. . . Meitei religion lays stress on clean and simple food, clean and simple clothing, deep meditation, respect far one's parents and good character' (Class VI, 89-90).

  In Class VII, the coming of 'Mayangs' (a term used for people not originally of Manipur) (65), and of 'Hinduism' (86-87, 91-92) is taught to have led to Sanskritisation of the religious and social life in Manipur. The new religion is supposed to have been patronised by the kings of Manipur (86-87, 92). Some evidences are:

  'The traditional Meitei religion got a setback during the reign of Garibniwaz. Many temples of the traditional deities were destroyed. . . Many other Hindu temples were also erected under the patronage of Garibniwaz . . . Each of the seven Salais (clans) was given a Hindu Gotra. The traditional festivals were given Sanskrit names . . . Thus, the process of Sanskritisation of Manipur began vigorously' (Class VII, 92).

  In Class VIII, the Chapter *Religious Changes in Manipur* talks about the 'Sanamahi Religious Movement', a movement to revitalise and revive the indigenous culture and religion. The evidence is:

  'Sanamahi religious movement is the movement to revitalise the indigenous religion of the Meiteis (Meeteis). The followers of Sanamahi religion devote themselves to discovery of the ancient manuscripts or Puyas and popularisation of Meitei script . . . emphasised the re-discovery of traditional culture, customary practices and traditional religious ceremonies of the Meitei society. In 1976, Manipur State Assembly passed the Laininghou Sanamahi Temple Act, 1976. . . In the census of 2001, Sanamahi religion has been recorded as one of the recognised religions of Manipur (Class VIII, 92-93).

- ***Co-option***

  The dominant group maintains their hegemony through compromise and the process of 'mentioning'. Here, the history and culture of less powerful groups are included in the texts by integrating its selective elements into the dominant tradition. These are brought 'into close association with the values of the powerful groups' (Apple 1993).

  In the texts, the Manipuri Muslims, also given the name

'Meitei' Pangals, are being integrated into the Meitei culture by tracing their lineage to the Meitei group from their maternal side. They are welcomed and their contribution to the state of Manipur is also mentioned. The evidences are:

'. . . There are also Manipuri Muslims in the valley, popularly known as Meitei Pangals. They came to Manipur mostly during the time of King Khagemba from Bengal, from which the word Pangal (i.e., Bengal) was derived. Their forefathers migrated without womenfolk, married Manipuri girls, at the instance of the king, and settled here. Thus, on their maternal side, they are all descendents of the Meiteis in the valley. Like the Meiteis, they have also surnames conferred on them by the kings of Manipur. Meiteilon or Manipuri is their mother tongue'. (Class VI, 13).

'The newly settled Muslims contributed much in the socio-economic development of the kingdom' (Class VII, 67).

'Islam came to Manipur when Muslims settled in Manipur during the reign of king Khagemba (1597-1652). They were among those taken prisoners by Khagemba . . . in 1606 A.D. These Muslims were settled as a separate community in the valley. They were later joined by other Muslims who came at different times from Sylhet and Cachar. They took Manipuri women as their wives and settled in Manipur. They adopted Manipuri as their mother tongue. The Manipuri name for Muslims is Meitei Pangal, which is derived from the word, Bengal'.

- ***Marginal Groups***

Common people, women and the hill tribes are given isolated mentions or sometimes none at all. There is the need to study the contribution of these groups towards the generation of historical knowledge. The evidences are:

'There were many classes of people in the society, such as the ruling class, the priests, common men which included artists, craftsmen and farmers, and slaves' (Class VI, 32).

'During the Mughal period, the Indian society can be broadly divided into three classes of people. The Nobility formed the first and the highest class . . . The merchants, government officials and the rich peasants formed the Middle class . . . The lowest class consisted of the poor peasants, soldiers, artisans and shopkeepers (Class VII, 52).

'The Vedic Aryan society was well-organised . . . Society was patriarchal . . . The wife was an honoured member of the family. She participated in all religious ceremonies by the side of her husband. However, in the later Vedic period the status of the wife became lower. Polygamy was prevalent among the princes, nobles and rich class of people. The birth of a daughter was regarded as an unhappy occasion' (Class VI, 27).

'Girls could not go to school but were taught at home to be good housekeepers . . . Women also had no political rights . . .' (Class VI, 38).

' . . . The position of women was low. Purdah was followed by high class Hindu and Muslims ladies. Dowry system was prevalent among the Hindus' (Class VII, 33).

'First Nupilan was the first Anti-British movement launched by the women-folk of Manipur . . . the first forceful and effective public protest against an act of injustice committed by the British officials. It was a courageous act on the part of the women folk of Manipur and it set an example to be followed by the future generation' (Class VIII, 80-81).

'In 1939 the women of Manipur once again rose against the British and the Maharaja of Manipur. This event is known as the Second Nupilan . . . Some of the women leaders were arrested and put in jail . . . The movement was started by the women alone . . .' (Class VIII, 84-85).

' . . . The British Government requested the Maharaja of Manipur to help them with a labour force. Accordingly, the Maharaja tried to raise a labour force from amongst the hill people, both the Nagas and the Kukis. The Kukis resented this move very much. . . On December 19, 1917, a group of Kukis attacked the police station at Kumbi. It marked the beginning of the Kuki Rebellion, 1917-1919 . . .' (Class VIII, 81).

'Another notable anti-British movement was the Zeliangrong Revolt . . . The term Zeliangrong was coined in the year 1947. It is derived from the names of three groups of people namely, the Zeme, the Liangmai and the Rongmei. These people belong to the same ethnic group' (Class VIII, 82-83).

' . . . Many tribal volunteers lent their support to the INA and many were imprisoned' (Class VIII, 98).

The researcher concludes that the representation needs to be consciously reflected upon by teachers, parents, community, school administrators, and people involved in writing of the textbooks. The varied views of knowledge, in the form of varied representations, could lead to different social values, within a particular historical and social context, which could influence the structure and the content of curriculum (Pollard 2002). Instead of a world or a national or a regional or a local representation, there is a need to develop a historical understanding of the learners. Hence, there is a need for a 'critical pedagogy', building of a thinking mind, and a democratic environment where learners could problematise and question the existing inequalities and the misrepresentation of reality be it in any aspect of their lives – home, school, or society.

3. To find out the relevance of the texts through the perspective of teachers of Social Sciences

Analysis of close ended questions

Representation of All Ethnic Groups

Table 3
Teachers' Response on Representation

Statements	*Agree*	*Disagree*	*Can't Say*
Representation of all ethnic groups is necessary	77%	20%	3%
Need for equitable representation of all ethnic groups	70%	23%	7%

Classroom Pedagogy

Table 4
Teachers' Response on Classroom Pedagogy

Statements	*Agree*	*Disagree*	*Can't Say*
Learners are able to relate lessons to their lives and everyday experience	47%	33%	20%
Learners participate actively in class discussions when addressing Manipur	67%	20%	13%

Adequate and Authentic Selection and Organisation of the Content

Table 5
Teachers' Response on the Content

Statements	*Agree*	*Disagree*	*Can't Say*
Content is adequate	23%	67%	10%
Content is authentic	46%	27%	27%
Teachers need to refer to other books	93%	7%	-

Assessment

Table 6
Teachers' Response on Assessment

Statements	*Agree*	*Disagree*	*Can't Say*
Questions in the books are text based	93%	7%	-
Projects, assignments, reports, etc., are used for assessment	66%	27%	27%

Analysis of open ended questions

The teachers were asked to give their view as to why they thought that there is a need to teach the History of Manipur, along with Indian History and World History, to the learners of Classes VI – VIII.

- ***Know One's Own Past***
  Most of the teachers wrote that there is a need for the learners to know one's own history first before knowing others. 'Knowing self first is essential to know others', writes one teacher. Also, 'the syllabus in Indian history did not cover Manipur's history (i.e., in the college)'. So, the assertion of one's identity by including themselves and studying their own history could be deliberate.
- ***Inculcate Identity and Value***
  The teaching-learning of History is seen as means to know one's (lost) culture and foster a sense of patriotism and belonging. It helps the learners to be aware of their own 'roots' and makes them 'feel proud to call themselves Manipuri'. Some of the teachers believe that a 'sense of pride and patriotism' is instilled along with 'moral values of the past' in the learners. The learners 'know their cultures, customs and traditions' and form their own 'identity'. 'There is no greater glory in the learning of History than gaining the knowledge of one's own heritage and recognising the past of one's own nation' writes one teacher.
- ***Future Aspiration***
  Some teachers wrote of the long term importance of teaching-learning of history and the need to give equal importance to local history, national history and world history so that learners could 'improve and compete with students outside their own state, country'. 'Teaching only History of Manipur will not give the learners a broad view of the world and all three should have equal footing or weightage'. The teacher also believed that 'a society cannot live in isolation need to compare and contrast in order to bring progress and development'. One teacher writes that the History of Manipur should be taught because 'it is necessary for students who compete in the state competitive exams'.

  These open-ended questions were in the form of a small passage taken from the history text used in schools of Manipur. The teachers were asked to read and give their views:

1. '. . . Many Manipuris joined the INA and contributed to the fight for India's freedom from the British rule . . . It accelerated the growth of political consciousness in Manipur . . . arousing of a sense of patriotism . . . broke upon the wall of isolation that had kept the people of Manipur from the rest of the country . . .' (Class VIII, 98 – 99).

Why do you think the past is represented in this way, while the present is quite the opposite?

- ***Same Goal in the Past***
  In the past, the presence of a common foe, the British brought the people of India and Manipur together. The dream of a sovereign

state of their own made 'the Manipuri join the INA with the hope that the British rule in Manipur will end and Manipur sovereignty will be restored'.

- ***Different Goals at Present***
  '. . . people were drawn together to face a common foe, the British . . . in the present things are no better than it was at that time . . . the walls are still there . . . the past seems to be losing its significance'.

Now, things seem to have changed with 'the people of Manipur struggling for independence'. One teacher writes, the 'step-motherly treatment of the North-East as a whole of which Manipur is a part can be said to be the main cause why the people start to alienate themselves from India'. Also, other teachers add that 'negligence and non-intervention from the Central Government (Delhi) to address the problems of unemployment, rise in price, and corruption of ruling governments, in the state has made them anti-Delhi, hence anti-India'.

- ***History as Socialisation***
  Some of the teachers believe that 'the young minds must be educated about the hardships faced in the past to take responsibilities on their shoulders'. This shows how History in school could be used as a means to socialise the learners and take pride in one's struggle and success in the past.

2. 'Any act of criminal violence or intimidation by any individual or group, causing terror and violation of human rights, may be called terrorism.

Examples:

i) Terrorist attacks on the World Trade Centre and the Pentagon in the USA.

ii) Cross–border terrorism in Jammu & Kashmir' (Class VIII, 249).

This passage was used to elicit the teachers' responses regarding the text not addressing the issue of insurgency in Manipur. Did the teachers give these two examples in the class or did they try and sensitise the learners by addressing the issue of insurgency in the class? What were the learners' reactions and concerns? The teachers were requested to give an elaborate response.

- ***Interference and Fear Factor***
  The teachers wrote that the insurgent groups directly or indirectly interfered in the working of the state:

  'The underground groups always interfere in all the different works taken up by the different departments of the government'. 'What is the point to drive one to understand insurgency when one is living with it . . . Today education is controlled by the diktats of certain insurgent organisation(s)'.

  A feeling of threat is inherent as one teachers writes, '. . . everything lies in the hands of the extremists and terrorists . . . insurgents are directly involved in almost all the affairs'. Every one is 'compelled to remain silent' as lives may be at stake and 'it might endanger the teachers and won't help the taught'. 'Where there is rule of terrorists who

can go against them', questions one teacher.

Even if people were to question and ask for answers, the teachers wrote they might 'face opposition from some insurgent groups'. Also, 'it is impossible to mention / criticise about a few groups in particular where even the writers' life could be at stake'. Hence, the people seem to be living under threat and fear.

- ***Terrorism vs. Insurgency***

Some teachers differentiated between terrorism as given in the textbooks and insurgency as present in Manipur. One teacher writes that 'the former lays emphasis on terror activities, violence and creation of fear psychosis in public minds, whereas the latter tries to secure the co-operation of public to achieve their goal of self-determination and violence'.

Another teacher writes that 'there is great difference between the two . . . complicated . . . you cannot totally paint them black . . . need to justify their cause . . . the government is afraid that a chapter on it will give insurgents more sympathisers'.

Insurgency is supposed to be 'in lesser form and limited' and 'localised and smaller in extent' in Manipur. Also, 'all the violence may not be treated as terror'. Whereas, the examples given in the books were 'international and distinct issue' and hence, they were terrorist acts and needed to be addressed.

- ***Classroom Discussion***

The researcher got two different answers on whether the teachers addressed the issue of insurgency in the class, besides the two given examples, which is in direct contrast with what the researcher has understood after the analysis on teachers' perspective of the present reality of Manipur and the view of most teachers that everyone is aware about the issue of insurgency in Manipur.

Some teachers wrote that as 'the books were published earlier and outdated' and 'the issue of insurgency was not very serious in the past', it didn't have examples of insurgency and their acts of violence in Manipur. But, most of the teachers did try to sensitise the learners and discussed the violent acts and killings in the class.

One teacher writes, ' . . . an obligation to create in my students the spirit of patriotism and loyalty towards our country . . . instill hope and spell out where insurgency has contributed towards this chaotic existence'.

Most of the teachers wrote that the learners are aware and come out with 'many observations of their own and their insecurities'. They are 'disgusted with reality' and 'strongly react and condemn the inhuman acts of the insurgents'. They discuss with 'interest and enthusiasm' and 'are keen to know more about the causes . . . goal . . . demands . . . how to solve this problem of insurgency in Manipur'.

While some teachers wrote that 'every one is aware' and 'the learners take the issue of insurgency as a

matter of fact . . . has become a part of their society, integral to their living and thinking'. So, the teachers felt there was no need to discuss the issue in the class, as one teacher writes that 'there are better things to be learned and discussed'.

Also, the teachers felt that the learners '. . . are not mature enough and not the appropriate platform to discuss' and 'the learners are minor . . . and don't have knowledge of insurgency'.

The researcher concludes that the relevance of the textbooks could be questioned. Instead of highlighting the accomplishment and achievement of only a single group and 'typecasting particular groups as dependent and helpless victims who make limited contributions of significance', there is a need to represent each and every individual and group 'in all strata of human accomplishment' (Gay 2004, 319). Also, the adequacy and authenticity of the textbooks is an issue with the teachers as they have to refer to other books for validation.

The important role of teacher is also to be seen in the context of their mediating role in the teaching-learning of controversial issues (Ballard 1970). The obsession with learning, rather than understanding and questioning is to be addressed on the basis of whether controversial issues and discussions are given space in classroom interaction or not (Dickinson & Lee 1978; Kumar 1996). Some of the teachers do try and sensitise the learners on the presence of insurgency, having discussions on issues related to the immediate context of the learners. But, the larger picture on the social reality still needs to be addressed.

Conclusion

This research study concludes that the understanding of the reality is all the more important so as to change it for the good of everyone. The learners come from varied ethnic groups but they are being given a 'collective consciousness' through the textbooks. This does not help in 'meaning making' as learners are taking in the facts without relating to the experience. The distorted and incomplete representation of the social reality needs to be questioned because unless then the representation would continue to be irrelevant for the learners. Also, History is seen as a means of handing down of one's culture and value, nationalistic propaganda or fostering a sense of national identity. This understanding and practice by the teachers needs to be addressed and problematised. History is to be taught as a discipline and the learners made to develop historical understanding.

The regional history and the present situation of Manipur is one small reality in the vast universe of the national scenario of India. There would exist many such realities in the vast expanse within the national boundaries of India. Such realities continue to be subsumed and integrated within the same symbolic universe of dominant group and being presented by giving a cover of national identity. The important influence of our social context in recognising and

validating what is to be passed on as knowledge cannot be ignored. Until each and everyone get to know their true reality and get representation, the need to assert one's identity would never cease to exist.

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Conditions of School Buildings in India
An Empirical Study

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Abstract

The present study empirically examines the conditions of school buildings pertaining to the types of school buildings, ownership of school premises, additional classrooms required and rooms used for instructional purposes. This paper utilises the secondary data collected during the recent successive two, namely, sixth and seventh surveys on school education conducted by the National Council of Educational Research and Training (NCERT) under administrative and financial control of Government of India (GOI). In totality, the findings of this study reveal that proper public regulations are required for accommodating all children in school buildings irrespective of management, and implementation thereof in practice.

Introduction

School buildings have been facing difficult challenges in serving the needs of children and public education. The Central and State Governments actively supported the development of programmes that recognised and dealt with the particular needs of students, educators, school employees and communities in the nation's vast rural and urban areas. Historically, school buildings had offered unique benefits and attributes for educators, students and communities. School buildings had pioneered many successful education reform tools since time immemorial, and were in widespread use even as on today, viz., peer assistance, multi-grade classrooms, cooperative learning etc. The social communities depended on their schools to serve many functions beyond their primary mission of educating children. The school administration within district was often the largest single estate manager in their area and school buildings served as the social, recreational and cultural foundation of their diversified social

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communities. But, many schools in the districts were under funded, and some lacked a steady revenue stream. Moreover, they were disadvantaged by size as well as geography (Singh, 2006). For example, when they applied for school building grants, the resulting funds based on number of students were often too small to accomplish the purpose of the award.

Initiative on School Buildings in Pre-Independence Era

The Central Advisory Board of Education in the pre-independence era in its sixth meeting held in January 1941 had under consideration the desirability of setting up an Expert Committee to examine what steps could be taken in the interest of efficiency and economy to improve the planning, construction and equipment of school buildings, and the Board were in agreement as to the importance of taking steps to ensure that school buildings should be designed in future with closer attention to modern scientific standards in regard to accommodation, lighting, ventilation and sanitation and with due regard to economy. The Board also recognised that a certain amount of experimental work had already been done in this sphere in different parts of India but decided that in order to collate the results of these experiments as well as to consider problems which had not yet been tackled, it would be desirable to appoint a special Expert Committee to prepare a report for the guidance of all authorities concerned with the provision of school buildings.

The Board accordingly set up a Committee consisting of the Provincial Directors of Public Instructions or their nominees, and representatives of some of the larger States in India, with the Educational Commissioner of Government of India as its Chairman. This Committee was given power to co-opt and/or consult such experts as they might think desirable, and had been led to undertake an enquiry to determine the environmental conditions under which both teachers and children would be capable of the maximum output without undue fatigue. The outcome of the enquiry had shown that there were scientific principles, which if applied to the design and planning of schools would greatly improve their efficiency without necessarily increasing their cost. It was conclusively shown that it was possible to prescribe and secure standards, particularly, in regard to lighting, heating and ventilation, which eliminated unnecessary strain and fatigue, and thereby increased the output. It had of course recognised that a large number of schools in this country were housed in buildings that were never intended to be used as schools and that even in the case of new schools, financial considerations tended to determine construction. At the same time, it was felt that in India, where climatic conditions might simplify the building problem in some places and complicate it in others, any practical contribution towards the solution of the issue would be of immediate value to every public authority responsible for the erection or provision of schools (cited from *http://education.nic.in/cd50years/g/52/4X/ 524X0101.htm*).

Initiatives on School Buildings in Post-Independence Era

The Central Advisory Board of Education in its 35th meeting held on May 2-3, 1970 passed the following Resolution:

> *"The Board emphasises the urgent need to provide buildings to educational institutions, especially at the primary stage. In its opinion, this massive problem can be tackled only if local resources are harnessed and a scheme is devised under which it would be possible to make loans available to State and local Governments and voluntary organisations at minimal rates of interest. The possibility of the nationalised banks making some funds available for this programme should be explored and, as a long-term measure a Central Financing Corporation for educational buildings may be set up. Full use should be made of the work done at the Central Building Research Institute, Roorkee, to reduce constructional costs."*

In order to examine the problem and to prepare concrete proposals for action, the Union Education Minister appointed a Committee under his Chairmanship. The Committee held three meetings, one on 13th August 1970 in New Delhi, the second meeting on 5th December 1970 at the Central Building Research Institute Roorkee, and the final meeting on 5th January 1971 at New Delhi. In the first meeting, the Chairman desired that the Committee may collect State-wise information regarding the requirement of school buildings. Accordingly, the Member-Secretary (Education Secretary-GOI) addressed a letter to the Education Secretaries of all State Governments/Union Territories of the Union. Accordingly, as per information on requirements submitted by the State Governments, a provision was made under the Fourth Five Plan on school buildings covering primary and secondary schools in the country (cited from *http://education.nic.in/cd50years/g/52/4X/524X0101.htm*).

In the process of development in school education under the *Sarva Shiksha Abhiyan* (SSA) Mission – 2005, the GOI-MHRD had made provisions for physical infrastructure having bearing on school buildings. The Mission is trying to mobilise resources available under other Central/ State Government schemes for provisioning of school infrastructure. Convergence was being sought under the centrally funded schemes of *Swajal Dhara* and Total Sanitation Campaign, which have significant provisions for school toilet and drinking water facilities. For the purpose of funding various civil work components, the cost norms of respective States should be followed except for the construction of BRCs and CRCs that have a fixed unit cost of ₹ 6 lakhs and ₹ 2 lakhs, respectively. The unit cost for school buildings and classrooms would be as proposed by the State. The unit cost may vary by type, region and from time to time but should be based on proper design and estimates (cited from *http://ssa.nic.in/submission/notification.asp*).

As mentioned in preceding paragraphs regarding efforts made by the Central Advisory Board of Education and Public Authorities, it is pertinent to mention that the school buildings in

India are funded and operated through the government, aid institutions, charities, private companies, local and overseas individuals and in many cases the parents of children themselves since time immemorial. It is now clear that these resources will have to be pooled and coordinated to avoid the waste and duplication and maximise benefit from scarce resources. The task is made even more complex by recurrent natural disasters such as the Tsunami in 2004 which disrupted normal life and destroyed numerous school buildings, and incidents where children lost their lives in school fires following which several school buildings were shut down for safety reasons in the country. In addition, the physical infrastructure of school buildings is woefully inadequate. If all children are in school, as they are meant to be, school buildings will burst at the seams. The Public Report on Basic Education (PROBE) survey has estimated that 82 per cent of schools needed repair. Two-thirds have leaking roofs, making it difficult to hold classes during rain. A large number of schools still continue to function in thatched huts/*kuchcha* buildings /tents or even in open spaces in spite of the norms regarding school buildings laid down for recognition and/ or affiliation by various regulatory authorities (Singh, 2006).

Educational Surveys and Statistics on School Buildings

In educational surveys on school education, comprehensive information on school buildings has been collected to enable the planners to understand the status of school buildings in the country in view of the public policies. The scope in the First and Second Surveys was limited to the simple enquiries about the condition of school buildings and number of rooms along with floor area. In Third Survey, the scope was considerably enlarged. During Fourth and Fifth Surveys information was sought on condition and ownership of school buildings, shortage of accommodation and expansion potential, and availability of drinking water, urinal, and lavatory facilities. In the Sixth Survey, information has been collected on the condition of school buildings, ownership of school premises, additional classrooms required and expansion potential, availability of urinal and lavatory facilities in schools with an emphasis on separate facilities for girls, and availability of drinking water facilities within the school premises (NCERT, 1998).

The Seventh Survey has assessed the availability of basic facilities in the recognised schools such as building, classrooms, drinking water, urinal, lavatory and electricity connection through the school information forms. The details in this regard are available in the survey guidelines (NCERT, 2002).

Materials and Methods

The present study attempts a presentation of the secondary data pertaining to crucial selected parameters on school buildings in India. Many researchers had conceptualised these parameters to measure the changing profile of educational development (Singh, 2002). The secondary data on school buildings is collected on related issues and processed for the recognised schools enumerated on census basis during the Sixth and Seventh All India

Educational Survey Reports [NCERT (1998) and NCERT (2007)]. The data is processed and analysed by simple statistical approach. This paper provides information on the condition of school buildings, ownership of school premises, rooms used for instructional purpose, and additional classrooms required based on the Seventh Survey in succeeding paragraphs. The State-wise analysis on school buildings has also been scrutinised to provide the comparative directions of development. It would also present the tangible comparisons with Sixth Survey to indicate the condition of school buildings and concerns thereof that are taking place in India in recent years.

Results and Discussions

We, now, present briefly results and discuss the major findings of this study on condition of school buildings in India. The observed significant variations are undertaken and analysed and the State-wise comparisons are also considered to quantify the changing profile of school buildings in India. The succeeding paragraphs in Part I to Part IV shall describe the details in this regard.

PART I

Types of School Buildings – Concepts and Definitions

The school buildings, in which majority of classes are held, is defined as *pucca* building, partly *pucca* building, *kachha* building, and without building including tents and open space. The working definitions of these referred buildings during Seventh Survey have been given well-defined concepts (NCERT, 2002), and are given hereunder:

Pucca Building

A school building is to be treated as *pucca* if it has walls and roof made of the following materials.

Wall Material

Burnt bricks, stones (duly packed with lime or cement), cement concrete or timber, plywood, artificial wood of synthetic material and PVC.

Roof Material

Tiles, G.I./metal/asbestos sheets, concrete, bricks, stones, timber, plywood, artificial wood of synthetic material and PVC.

Partly Pucca Building

A school building is to be treated as partly *pucca* if it has walls made of the above-mentioned material but roof is made of the materials other than those mentioned above such as bamboo, grass, thatch, etc.

Kuchcha Building

School building, the walls and/or roof of which are made of materials other than those mentioned above such as *unburnt bricks, bamboo, mud, grass, reeds, thatch, loosely packed stones is to be treated as kuchcha building.*

Table 1 to Table 4 set out information in regard to school buildings for primary, upper primary, secondary and higher secondary schools by area (rural and urban) and management (government, local body, private aided and private unaided) according to types of school buildings (*pucca*, partly *pucca*, *kuchcha*, tent, open space), respectively in the country.

A. Types of School Buildings – All Schools

During Seventh Survey, the information on *pucca*, partly *pucca*, *kuchcha*, tent, and open space in regard to school buildings are collected. Singh and Kumar (2006) have considered issues pertaining to types of schools buildings for rural elementary level schools of the Western States/UTs of India. On the other hand, Sharma and Singh (2007) have also considered this issue for India.

Out of 10,30,996 schools in the country, 93.78 per cent schools were housed in *pucca*/partly *pucca* buildings and 3.76 per cent schools were running in *kuchcha* buildings. Besides, the remaining 2.46 per cent schools were without buildings, including tent and open space in the country. Similarly, 93.12, 4.19 and 2.69 per cent schools in rural area are accommodated in *pucca*/ partly *pucca*, *kuchcha* and without buildings including tent and open space. Management-wise, the proportion of schools having *pucca*/ *pucca* buildings is the highest in private un-aided schools (96.58 per cent) and lowest in the government schools (92.84 per cent) akin to the trends reported during the Sixth and Fifth Surveys. A brief description of school buildings during Seventh Survey in primary, upper primary, secondary and higher secondary schools is given in the succeeding paragraphs.

B. Types of School Buildings – Primary Schools

Table 1

Primary Schools According to Type of Buildings, 2002

Area/Management	*Types of School Buildings*					
	Pucca	*Partly Pucca*	*Kachcha*	*Tent*	*Open Space*	*Total*
1	2	3	4	5	6	7
Rural	4,60,227	68,811	26,028	1,405	16,343	5,72,814
	(80.35)	(12.01)	(4.54)	(0.25)	(2.85)	(100.00)
Urban	65,273	9,121	1,931	224	1,701	78,250
	(83.42)	(11.66)	(2.47)	(0.28)	(2.17)	(100.00)
Total	5,25,500	77,932	27,959	1,629	18,044	6,51,064
	(80.71)	(11.97)	(4.30)	(0.25)	(2.77)	(100.00)
Government	2,88,793	46,206	16,428	653	10,991	3,63,071
	(79.54)	(12.73)	(4.52)	(0.18)	(3.03)	(100.00)
Local Body	1,78,772	21,104	7,288	841	6,712	2,14,717
	(83.26)	(9.83)	(3.39)	(0.39)	(3.13)	(100.00)
Private Aided	17,521	3,531	2,338	53	166	23,609
	(74.21)	(14.96)	(9.90)	(0.23)	(0.70)	(100.00)
Private Unaided	40,414	7,091	1,905	82	175	49,667
	(81.37)	(14.28)	(3.84)	(0.16)	(0.35)	(100.00)

Note: Figures within parentheses indicate percentages.

The Seventh Survey reported 6,51,064 primary schools in the country. Nearly 5,25,500 primary schools (80.71 per cent) are running in *pucca* buildings, and 77,932 primary schools (11.97 per cent) are having the partly *pucca* buildings. The remaining 47,632 primary schools (7.32 per cent) are running in non-*pucca* buildings in India in year 2002. In rural area, the proportions of primary schools having *pucca* and partly *pucca* buildings are found nearly 80.35 per cent and 12.01 per cent, respectively. The situation of primary schools without building in rural area has declined from 38,657 schools in Sixth Survey to 17,748 schools in Seventh Survey, consequently, depicting a negative growth of -54.09 per cent. Besides, the condition of schools in urban areas is still better than rural area as 83.42 per cent primary schools in urban areas are housed in *pucca* buildings as against 80.35 per cent schools in rural area. Management-wise information on primary school buildings reveals that the proportions of schools having *pucca* buildings are the highest in local body (83.26 per cent) followed by private unaided (81.37 per cent), government (79.54 per cent), and private aided (74.21 per cent) schools.

Nearly eight States/UTs, viz., Chhattisgarh, Mizoram, Sikkim, Tripura, Chandigarh, Daman and Diu, Lakshadweep and Pondicherry reported that primary schools without building did not exist during Seventh Survey. However, the number of primary schools without building in rural areas was in thousands in the States like Andhra Pradesh (5,607) followed by Bihar (2,762), Madhya Pradesh (2,490) and Uttar Pradesh (1,510) on the referred point of time.

C. Types of School Buildings – Upper Primary Schools

Table 2

Upper Primary Schools According to Type of Buildings, 2002

Area/Management	*Types of School Buildings*					
	Pucca	*Partly Pucca*	*Kachcha*	*Tent*	*Open Space*	*Total*
1	2	3	4	5	6	7
Rural	1,56,058	26,560	6,673	166	4,490	1,93,947
	(80.46)	(13.69)	(3.44)	(0.09)	(2.32)	(100.00)
Urban	45,938	4,401	717	45	274	51,375
	(89.42)	(8.56)	(1.40)	(0.09)	(0.53)	(100.00)
Total	2,01,996	30,961	7,390	211	4,764	2,45,322
	(82.34)	(12.62)	(3.01)	(0.09)	(1.94)	(100.00)
Government	88,058	15,690	3,865	69	3,623	1,11,305
	(79.11)	(14.10)	(3.47)	(0.06)	(3.26)	(100.00)
Local Body	57,569	7,029	1,021	85	995	66,699
	(86.31)	(10.54)	(1.53)	(0.13)	(1.49)	(100.00)

Private Aided	14,121	2,784	1,114	25	44	18,088
	(78.07)	(15.39)	(6.16)	(0.14)	(0.24)	(100.00)
Private Unaided	42,248	5,458	1,390	32	102	49,230
	(85.82)	(11.09)	(2.82)	(0.06)	(0.21)	(100.00)

Note: Figures within parentheses indicate percentages.

The Seventh Survey enumerated 2,45,322 upper primary schools in the country, of which 2,01,996 upper primary schools (82.34 per cent) have *pucca* buildings, whereas, the Sixth Survey reveals that 68.53 per cent upper primary schools were housed in *pucca* buildings in the country. Around 30,961 upper primary schools (12.62 per cent) partly *pucca* buildings. The remaining 12,365 upper primary schools (5.04 per cent) are running in non-*pucca* buildings in India in year 2002. The proportions of upper primary schools having *pucca* and partly *pucca* buildings in rural area are found nearly 80.46 per cent and 13.69 per cent, respectively. The situation of upper primary schools without building in rural area had declined from 5,057 schools in the Sixth Survey to 4,656 schools in the Seventh Survey, depicting a negative growth of -7.93 per cent. Besides, the condition of schools in urban areas is still better than rural area as 89.42 per cent primary schools in urban areas are housed in *pucca* buildings as against 80.46 per cent schools in rural area. Management-wise data analysis for upper primary school buildings reveals that the proportions of schools functioning in *pucca* buildings are the highest in local body (86.31 per cent) followed by private unaided (85.82 per cent), government (79.11 per cent), and private aided (78.07 per cent) schools.

The State-wise data analysis exhibits that 13 States/UTs have zero upper primary schools without building, namely, Chhattisgarh, Goa, Kerala, Mizoram, Nagaland, Sikkim, Tripura, Andaaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Lakshadweep and Pondicherry. Besides, the number of upper primary schools without buildings in rural areas was reported in hundreds for the States, namely, Madhya Pradesh (1,693) followed by Uttar Pradesh (598), Rajasthan (330), Bihar (295), Himachal Pradesh (186), Uttaranchal (153), Punjab (141), and Gujarat (103) in the country.

D. Types of School Buildings – Secondary Schools

Table 3

Secondary Schools According to Type of Buildings, 2002

Area/Management	*Types of School Buildings*					
	Pucca	*Partly Pucca*	*Kachcha*	*Tent*	*Open Space*	*Total*
1	2	3	4	5	6	7
Rural	51,707	8,617	2,756	128	368	63,576
	(81.33)	(13.55)	(4.34)	(0.20)	(0.58)	(100.00)

Urban	24,891	1,882	334	28	30	27,165
	(91.63)	(6.93)	(1.23)	(0.10)	(0.11)	(100.00)
Total	76,598	10,499	3,090	156	398	90,741
	(84.41)	(11.57)	(3.41)	(0.17)	(0.44)	(100.00)
Government	24,617	4,570	1,060	85	259	30,591
	(80.47)	(14.94)	(3.46)	(0.28)	(0.85)	(100.00)
Local Body	8,276	1,154	411	6	120	9,967
	(83.03)	(11.58)	(4.12)	(0.06)	(1.21)	(100.00)
Private Aided	20,511	2,537	820	26	8	23,902
	(85.81)	(10.62)	(3.43)	(0.11)	(0.03)	(100.00)
Private Unaided	23,194	2,238	799	39	11	26,281
	(88.25)	(8.52)	(3.04)	(0.15)	(0.04)	(100.00)

Note: Figures within parentheses indicate percentages.

Out of 90,741 secondary schools during Seventh Survey, 76,598 secondary schools (84.41 per cent) are functioning in *pucca* buildings, whereas, the Sixth Survey reveals that 68.61 per cent secondary schools were housed in *pucca* buildings in the country. Empirically 10,499 secondary schools (11.57 per cent) have the partly *pucca* buildings. The remaining secondary schools, that is, 3,644 secondary schools (4.02 per cent) are running in non-*pucca* buildings. The secondary schools in terms of percentage having *pucca* and partly *pucca* buildings are found nearly 81.33 per cent and 13.55 per cent in rural area, respectively. The secondary schools without building in rural area has decreased from 1,068 schools in Sixth Survey to 496 schools in Seventh Survey, consequently, it reflects negative growth of -53.56 per cent. Besides, the condition of schools in urban areas are better than rural areas as 91.63 per cent secondary schools in urban areas are housed in *pucca* buildings as against 81.33 per cent schools in rural areas. Management-wise secondary schools according to type of buildings reveals that the proportion of schools functioning in *pucca* buildings are the highest in the private unaided (88.25 per cent) followed by private aided (85.81 per cent), local body (83.03 per cent), and government (80.47 per cent) schools.

The State-wise data analysis exhibits that 16 States/UTs have zero secondary schools without building, namely, Arunachal Pradesh, Chattisgarh, Goa, Kerala, Meghalaya, Mizoram, Nagaland, Rajasthan, Sikkim, Tripura, Andaman and Nicobar Islands, Chandigarh, Dadra and Nagar Haveli, Daman and Diu, Lakshdweep, and Pondicherry. In rural areas, the secondary schools without building are reported more than one hundred for Andhra Pradesh (114) and Madhya Pradesh (113) in the country.

E. Types of School Buildings – Higher Secondary Schools

Table 4
Higher Secondary Schools According to Type of Buildings, 2002

Area/Management	*Types of School Buildings*					
	Pucca	*Partly Pucca*	*Kachcha*	*Tent*	*Open Space*	*Total*
1	2	3	4	5	6	7
Rural	20,431	2,072	279	18	47	22,847
	(89.43)	(9.07)	(1.22)	(0.08)	(0.21)	(100.00)
Urban	19,966	939	83	14	20	21,022
	(94.98)	(4.47)	(0.39)	(0.07)	(0.09)	(100.00)
Total	40,397	3,011	362	32	67	43,869
	(92.09)	(6.86)	(0.83)	(0.07)	(0.15)	(100.00)
Government	13,784	1,588	141	18	62	15,593
	(88.40)	(10.18)	(0.90)	(0.12)	(0.40)	(100.00)
Local Body	1,248	138	14	0	0	1,400
	(89.14)	(9.86)	(1.00)	(0.00)	(0.00)	(100.00)
Private Aided	14,806	637	87	9	1	15,540
	(95.27)	(4.10)	(0.56)	(0.06)	(0.01)	(100.00)
Private Unaided	10,559	648	120	5	4	11,336
	(93.15)	(5.72)	(1.06)	(0.04)	(0.03)	(100.00)

Note: Figures within parentheses indicate percentages.

Among 43,869 higher secondary schools during Seventh Survey, 40,397 secondary schools (92.09 per cent) are functioning in *pucca* buildings, whereas, the Sixth Survey reveals that 83.97 per cent higher secondary schools were housed in *pucca* buildings in the country. Nearly 3,011 higher secondary schools (6.86 per cent) are have partly *pucca* buildings, and remaining higher secondary schools, that are, 461 higher secondary schools (1.05 per cent) are running in non-*pucca* buildings. The higher secondary schools in terms of percentage having *pucca* and partly *pucca* buildings are found nearly 89.43 per cent and 9.07 per cent in rural area, respectively. The higher secondary schools without building in rural area has decreased from 99 schools in Sixth Survey to 65 schools in Seventh Survey, consequently, it reflects negative growth of -34.34 per cent. Besides, the condition of schools in urban areas is better than rural areas as 94.98 per cent higher secondary schools in urban area are housed in *pucca* buildings as against 89.43 per cent schools in rural areas. The survey of management-wise higher secondary schools according to type of building reveals that the proportions of schools functioning in *pucca* buildings are highest in private unaided (93.15 per cent) followed by private aided (95.27 per cent), local body (89.14 per cent), and government (88.40 per cent) higher secondary schools.

The State-wise data analysis exhibits that higher secondary schools running without building is reported maximum in Andhra Pradesh (32), Madhya Pradesh (17), Haryana (11), Tamilnadu (9) and Delhi (7). These schools without building in rural areas have increased akin to other categories of schools, and it is arithmetically around 65 higher secondary schools during Seventh Survey in the country.

PART II

Ownership of School Premises

The school premises are provided by the various social trusts, organisations and individuals apart from the government or local body institutions having a vide range of variations in terms of ownership of school premises in the country. The ownership of school premises for the major portion of school buildings is considered on three major aspects in the Seventh Survey that are owned, rented and rent-free school building premises.

Table 5 to Table 8 provides statistics on schools according to ownership of premises of buildings (owned, rented and rent-free) for primary, upper primary, secondary and higher secondary schools by area (rural and urban) and management (government, local body, private aided and private unaided), respectively in the country.

A. Ownership of School Premises – All Schools

The ownership of school premises in Seventh Survey for 10,30,996 schools provides the statistics that 8,45,592; 97,657; and 87,747 schools have own (82.02 per cent), rented (9.47 per cent) and rent-free (8.51 per cent) school building premises, respectively in the country. Area-wise proportion of these schools functioning in their own premises is higher in rural areas (86.24 per cent) as compared to urban areas (61.77 per cent) akin to finding of the earlier surveys. In urban areas, 29.99 per cent schools are running in rented premises as compared to 5.20 per cent schools in rural areas. Management-wise figures of the Seventh Survey point out that the ownership of maximum schools having either owned or rent-free building premises are with the government and local body schools in the country. In terms of percentage, only 2.21 per cent government and 2.77 per cent local body schools have rented school building premises, respectively. On the other hand, 25.08 per cent private aided and 42.28 per cent private unaided schools have rented building premises in the country.

B. Ownership of School Premises – Primary Schools

Table 5

Primary Schools According to Ownership of Premises, 2002

Area/Management	*Schools Having Premises*			
	Owned	*Rented*	*Rent- Free*	*Total*
1	2	3	4	5
Rural	5,03,633	17,804	51,377	5,72,814
	(87.92)	(3.11)	(8.97)	(100.00)

Urban	48,768	20,842	8,640	78,250
	(62.32)	(26.64)	(11.04)	(100.00)
Total	5,52,401	38,646	60,017	6,51,064
	(84.84)	(5.94)	(9.22)	(100.00)
Government	3,17,600	8,459	37,012	3,63,071
	(87.48)	(2.33)	(10.19)	(100.00)
Local Body	1,91,772	5,250	17,695	2,14,717
	(89.31)	(2.45)	(8.24)	(100.00)
Private Aided	18,202	3,841	1,566	23,609
	(77.10)	(16.27)	(6.63)	(100.00)
Private Unaided	24,827	21,096	3,744	49,667
	(49.99)	(42.47)	(7.54)	(100.00)

Note: Figures within parentheses indicate percentages.

There are 6,51,064 primary schools in the country; of which 5,52,401 primary schools (84.84 per cent) have own; 38,646 primary schools (5.94 per cent) have rented and 60,017 primary schools (9.22 per cent) have rent-free school building premises during Seventh Survey. The proportion of these schools functioning in their own premises is found higher in rural areas (87.92 per cent) as compared to urban areas (62.32 per cent). The urban areas consists of 26.64 per cent schools that are running in rented school building premises as compared to 3.11 per cent schools in the rural areas. Management-wise segregation of distribution in regard to proportions of primary schools functioning in rented school building premises is found higher in the schools managed by private organisations as compared to schools managed by public authorities (government or local body) in the country.

C. Ownership of School Premises – Upper Primary Schools

Table 6

Upper Primary Schools According to Ownership of Premises, 2002

Area/Management	*Schools Having Premises*			
	Owned	*Rented*	*Rent- Free*	*Total*
1	*2*	*3*	*4*	*5*
Rural	1,64,501	13,772	15,674	1,93,947
	(84.82)	(7.10)	(8.08)	(100.00)
Urban	29,152	18,768	3,455	51,375
	(56.74)	(36.53)	(6.73)	(100.00)

Total	1,93,653	32,540	19,129	2,45,322
	(78.94)	(13.26)	(7.80)	(100.00)
Government	95,613	2,124	13,568	1,11,305
	(85.90)	(1.91)	(12.19)	(100.00)
Local Body	62,148	2,302	2,249	66,699
	(93.18)	(3.45)	(3.37)	(100.00)
Private Aided	13,195	4,030	863	18,088
	(72.95)	(22.28)	(4.77)	(100.00)
Private Unaided	22,697	24,084	2,449	49,230
	(46.10)	(48.92)	(4.98)	(100.00)

Note: Figures within parentheses indicate percentages.

The Seventh Survey reported in regard to ownership of upper primary school building premises that 1,93,653 schools (78.94 per cent) have owned; 32,540 schools (13.26 per cent) are having rented as well as 19,129 schools (7.80 per cent) are having rent-free school building premises in the country. In rural areas, the proportions of schools falling under upper primary category are functioning in their own premises on higher side (84.82 per cent) as compared to urban areas (56.74 per cent). The proportion of upper primary schools running in rented school building premises is quite high in urban areas consisting of 36.53 per cent schools that are running in rented school building premises as compared to 7.10 per cent schools in rural areas. Management-wise data analysis in terms of per cent points for upper primary schools functioning in rented school building premises is comparatively on higher side in the schools as managed by private organisations in respect of schools managed by government or local body in the country. Empirically, the private aided and private unaided schools are running 22.28 per cent and 48.92 per cent upper primary schools in the rented school building premises, respectively.

D. Ownership of School Premises – Secondary Schools

Table 7

Secondary Schools According to Ownership of Premises, 2002

Area/Management	*Schools Having Premises*			
	Owned	*Rented*	*Rent- Free*	*Total*
1	*2*	*3*	*4*	*5*
Rural	48,777	9,900	4,899	63,576
	(76.72)	(15.57)	(7.71)	(100.00)
Urban	1,60,90	9,588	1,487	27,165
	(59.23)	(35.30)	(5.47)	(100.00)

Total	64,867	19,488	6,386	90,741
	(71.48)	(21.48)	(7.04)	(100.00)
Government	26,612	729	3,250	30,591
	(86.99)	(2.38)	(10.63)	(100.00)
Local Body	9,057	396	514	9,967
	(90.87)	(3.97)	(5.16)	(100.00)
Private Aided	13,941	8,703	1,258	23,902
	(58.33)	(36.41)	(5.26)	(100.00)
Private Unaided	15,257	9,660	1,364	26,281
	(58.05)	(36.76)	(5.19)	(100.00)

Note: Figures within parentheses indicate percentages.

Of the 90,741 secondary schools in the country; 64,867 schools (71.48 per cent) are functioning in building premises owned by schools. In addition, a substantial number that is 19,488 secondary schools (21.48 per cent) are running in the rented school building premises, whereas remaining 6,386 secondary schools (7.04 per cent) are having rent-free school building premises in the country. The proportion of schools running in own premises in rural areas has been nearly 76.72 per cent whereas it has been reported nearly 59.23 per cent in urban areas at the time of Seventh Survey. It is important to mention that management-wise nearly 36.41 per cent private aided, and 36.76 per cent private unaided secondary schools are functioning in rented premises. The situation is quite satisfactory for government and local body secondary schools as nearly more than 87 per cent schools are housed in the premises owned by them.

E. Ownership of School Premises – Higher Secondary Schools

Table 8

Higher Secondary Schools According to Ownership of Premises, 2002

Area/Management	*Schools Having Premises*			
	Owned	*Rented*	*Rent- Free*	*Total*
1	*2*	*3*	*4*	*5*
Rural	18,855	2,855	1,137	22,847
	(82.53)	(12.49)	(4.98)	(100.00)
Urban	15,816	4,128	1,078	21,022
	(75.23)	(19.64)	(5.13)	(100.00)
Total	34,671	6,983	2,215	43,869
	(79.03)	(15.92)	(5.05)	(100.00)

Government	14,092	169	1,332	15,593
	(90.37)	(1.09)	(8.54)	(100.00)
Local Body	1,186	155	59	1,400
	(84.72)	(11.07)	(4.21)	(100.00)
Private Aided	11,346	3,776	418	15,540
	(73.01)	(24.30)	(2.69)	(100.00)
Private Unaided	8,047	2,883	406	11,336
	(70.99)	(25.43)	(3.58)	(100.00)

Note: Figures within parentheses indicate percentages.

Out of 43,869 higher secondary schools in the country; 34,671 schools (79.03 per cent) are housed in building premises owned by the schools; 6,983 higher secondary schools (15.92 per cent) are functioning in the rented school building premises; and remaining 2,215 higher secondary schools (5.05 per cent) are having rent-free school building premises at the time of Seventh Survey. In rural areas, 82.53 per cent higher secondary schools are reported in owned school building premises, and are found on higher side as compared to 75.23 per cent higher secondary schools running in owned school building premises in urban areas. Considering the proportion of higher secondary schools by management, it is observed that percentage of schools functioning in rented school building premises is highest for private unaided schools (25.43 per cent), followed by private aided schools (24.30 per cent), local body schools (11.07 per cent) and government schools (1.09 per cent), respectively.

PART III

Additional Classrooms Required

The literature available on imparting instructions to school children reveals that generally adequate numbers of classrooms are not available for smooth functioning of the schools prominently running in *kuchcha*, thatched huts, tents and open space including schools having *pucca* and partly *pucca* buildings in the country. The *pucca* and partly *pucca* schools buildings requires additional classrooms in view of growth in children enrolled in schools or inadequate provisions made at planning stage of buildings by school management as well as approval granted by the concerned public authorities for recognition of schools in the country.

Table 9 to Table 12 provide information pertaining to additional requirement of classrooms (nil, one, two to three, four to five and more than five) in schools for primary, upper primary, secondary and higher secondary schools by area (rural and urban) and management (government, local body, private aided and private unaided), respectively in the country.

A. Additional Classrooms Required – All Schools

The Seventh Survey reveals that 3,79,404 schools (36.80 per cent) do not

require additional classrooms, which comes from 2,88,912 schools (33.86 per cent) in rural areas as well as 90,492 schools (50.89 per cent) in urban areas in the country. Also, it is pertinent to mention that 6,51,592 schools (63.20 per cent) require 18,88,600 additional classrooms in the country. Area-wise, the requirement of additional classrooms has been 15,55,941 rooms in rural schools as well as 3,32,659 rooms in urban schools at the time of Seventh Survey. Maximum number of additional classrooms is required for 4 to 6 classrooms group in 32.93 per cent schools scattered in rural areas (35.03 per cent) and urban areas (22.89 per cent).

B. Additional Classrooms Required – Primary Schools

Table 9
Primary Schools According to Additional Classrooms Required, 2002

Area/ Management	*Schools Requiring Additional Classrooms*						
	Nil	*1*	*2-3*	*4-5*	*More than 5*	*Total*	*Total No. of Additional Classrooms Required*
1	2	3	4	5	6	7	8
Rural	1,97,276	1,10,740	2,13,329	45,849	5,620	5,72,814	9,39,470
	(34.44)	(19.33)	(37.24)	(8.01)	(0.98)	(100)	
Urban	38,203	10,404	21,269	6,204	2,170	78,250	1,17,011
	(48.82)	(13.30)	(27.18)	(7.93)	(2.77)	(100)	
Total	2,35,479	1,21,144	2,34,598	52,053	7,790	6,51,064	10,56,481
	(36.17)	(18.61)	(36.03)	(8.00)	(1.19)	100	
Government	1,18,684	66,330	1,42,373	31,322	4,362	3,63,071	6,34,718
	(32.69)	(18.27)	(39.21)	(8.63)	(1.20)	(100)	
Local Body	74,216	45,385	75,835	17,001	2,280	2,14,717	3,38,816
	(34.56)	(21.14)	(35.32)	(7.92)	(1.06)	(100)	
Private Aided	12,512	2,986	6,114	1,617	380	23,609	30,258
	(52.99)	(12.65)	(25.90)	(6.85)	(1.61)	(100)	
Private Unaided	30,067	6,443	10,276	2,113	768	49,667	52,689
	(60.54)	(12.97)	(20.69)	(4.25)	(1.55)	(100)	

Note: Figures within parentheses indicate percentages.

Of the 6,51,064 primary schools in the country; 2,35,479 schools (36.17 per cent) do not require additional classrooms while 1,21,144 schools (18.61 per cent) require one additional classroom; 2,34,598 schools (36.03 per cent) require two to three additional classrooms. The majority of primary schools require two to three additional classrooms that are 37.24 per cent in rural areas and 27.18 per cent in urban areas, respectively - which may be the

policy norms for granting recognition to primary schools by the concerned public authorities. The total number of additional classrooms required by these schools is 10,56,481 rooms during Seventh Survey, thereby, reflecting an increase of 70,769 additional classrooms with respect to Sixth Survey. In per cent points, increase in requirement of additional classrooms comes nearly 7.18 per cent. The percentage of primary schools having inadequate number of classrooms is more in rural areas (65.56) than in urban areas (51.18) akin to Sixth Survey in the country. Management wise, the primary schools managed by private agencies are relatively better placed than the schools managed by public agencies (government or local body) so far as percentage of schools having adequate number of classrooms is concerned.

C. Additional Classrooms Required – Upper Primary Schools

Table 10

Upper Primary Schools According to Additional Classrooms Required, 2002

Area/ Management	*Schools Requiring Additional Classrooms*						
	Nil	*1*	*2-3*	*4-5*	*More than 5*	*Total*	*Total No. of Additional Classrooms Required*
1	2	3	4	5	6	7	8
Rural	63,426	29,580	66,239	26,866	7,836	1,93,947	3,83,867
	(32.71)	(15.25)	(34.15)	(13.85)	(4.04)	(100)	
Urban	26,960	5,153	11,502	4,635	3,125	51,375	87,016
	(52.48)	(10.03)	(22.39)	(9.02)	(6.08)	(100)	
Total	90,386	34,733	77,741	31,501	10,961	2,45,322	4,70,883
	(36.84)	(14.12)	(31.69)	(12.84)	(4.47)	(100)	
Government	31,166	15,723	41,090	17,727	5,599	1,11,305	2,47,416
	(28.00)	(14.13)	(36.92)	(15.93)	(5.03)	(100)	
Local Body	22,482	10,642	20,803	9,441	3,331	66,699	1,34,518
	(33.71)	(15.96)	(31.19)	(14.15)	(4.99)	(100)	
Private Aided	9,235	2,018	4,841	1,354	640	18,088	26,423
	(51.06)	(11.16)	(26.76)	(7.48)	(3.54)	(100)	
Private Unaided	27,503	6,350	11,007	2,979	1,391	49,230	62,526
	(55.87)	(12.90)	(22.36)	(6.05)	(2.82)	(100)	

Note: Figures within parentheses indicate percentages.

Of the 2,45,322 upper primary schools; 90,386 schools (36.84 per cent) have adequate number of classrooms whereas 34,733 schools (14.12 per cent) require one additional classroom; 77,741 schools (31.69 per cent) require

two to three additional classrooms. Most of the upper primary schools require two to three additional classrooms that are 34.15 per cent in rural areas and 22.39 per cent in urban areas, respectively. The additional number of classrooms required by upper primary schools is 4,70,883 class rooms. During Sixth Survey; 57,282 upper primary schools (35.18 per cent) had adequate number of classrooms, and hence showing an increase of 1,17,079 additional classrooms (33.09 per cent) at the time of Seventh Survey as compared to Sixth Survey. The upper primary schools with inadequate number of classrooms are reported more in rural areas (67.29) than in urban areas (47.52) at the time of Seventh Survey. Similar findings were also observed during Sixth Survey in the country. Considering the management-wise figures, it is observed that the proportion of schools having adequate number of classrooms is higher for upper primary schools managed by private unaided and private aided schools, and are relatively better in terms of statistics available from Seventh Survey reports than the schools managed by government or local body.

D. Additional Classrooms Required – Secondary Schools

Table 11

Secondary Schools According to Additional Classrooms Required, 2002

Area/ Management	*Schools Requiring Additional Classrooms*						
	Nil	*1 -3*	*4 – 6*	*7 -9*	*More than 10*	*Total*	*Total No. of Additional Classrooms Required*
1	2	3	4	5	6	7	8
Rural	20,649	26,959	12,912	1,888	1,168	63,576	1,49,672
	(32.48)	(42.40)	(20.31)	(2.97)	(1.84)	(100)	
Urban	15,290	6,493	3,821	773	788	27,165	49,482
	(56.29)	(23.90)	(14.07)	(2.84)	(2.90)	(100)	
Total	35,939	33,452	16,733	2,661	1,956	90,741	1,99,154
	(39.61)	(36.87)	(18.44)	(2.93)	(2.16)	(100)	
Government	7,367	12,973	7,760	1,413	1,078	30,591	89,514
	(24.08)	(42.41)	(25.37)	(4.62)	(3.52)	(100)	
Local Body	2,431	4,548	2,523	296	169	9,967	26,652
	(24.39)	(45.63)	(25.31)	(2.97)	(1.70)	(100)	
Private Aided	11,504	7,855	3,751	495	297	23,902	42,958
	(48.13)	(32.87)	(15.69)	(2.07)	(1.24)	(100)	
Private Unaided	14,637	8,076	2,699	457	412	26,281	40,030
	(55.69)	(30.73)	(10.27)	(1.74)	(1.57)	(100)	

Note: Figures within parentheses indicate percentages.

As per Seventh Survey, total number of secondary schools is reported to be nearly 90,741 schools. Out of these, 35,939 secondary schools (39.61 per cent) do not require additional classrooms in the country. Besides, 33,452 schools (36.87 per cent) need one additional classroom; 16,733 schools (18.44 per cent) require two to three additional classrooms. The majority of secondary schools (36.87 per cent) require one to three additional classrooms, and this proportion in terms of requirement for one to three additional classrooms in rural areas 42.40 per cent whereas it is 23.90 per cent in urban areas, respectively. The requirement of additional classrooms for secondary schools is around 89,514 classrooms at the time of Seventh Survey. It reveals a longitudinal increase of 15,295 additional classrooms in respect to Sixth Survey, which comes nearly 8.32 per cent. Area-wise percentage of secondary schools having inadequate number of classrooms is obtained more in rural areas (67.52) as compared with figures in urban areas (43.71). Similar findings are also reported during Sixth Survey in the country. Management-wise, the secondary schools managed by the private agencies are relatively better in this respect to the schools managed by public agencies so far as percentages of schools having adequate number of classrooms are concerned.

E. Additional Classrooms Required – Higher Secondary Schools

Table 12
Higher Secondary Schools According to Additional Classrooms Required, 2002

Area/ Management	Schools Requiring Additional Classrooms						
	Nil	1 -3	4 - 6	7 -9	More than 10	Total	Total No. of Additional Classrooms Required
1	2	3	4	5	6	7	8
Rural	7,561	5,509	6,368	1,483	1,926	22,847	82,932
	(33.10)	(24.11)	(27.87)	(6.49)	(8.43)	(100)	
Urban	10,039	3,044	4,109	1,194	2,636	21,022	79,150
	(47.75)	(14.48)	(19.55)	(5.68)	(12.54)	(100)	
Total	17,600	8,553	10,477	2,677	4,562	43,869	1,62,082
	(40.12)	(19.50)	(23.88)	(6.10)	(10.40)	(100)	
Government	4,006	3,216	5,027	1,225	2,119	15,593	71,495
	(25.69)	(20.62)	(32.24)	(7.86)	(13.59)	(100)	
Local Body	434	335	418	80	133	1,400	5,614
	(31.00)	(23.93)	(29.86)	(5.71)	(9.50)	(100)	

Private Aided	6,986	2,782	3,454	897	1,421	15,540	51,599
	(44.96)	(17.90)	(22.23)	(5.77)	(9.14)	(100)	
Private Unaided	6,174	2,220	1,578	475	889	11,336	33,374
	(54.47)	(19.58)	(13.92)	(4.19)	(7.84)	(100)	

Note: Figures within parentheses indicate percentages.

At the time of Seventh Survey; 17,600 higher secondary schools (40.12 per cent) out of 43,869 higher secondary schools have adequate number of classrooms. Around 8,553 schools (19.50 per cent) require one to three additional classrooms; 10,477 schools (23.88 per cent) require four to six additional classrooms. The requirement of additional classrooms is found maximum for four to six classrooms that are 27.87 per cent in rural areas, and 19.55 per cent in urban areas, respectively. The additional number of classrooms required by higher secondary schools is 1,62,082 classrooms. At the time of Sixth Survey; 8,792 higher secondary schools (37.16 per cent) furnished information regarding adequate number of classrooms, thereby, exhibiting an increase of 8,808 higher secondary schools (100.18 per cent) having adequate number of classrooms at the time of Seventh Survey in the country. Also, the additional classrooms required in higher secondary schools has been 83,900 classrooms which has been substantially increased nearly 93.18 per cent at the time of Seventh Survey as compared to Sixth Survey in terms of the requirement of additional classrooms for higher secondary schools. The inadequate number of classrooms in higher secondary schools is reported more in rural areas (66.90) than in urban areas (52.25) at the time of Seventh Survey. Similar findings were also observed during Sixth Survey in the country. The proportion of higher secondary schools having adequate number of classrooms is the highest in private unaided (54.47 per cent), followed by the private aided schools (44.96 per cent), local body (31.00 per cent) and government (25.69 per cent) schools as per the available statistics of the Seventh Survey.

PART IV

Rooms Used for Instructional Purposes in Schools

The Seventh Survey has canvassed information on the utilisation of rooms covering various aspects, viz., total number of rooms in the school, availability of separate room for the Headmaster/ Principal, number of rooms used for teaching purposes excluding Headmaster/ Principal room, office room, laboratories, library, staff-room, workshops, craft-room etc. In the present study, the area-wise schools according to number of rooms used for instructional purposes are specifically analysed and discussed in succeeding paragraphs.

Table 13 provides information according to number of rooms used for instructional purposes in primary, upper primary, secondary and higher secondary schools by area (rural and urban) and management (government, local body, private aided and private unaided), respectively in the country.

Table 13

Area-wise Schools According to Number of Rooms Used for Instructional Purposes, 2002

School Category	*Area*	*Schools According to Number of Rooms Used for Instructional Purposes*										
		Nil	*1*	*2*	*3*	*4*	*5*	*6- 7*	*8- 9*	*10 & above*	*Total*	*No. of Rooms per School*
1	2	3	4	5	6	7	8	9	10	11	12	13
Primary	Rural	14,895	1,11,921	2,32,072	1,03,796	57,914	31,402	13,238	4,655	2,921	5,72,814	2.5
		(2.60)	(19.54)	(40.52)	(18.12)	(10.11)	(5.48)	(2.31)	(0.81)	(0.51)	(100)	
	Urban	1,544	7,563	12,977	9,879	13,175	13,534	8,138	4,369	7,071	78,250	4.8
		(1.97)	(9.67)	(16.58)	(12.62)	(16.84)	(17.30)	(10.40)	(5.58)	(9.04)	(100)	
	Total	16,439	1,19,484	2,45,049	1,13,675	71,089	44,936	21,376	9,024	9,992	6,51,064	2.8
		(2.53)	(18.35)	(37.64)	(17.46)	(10.92)	(6.90)	(3.28)	(1.39)	(1.53)	(100)	
Upper Primary	Rural	3,188	10,848	22,900	40,478	27,689	21,021	38,638	17,572	11,613	1,93,947	4.9
		(1.64)	(5.59)	(11.81)	(20.87)	(14.28)	(10.84)	(19.92)	(9.06)	(5.99)	(100)	
	Urban	232	823	1,709	5,040	4,615	4,714	11,887	9,157	13,198	51,375	8.0
		(0.45)	(1.60)	(3.33)	(9.81)	(8.98)	(9.18)	(23.14)	(17.82)	(25.69)	(100)	
	Total	3,420	11,671	24,609	45,518	32,304	25,735	50,525	26,729	24,811	2,45,322	5.5
		(1.39)	(4.76)	(10.03)	(18.56)	(13.17)	(10.49)	(20.60)	(10.89)	(10.11)	(100)	
Secondary	Rural	414	14,657	25,355	11,170	7,438	2,298	937	529	778	63,576	6.6
		(0.65)	(23.05)	(39.88)	(17.57)	(11.70)	(3.62)	(1.48)	(0.83)	(1.22)	(100)	
	Urban	61	3,204	5,843	4,305	5,873	2,920	1,626	1,148	2,185	27,165	10.8
		(0.22)	(11.79)	(21.51)	(15.85)	(21.62)	(10.75)	(5.99)	(4.23)	(8.04)	(100)	
	Total	475	17,861	31,198	15,475	13,311	5,218	2,563	1,677	2,963	90,741	7.8
		(0.52)	(19.68)	(34.38)	(17.06)	(14.67)	(5.75)	(2.82)	(1.85)	(3.27)	(100)	
Higher Secondary	Rural	81	769	2,954	4,467	4,330	3,338	2,315	1,446	3,147	22,847	13.6
		(0.36)	(3.37)	(12.93)	(19.55)	(18.95)	(14.61)	(10.13)	(6.33)	(13.77)	(100)	
	Urban	43	324	1,292	1,940	2,733	2,591	2,286	1,935	7,878	21,022	20.8
		(0.20)	(1.54)	(6.15)	(9.23)	(13.00)	(12.33)	(10.87)	(9.20)	(37.48)	(100)	
	Total	124	1,093	4,246	6,407	7,063	5,929	4,601	3,381	11,025	43,869	17.0
		(0.28)	(2.49)	(9.68)	(14.60)	(16.10)	(13.52)	(10.49)	(7.71)	(25.13)	(100)	

The data collected under Seventh Survey makes public that out of total 10,30,996 schools 20,458 schools are not using rooms for instructional purposes in the country, thereby it reflects that 1.98 per cent schools are providing education to children without having a classroom in the country. The situation is bad in rural areas having 18,578 schools (2.18 per cent) as compared to urban areas having 1,880 schools (1.06 per cent) without rooms that is nil or zero rooms used for instructional purposes. Besides, majority of schools have two rooms used for instructional purposes that are numerically 3,05,102 schools (29.59 per cent), followed by three rooms used for instructional purposes by 1,81,075 schools (17.56 per cent) in the country.

The schools according to number of rooms used for instructional purposes by category of schools are found to be maximum for primary schools in terms of absolute number (14,895) as well as per cent points (2.60) in rural areas followed by schools in urban areas for primary schools in the country. The average number of rooms per primary school is also found around 2.5 rooms in rural areas followed by 4.8 rooms in urban areas for primary schools in the country. The situation of upper primary schools according to number of rooms used for instructional purposes is comparatively better than primary schools by area at the time of Seventh Survey.

The secondary education, through secondary and higher secondary schools, is also having nil/zero number of rooms for instructional purposes in the country. In terms of proportions, these schools are mainly scattered over rural area for secondary schools (0.65 per cent) and higher secondary schools (0.36 per cent). However, the urban area is also contributing around 0.22 per cent secondary schools and 0.20 per cent higher secondary schools using nil/ zero number of rooms for instructional purposes. Even, average number of rooms per school for secondary and higher secondary schools is found to be less, that is, empirically 6.6 rooms and 13.6 rooms in rural area as compared to 10.8 rooms and 20.8 rooms in urban area, respectively in the country.

Conclusions

On the basis of the above data analysis vis-à-vis results and discussions of secondary data available from the educational surveys, it may be concluded that the public authorities shall have to re-visit their aims and goals of mass education on condition of school buildings, viz., infrastructure facilities pertaining to the types of school buildings, ownership of schools premises, additional classrooms required, rooms used for instructional purposes having concern with the school education in country, while implementing/proposing the universalisation of either elementary or secondary (yet to be initiated) level education for accommodating all children in school buildings irrespective of their management through proper public regulations, and implementation thereof in practice keeping in view the objectives of constitutional mandate in this regard in the interest of school going children of India.

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Differences in Students' Interest in Physics by Gender and Stage of Schooling in Kerala

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Abstract

Amid worldwide studies indicating declining students' interest in physics during secondary stage especially among girls, this study explores boys' and girls' interest in physics and changes thereof as students go up the educational ladder, on a sample of 1509 boys and 1727 girls in upper primary to higher secondary schools in Kerala. It employed a combination of cross-sectional and longitudinal designs of survey. Interest in physics was measured as sum of preference scores on a set of physics topics at upper primary, high school and higher secondary stages. Irrespective of gender, interest in physics topics is highest at the upper primary stage, with a slight advantage for girls. In general, by high school, there is 12% decline in interest in physics and a further 14% decline by higher secondary stage; decline being more among girls than boys. Decline in interest of girls is more in physics than interest in science in general; decline in interest of boys is less in physics than interest in science in general. The findings are discussed in view of self-related knowledge of students, achievement and instructional practices.

Introduction

National Curriculum Framework (NCERT, 2005) stressed fundamental shifts and changes in interests of students and wanted assessment to encompass attitudes to learning and interest. Investigation of students' attitudes towards studying science has been a substantive feature of research in science education for the past 30–40 years (Osborne *et al.*, 2003, p. 1049). Research in that area is still a subject

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of significance (Trumper, 2006**)** owing to persistent decline in post-compulsory high school science enrollment over the last two decades, which has generated concern in many countries, including India (Garg & Gupta, 2003). In search of an answer for the globally alarming situation, many science educators have given greater importance to the affective domain (Gardner, 1985, 1998; Oh & Yager, 2004), especially attitudes and interests.

Students' originally positive attitudes toward science subjects change markedly in the upper grades, especially in chemistry and physics (Graber, 1993; Greenfield, 1997). Studies indicate that students' interest in physics declines during secondary stage and that girls are less interested in physics than boys (Gardner 1985, 1998; Ormerod & Duckworth, 1975). Students considered physics and chemistry to be the most difficult of science courses, and generally more difficult than most other subjects (Lyons, 2004).

Combining cross-sectional and longitudinal designs on about 8000 students in German schools, Hoffmann (2002) revealed that girls find physics less and less interesting as they grow older; and, by the end of the 5th grade, well before the majority of classes begin to study physics, girls generally show markedly less interest than boys in most of the areas of physics. Moreover, girls generally regard physics as belonging to the group of the least interesting subjects; and, boys to those that are the most interesting. Distinct reduction in interest in the majority of areas in physics, more marked in girls than in boys, was seen in the 7th grade when the majority of classes begin to study physics (Hoffmann, 2002). In U.S. too, while male and female 7th and 10th graders have similar positive attitudes toward science, high school seniors show a greater difference in these attitudes (U.S Department of Education, 1997).

In Kerala also, gender difference in physics learning is reported. Out of the 63 concepts in Physics that show gender difference in misconceptions, 37 concepts have higher rate of misconception among girls than boys. Only 26 concepts in Physics have higher rate of misconceptions among boys, than in girls (Gafoor & Akhilesh, 2008). Like the global pattern, in Kerala higher secondary stage girls have more interest in biology and less interest in physical science than boys (Gafoor, 2011) do. Elsewhere, Halpern et al. (2007) also observed that girls, particularly as they move out of elementary school and into middle and high school and beyond, often underestimate their abilities in science. British girls in primary classes expressed more interest in studying further school science topics than the boys; by high school the level of interest amongst the girls dropped considerably so that the girls who had greatest primary science experience now gave the lowest response to questions about interest in future school science topics (Craig & Ayres, 1988 p. 423). In Germany too, Haussler (1987) confirmed the general trend found in many other studies; overall interest in physics decreases as students grow older and that boys are more interested than girls. However, this study found the drop in interest rather moderate; which was

most pronounced during the interval between 12 and 13 years of age, the age when formal instruction in physics starts, and was fairly level afterwards. As interest is a medium supporting learning processes (Krapp, Hidi, & Renninger, 1992; Nenniger, 1992), it is necessary to find out what boys' and girls' interest in physics is, and how does it change as students go up the educational ladder.

Interest in physics

The term 'interest' usually refers to preference to engage in some types of activities rather than others. An interest is a highly specific type of attitude. When one is interested in a particular phenomenon or activity, s/he is favourably inclined to attend to it and give time to it (Gardner & Tamir, 1989 p. 410). Interest emerges from an individual's interaction with environment (Renninger, Hoffmann, & Krapp, 1998). Interest in physics is a psychological construct understood as the relation of a student to physical matters (Hoffmann, 2002) determined among other things by the knowledge a student has in the field, his or her physics related self-concept, experience of competence, and self-determined engagement, and various emotional and affective components (Renninger, 1992). A distinction between general interest in physical matters and interest in physics as a school subject is possible (Hoffmann, 2002). General interest in physical matters is as individual interest in physics, an enduring personal disposition to engage with different areas of physics (Krapp, Hidi, & Renninger, 1992). Interest in physics as a school subject is a combination of individual interest in physics, and short-term interest in certain topics of physics produced by instructional factors (Hidi & Andersen, 1992).

Objectives

This study investigates interest in physics topics among school students in Kerala and the differences therein by stage of schooling and gender. This study has the following specific objectives, viz., 1) To estimate the extent of interest in physics among upper primary, high school and higher secondary school students of Kerala, and to contrast it against the extent of interest in science in general of these students; 2) To depict the changes in extent of interest in physics as the students go from upper through high school to higher secondary stages; and, 3) To reveal the extent of changes in interest in physics by gender and stage of schooling.

Methodology

This study employed a combination of cross-sectional and longitudinal designs of survey. Three cross-sectional sets of data pertaining to upper primary, high school and higher secondary school students were derived. There were intervals, of two years between the data collection of upper primary and high school stages; and, of three years between high school and higher secondary stages. This ensured that data collected in subsequent stages pertained to the same group, though not same individuals. All the three cross-sectional samples were drawn using stratified random procedures from

Kozhikode revenue district of Kerala, ensuring representativeness to the population of students (of their respective school stage) in Kerala. It is significant to note that all higher secondary school students sampled are science students, and hence possibly represents students with highest science related interest in that stage. In total, there were 1,509 boys and 1,727 girls (see Table 1 for details).

Table 1
Size and attributes of the samples used as source of data for the study

	Upper Primary			*High School*		*Higher Secondary*
Grade	V	VI	VII	VIII	IX	XII
Boys	216	229	208	272	231	353
Girls	243	279	286	259	238	422
Total	459	508	494	531	469	775

Interest in physics was scored as the sum of preference scores on a large set of topics on a 3-point Likert scale. There were 42, 30, and 20 physics topics in the measures meant for upper primary, high school and higher secondary school students respectively. The number of physics topics is higher in the lower stages in order to facilitate comprehension of the intended topic by younger students; number of topics could be progressively reduced as students go up the school and acquire more inclusive but precise terms to denote the areas in physics. Scores on select topics were averaged, and then converted to a derived score with a range, 0 to 1, to facilitate comparison among the data from the three stages. Test-retest reliability and Cronbach's alpha of the three measures were >.80. Measure of interest in school subjects in terms of preference for topics are more valid than the interest measures obtained from frequently used interest scales which employs attitudinal type statements. Further, these measures are more realistic as they are derived from the students' preference for topics they are studying at their stage of schooling, rather than a desirable state that the students wish to.

Interest in science scores are derived from the same three samples by employing similar aggregation of the preferences on topics from the three science streams – biology, chemistry, and physics.

Results

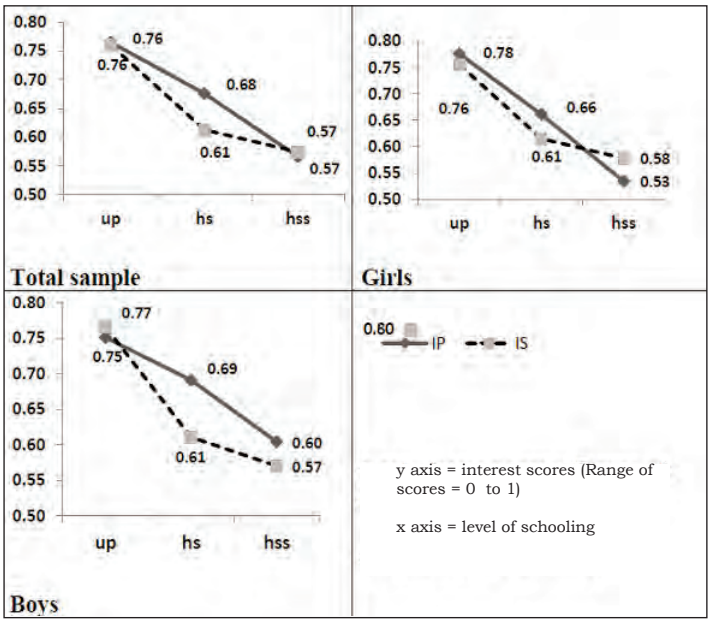
Extent of interest of students in physics at school

The scores on interest in physics that can range between 0 and 1 were derived for students at the three stages of schooling in total and by students' gender (Table 2).

Table 2
Derived mean score of interest in physics and interest in science among students at three stages of schooling

	Interest in Physics			*Interest in Science*		
	UP[a]	HS[b]	HSS[c]	UP	HS	HSS
Total	0.76	0.68	0.57	0.76	0.61	0.57
Boys	0.75	0.69	0.60	0.77	0.61	0.57
Girls	0.78	0.66	0.53	0.76	0.61	0.58

a, b, c denotes SD=0.17(.19), SD=0.22, and SD=0.19 respectively



Interest in physics topics is highest at the upper primary stage, for both boys and girls. It shows significant decline of nearly 0.5 standard deviations as the students reach high school and further decline of another 0.5 standard deviation as they reach higher secondary school. In tune with the observations of Gafoor and Smitha (2010), and Deepak (2010) about interest in science in general, interest in physics topics also decreases as the students go up the school stages, irrespective of the gender. This trend is visible in figure1.

Figure 1: Comparison of (decline in) interest in science (IS) and interest in physics (IP) of students (total, boy and girl samples) as they go from upper primary (UP) school through high school (HS) to Higher secondary (HSS).

Figure1 and Table 1 demonstrate the following. The decline in interest of girls is sharper in physics than interest in science in general; and, decline in interest of boys is less in physics than interest in science in general. Since the interest scores of higher secondary students plotted here pertains to science students only, the score of .53 to .60 (out of maximum of 1) can be considered moderate only and hence reason for students' low interest in physics has to be probed into.

Extent of changes in interest in physics by gender

Figure 2 shows that initially, at upper primary stage, girls (M= .78, SD= .17) had a little higher (3% score) interest in physics than boys (M= .75, SD= .19) [t= 2.70, p<.01]; but at the high school stage the relation is reversed with boys (M= .69, SD= .22) being a little more interested (3% score) in physics than girls (M= .66, SD= .22), [t= 2.11, p<.05]. In addition, at higher secondary stage the gender difference in interest in physics becomes clearly pronounced with boys being significantly higher (M= .60, SD= .19) on it than girls (M= .53, SD= .19) [t= 5.01, p<.01, (Effect Size= .39)]. Figure 2 shows that drop in interest in physics from upper primary stage to higher secondary stage is more acute among girls than boys.

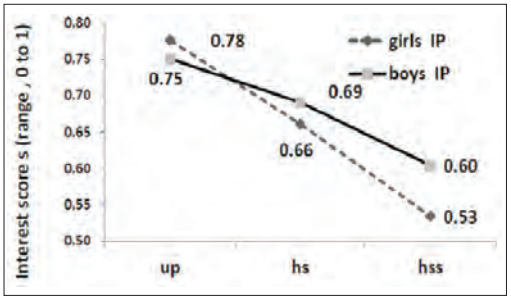


Figure 2: Comparison of decline in interest in physics of boys and girls as they go from upper primary (UP) school through high school (HS) to higher secondary (HSS) [Range of scores= 0 to 1]

Extent of changes in interest in physics by students' stage of schooling

In order to quantify the extent of decline in interest in physics by the stage of school, the interest in physics of the students at upper primary stage was considered maximum (100%) and the interest scores of the latter stages were proportionally amplified by multiplying them also with the same ratio. Then, the percentage decline in interest in physics by high school and higher secondary school was computed by subtracting the latter values from 100. Figure 3 shows the decline of interest in physics of the samples.

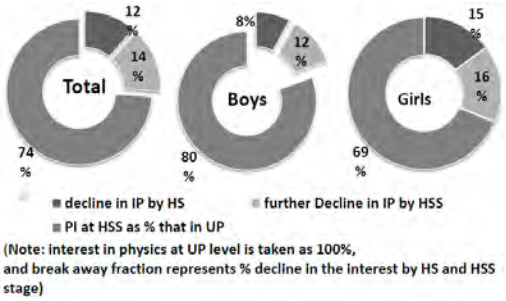


Figure 3: Reduction in interest in physics (IP) of students as they go from upper primary UP school through high school (HS) to higher secondary (HSS)

Figure 3 shows that in percentage terms, in total sample, there is 12% decline in interest in physics of high school students, in comparison to the

interest in physics of upper primary school students. Higher secondary school students' interest in physics is 14% further lower than that of high school students (26% less than the interest in physics of upper primary students). In higher secondary boy samples, thus, there is 20% less interest in physics than what the boys at upper primary stage have; of this 8% of interest is lost by high school stage, and 12% interest is lost by the higher secondary stage. In comparison to this, decline in interest in physics among girls is larger; there is 31% less interest in physics than what the girls at upper primary stage have; a reduction of 15% by high school stage and a further 16% interest is lost by the higher secondary stage. Drop in interest in physics is more in the transition from high school to higher secondary school, than during the transition from primary to high school.

Conclusions

The findings clearly demonstrate the decline in interest in physics among students as they move from upper primary through high school to senior secondary stages. This decline is more among girls than boys. Initially, girls had a little higher interest in physics than boys but at the high school stage, the relation is reversed with boys being a little more interested in physics than girls; by higher secondary stage the gender difference in interest in physics become clearly pronounced with boys being significantly higher on it than girls. Comparing the decline in interest in physics with decline in interest in science in general, among girls, it is observed that physics is less preferred than science in general; decline in interest of boys is less in physics than interest in science in general. Against the findings by Haussler (1987), that drop in interest in physics was most pronounced during the interval between 12 and 13 years of age, which is, level afterwards; this study found that drop in interest in physics was more pronounced during the transition from high school to higher secondary school. Girls' reduced interest in scientific and technical education is reported as beginning before and outside school (Hannover, 1998). In pre-school and outside school, trends appear which are then reinforced by school and by lessons in physics, chemistry and technology. Hence, interest oriented physics instruction is especially important for girls. Interests are mental representations that are strongly linked to self-related knowledge (Hannover 1998); interests are used to regulate self-esteem; interests and self-concept mutually influence each other. Gender difference in interest in physics seems to be mainly explained by gender differences in physics-related self-concept. Giving girls a better chance in physics means supporting them in developing a positive physics-related self-concept (Hoffmann, 1999); this is one condition for developing general interest in physics and higher physics achievement. Achievement and interest in physics are positively related, though not in equal terms for boys and girls. A meta-analysis of the relation between subject-matter-related interest and school achievement (Schiefele, Krapp, & Schreyer, 1993) found a mean correlation of 0.31 for physics and

science in general; the interest–achievement correlations for male students were significantly higher than for female students. Kelly (1978) assumes that the traditional gender stereotypes lead to generally less interest in the sciences among girls and that the reduced variance of girls' interest scores leads to lower correlation with the achievement indicators. Another attempt to explain lower achievement-interest relation assumes that girls behave with more conformity than boys do. Girls are willing to do what school expects of them; therefore, they have good grades even in those classes where their interest is limited (Baretti-Fuchs & Meadows, 1976).

A possible interpretation of decreasing interest in physics by increasing grade would be that prior to any physics instruction students have high expectations with respect to physics, which are not quite met by the kind of physics lessons they experience later in school. Hence, the findings suggest adding to the physics courses the topics that interest both girls and boys. Interest in physics can be enhanced, among other things, by introducing several topics using the history of science (Seker, 2005), and by using inquiry based instruction that provide opportunities for students to explore, manipulate, and experience how science knowledge is constructed (Tai & Tuan, 2005). In the specific context of Kerala, the gap in interest between boys and girls may be closed if physics is treated not solely as a scientific enterprise but also in its connection to our society; as individual teachers have a major effect on both overall science-interest and on specific topic related interests (Gafoor, 2009). As National Curriculum Framework (2005) advocates, learning in the early years must be directed by the child's interests and priorities, and should be contextualised by their experiences rather than being structured formally.

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'Best Interest Principle' for the Education of a Child

Prabha Hariharan*

Abstract

Our education system is going through a very important phase where its inadequacies are being revealed by various national and international educational outcome comparisons. While many states are taking up innovative educational experiments and practices, the overall picture of our educational outcomes still needs improvement. In this scenario, we need to clarify the guiding principles for the processes and practices of our education system with focus on the main goal of successful educational outcomes for all children. This article presents a framework called the 'Best Interest Principle' for the education of a child. This framework brings together three major factors that can be thought of as providing guidance to the processes and practices in our educational system.

The right to education is a major right that children in our country have (National Policy on Education, 1986, 1992; Right of Children to Free and Compulsory Education Act, 2009). The Right of Children to Free and Compulsory Education Act of 2009 specified the curriculum and evaluation procedures in elementary education in its section 29, sub-section (2), clauses (a) to (h). In these, it specifies, in clause (b), that curriculum should take into consideration 'all round development of the child', in clause (c) 'building up child's knowledge, potential and talent', in clause (d) 'development of physical and mental abilities to the fullest extent', in clause (e), it says "learning through activities, discovery and exploration in a child-friendly and child-centred manner" and in clause (g) 'make the child free of fear, trauma and anxiety and helping the child express views freely'. In addition, chapter III, section 2 directs the schools to provide free and compulsory education to students with disabilities as per guidelines in the Persons with Disabilities (Equal Opportunities, Protection and Full Participation) Act of 1995.

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This Law has provided the policy direction for implementing good quality education (chapter III, section 8 (h) from class 1 to class VIII for all students in our country, irrespective of their challenging conditions such as disability and low socio-economic status. The RTE Act (2009) has also laid down specifications on 'good quality education' which would be as per the Schedule of the RTE Act (2009).

However, educational outcome statistics at national level (ASER-2011 and Midterm Assessment Survey, 2000) and global levels (PISA-2010) have shown that the learning outcomes even in foundational skills such as reading ability are very low for Indian students. These statistical findings reflect that the guidelines in the NCF (2005), NPE, (1986) and the RTE Act (2009) are yet a long way from the classroom. In view of the current scenario, we, as a nation, need to revisit the processes and practices in our school education system. School education is an important part of a child's life as it develops in her/him foundational skills and higher order thinking abilities. Foundational skills are the skills of reading, writing, mathematics and basic cognitive skills such as observation, understand from situations and value systems. These skills are 'foundational' because, they make a student capable of deriving knowledge and information about the world through their application to instructional materials and other media. Higher order thinking processes enable students to gain deeper knowledge and understanding of the world and its processes through the content areas such as science and social science.

Lack of foundational skills development in early years of elementary school can negatively impact academic performance and achievement as students move from class to class. This creates an achievement gap between the two groups of children - those that develop the foundational abilities at their class level in early elementary years and those that don't. This achievement gap widens as students proceed to the higher classes. This phenomenon can be seen in the graphical representation of the achievement gap (Stanowich, 1986) and is shown in figure 1.

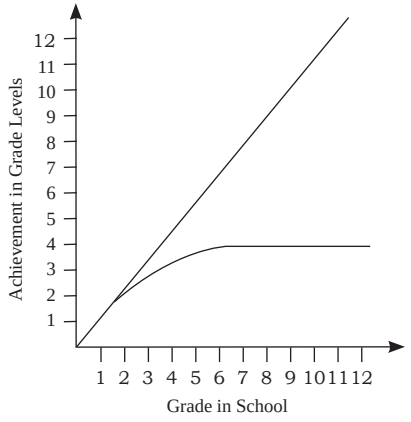

Figure 1: *Achievement Gap*

Who are the students who lag behind? These are students who have more challenging needs due to a variety of reasons. Additionally these students are most often found in our government schools. Our government schools are typically tasked with the job of providing education to students at low costs and are the main place of education for children from the lower socio-economic classes who constitute a major

proportion of children in our country. Children with disabilities and children from dalit, tribal, female headed families, landless families, and girl children form a majority among these marginalised children (De et. al., 1999; Sainath, 1996).

A lot of work needs to be done in terms of building effective instruction for developing successful learning outcomes in foundational skills and content knowledge in our children during their school going ages of 6-14 years. Such outcomes can prepare them for independent, productive and responsible adult life. An important question to ask at this juncture is 'What would constitute a school education programme that would be in the 'best interest' of the child?' This question is very important because while the law puts the onus of education of our country's children on our government, it is critical that these crucial years of education (age 6 to age 14) be delivered in the best interest of the child. The best interest of the child should be such that the education the child receives in these eight years successfully lays strong physical, intellectual, cognitive and affective foundations that enable the children to build their citizenship effectively for themselves as well as for their country.

The age group 6-14 years includes elementary education or primary education and middle school or lower secondary school education. Of these, the elementary education has to be strong as it captures students at their critical ages of development of the brain which is during the first decade of life. Development of the higher order thinking skills can be done efficiently during the middle school years. Both these then will go hand in hand as the students' progress through high school and beyond. An important task before our education system is therefore to ensure appropriate development of foundational and higher order thinking skills in these elementary and middle school years. Students need to be able to use their knowledge and thinking to address problems in society and find productive vocations and careers as they become future citizens. These aims and functions of education are also enumerated in the National Focus Group's Position paper on 'Aims of Education' (National Focus Group, 2007).

An education that fulfils the above-said purposes needs to be a common goal of all the personnel concerned with the education system. Figure 2 represents the education system at three levels. It shows these levels as three concentric circles where the outermost circle is the entire system, the middle circle is the school, the innermost circle is the classroom within which is the student. At each level, educational philosophies, ideologies and knowledge about the student's nature and needs should guide curricular decisions and practices. Through these three factors - both individual and collective, the personnel at each level such as the government officials in the departments of education, school heads and the teachers impact the educational experiences of the child and thereby the child's learning outcomes. This is reflected in the overall educational outcomes of our country.

In the next section, this article presents a framework of *'best interest*

principle' for the education of a child which would enable all concerned with the education system to work effectively towards the educational needs of the children in their care. In this framework, 'high quality education' is the central goal of the educational system as it addresses the fulfillment of the aims and functions of education in our country. 'High quality education' is envisioned as educational outcomes arising out of successful educational experiences and measured by attainment of highest possible learning outcomes in the various life skills, academic skills and knowledge areas for all students irrespective of their marginalising conditions such as disability and low socio-economic status. It also includes experiences that help students learn good values and translate values learned to values lived.

Framework of 'Best Interest Principle' for education of the child

The framework of the 'best interest principle for the education of the child' has, in its centre, students with successful educational experiences. This situation is the best situation for the child and should be provided for all children irrespective of caste, social class, gender and ability. It depends on three major factors - *philosophy* (or the system of inquiry) to construct the educational processes, *ideology* (or the set of ideas) that directs curricular practices and *knowledge* about the students' learning needs that have to be attended to (see figure 3).

Successful educational experience for 'high quality education' for a child is like a three-legged stool that is supported by the three factors as each leg. Successful educational experiences are the main stage or central manifestation of the educational processes. Such experiences will lead to the achievement of the goal of high quality education. This is so because, it will provide intrinsic motivation that can facilitate retention of students in school, choices to engage in learning activities, and faith in the educational system. Various efforts to retain students have shown to be problematic in their efficacy as many times, while enrolments have increased retention has been a challenge (Shirname, 2007). Successful educational experiences will play a motivating role for students to stay on in school and increase their faith in education as a liberating force.

The three factors which are shown as the three vertices of the triangular framework are the philosophy of critical pedagogy, ideology of constructivist pedagogy, and knowledge of students' needs. If the educational processes and practices of goal setting, curriculum planning, instruction and assessments are guided by these factors, they would take us towards providing successful educational experiences for all our students, which in turn would lead to successful educational outcomes both at an individual level as well as at the national level.

Each of these three factors has equal importance in enabling the education system to facilitate successful educational experiences for all children. When any one of them is not taken into account, it affects the educational experiences and outcomes for the children. They can be compared to the

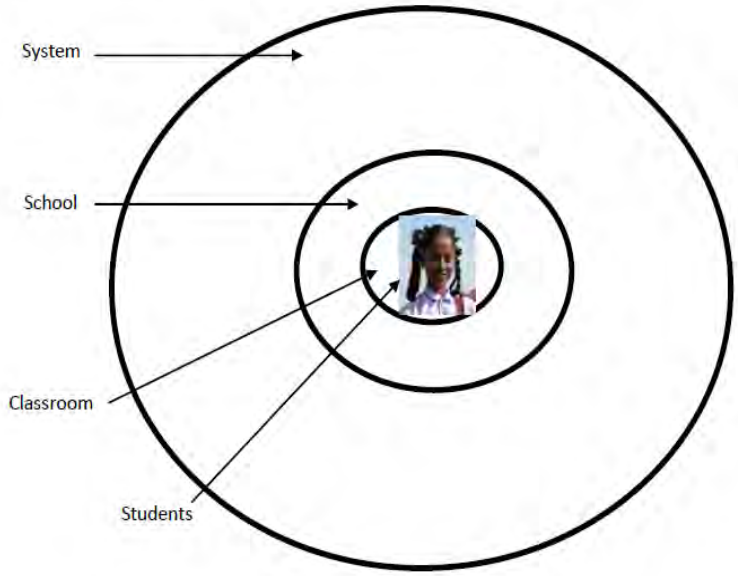

Figure 2: *Our Education System – a diagrammatic conceptulisation*

three legs of a three-legged stool whose seat is the successful educational experiences of the child.

Philosophy guides the overall processes of education and educational philosophy has been purported as a knowledge field with rigorous analysis of every aspect of the system (Sheshadri, 2008). Critical Pedagogy is a science and art of the teaching learning process, which enables development of attitudes and values of social consciousness, and responsibility through development of cognitive skills of critical thinking (Panda, 2006; Ramesh Babu, 2007). These skills are in the higher cognitive domain and include analysis, inferences, application, revisiting and reconsider existing unjust and improper practices in the society. Attitude of society reflects attitudes of people in schools and vice versa. In doing so, education acts either as an agent of status quo maintenance or an agent of change through social transformation. Since critical pedagogy, as a philosophy, has multi-dimensional potential, leading to creation of reflective and responsible democratic citizenship, it has to be the main guiding philosophy in our education system.

Ideology guides the educational processes emphasising 'how' knowledge should be understood. Constructivism is an ideology that originated in the 1700s and has been shown to be concerned with understanding of what is knowledge and how it develops. According to constructivism, knowledge is constructed by the knower using the society and the student's own experiences as the reference points for construction of knowledge. Such learning leads to purposive solutions for meaningful problems (Pandey, 2007).

Knowledge of students' needs guides the educational process regarding the different ways in which curriculum can be transacted. Knowledge of individual differences has increased owing to the increases in information in the fields of cognitive developmental neuroscience (Munakata, Casey & Diamond, 2004) and neuroscience research which can help education of children by understanding how the brain works at different ages and for different activities (Goswami, 2004). Further theories of multiple intelligences (Howard Gardner, 1983) and Universal Design for Learning (Rose, Meyer, Rappolt & Strangman, 2002) have shown that students actually vary in their intelligences and learning needs. In addition, socio-economic and cultural backgrounds also predispose children to differences in learning readiness and privileges, all of which contribute to individual differences among students.

Practical implication of the 'Framework of Best Interest Principle for Education of the child'

Traditionally, our pedagogical practices have involved the 'one size fits all' idea where there is a lecture method and students who follow the teacher within the time frame stipulated in the timetable progress while those that don't get left behind. Further, those who get left behind would be detained in the same class leading to negative social, emotional and psychological effects. Currently, we have a no-detention policy. This policy, although it addresses the negative effects of being detained, has brought about another set of negative consequences, which relate to the academic outcomes for the children and their preparedness for higher school and beyond. According to the National Sample Survey, many students who were not enrolled in school gave reasons as 'not interested' (Shirname, 2007). This clearly indicates the lack of enriching and motivating

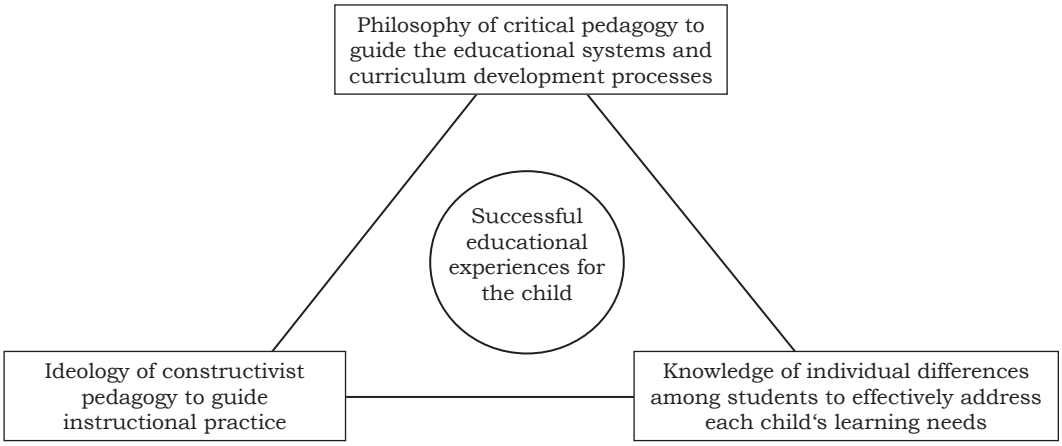

Figure 3: *Framework of 'Best Interest Principle' for education of a child*

experiences school needs to provide to students.

Although educational initiatives such as activity based learning used in elementary schools in Tamil Nadu have attempted at tailoring instruction to different levels and let students vary in their rates of progress, they still have not been able to lead to improvements in educational outcomes. Through such educational experiences, schools can become agents of social transformation as proposed in the National Curriculum Framework (2005) and in the earlier Kothari Commission Report (1964-66). Till date, our educational indicators are mostly in the levels of enrolment and retention ratios, literary levels and educational innovations have focussed on infrastructural innovations e.g., Operation Blackboard. More recently, new initiatives such as activity-based learning had some pedagogical innovative component also, however, due to lack of appropriate research, here too a sharp focus was on materials development leaving aside the component of educational experiences and learning outcomes.

Further, the RTE Act (2009) has listed infrastructure and hours of work as requirements for 'good quality education', but not requirements about educational outcomes, which also needs to be specified. The 'Best Interest Principle' for the education of the child proposed here hopes to provide a guidance for all individuals concerned with our education system at any level in their efforts towards developing educational processes and practices.

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