ISSN 0976-9994

EDUCATIONAL RESEARCH

VOLUME – IX

CENTRE FOR INNOVATIONS, RESEARCH AND DEVELOPMENT

(C I R D)

(2011)

SOHAN LAL DAV COLLEGE OF EDUCATION

(INSTITUTE OF ADVANCED STUDY IN EDUCATION)

ISO-9001:2000 certified

Graded A+by NAAC (Score 90-95%)

Old Methodology

AMBALA CITY – 134002

HARYANA (INDIA)

Premier Institute of Education established in 1939

Web site-www.sldaveducation.org, www.sldaveducation.webs.com,

e-mail: sldaveducation@gmail

CENTRE FOR INNOVATIONS, RESEARCH AND DEVELOPMENT (CIRD)

Editorial Board

ISSN 0976-9994

EDUCATIONAL RESEARCH

VOLUME – IX

CENTRE FOR INNOVATIONS, RESEARCH AND DEVELOPMENT

(C I R D)

(2011)

SOHAN LAL DAV COLLEGE OF EDUCATION

(INSTITUTE OF ADVANCED STUDY IN EDUCATION)

ISO-9001:2000 certified

Graded A+by NAAC (Score 90-95%)
Old Methodology

AMBALA CITY – 134002

HARYANA (INDIA)

Premier Institute of Education established in 1939

Web site-www.sldaveducation.org, www.sldaveducation.webs.com,

e-mail: sldaveducation@gmail.com

FOREWORD

It gives me immense pleasure to state that Sohan Lal DAV College of Education is a premiere Institute of Education which is catering to the needs of 21st Century of Modern India in Teacher Education. This institute has carved a niche in the field of teacher education by producing teachers, teacher educators, administrators, educationists of great repute. The uncountable benchmarks (like- A+ Grade in NAAC (old Methodology), excellent results in University, maximum students qualified national eligibility test conducted by University Grants Commission and many more). Such achievements in the field of teacher education reflect Collective Wisdom of the faculty under the dynamic leadership of Principal, Dr. Vivek Kohli.

It is appreciable to note that for advancing Frontiers of Knowledge through research and transmission, Dr. Kohli is releasing Annual Journal 'Educational Research' regularly through 'Centre for Innovations, Research and Development'. With his sincere and dedicated efforts this Volume international reputed is a referred Journal with ISSN No. 0976-9994

I am sure this issue would provide rich information as well as indepth knowledge that would lend insight to the researchers, practitioners, policy makers and other professionals involved in the field of teacher educators.

I wish the release of the issue a great success.

G.P. Chopra
Padam Bhushan
President
DAV College Managing Committee
New Delhi

PREFACE

Understanding the intricacies of the human mind is a difficult task and compre hending the teaching learning process and the underlying teacher learner Psychology is even more a complex activity Educational Research is a core subject which focuses on various issues, and which facilitates a better understanding of the whole gamut of educational system.

Any research serves its full purpose only when it is conveyed to the intended community. We have been focusing on different aspects of education through theme papers; research finding at different level in our Journals Educational Research Volume IX. This Journal has been launched to address the extraction of educational resources and knowledge processing that ultimately leads to the desired effect on learning and opening new vistes of research to be undertaken.

Here, I would like to appreaciate and extend my thanks to the Gymanistic efforts of the Coordinator, Dr. Sushma Gupta, Assistant Coordinator, Dr. Neelam Luthra and the entire editional board including Dr. Narender Kaushik, Mrs. Satnam Kaur, Dr. Nirmal Goyal, Dr. B.S. Wadhwa and Mrs. Bharti Algh.

The efforts of Ms. Gurpreet Kaur in typing the matireal are very much laudable.

Dr. Vivek Kohli
Principal
&
Editor-in-Chief

ACKNOWLEDGEMENT

Educational Communications transfers information that facilitates communication among Educational Technology professionals and students world wide. Technology and knowledge processing correlates education, which enhances the creation of knowledge that leads to innovative journal educational strategies. This Educational Research Volume IX aims to guiding light to the research scholars and students teachers in education, to have a deeper understanding of the learning experiences of students and the problems faced by the teachers, brought to the limelight by the research findings and scholarly articles of our authors.

I take this opportunity to place on record my sincere thanks to Honorable Padam Bhushan Sh. G.P. Chopra, President, DAV College Managing Committee, New Delhi for acting as an inexhaustible source of volume inspiration for the publication of Vol. No. IX of the abstracts of Dissertation of research studies conducted at different levels, theme papers etc. we are extremely fortunate to have his invalueable suggestions.

We are very lucky to have Justice R.N. Mittal, Sr. Vice President DAV College Managing Committee, New Delhi for his blessings and acting as our guiding spirit for accomplishing this perspiring task.

I, express my sincere gratitude to Sh. R.S. Sharma, General Secretary, DAV College Managing Committee, New Delhi. He is man of permanent source of encouragement for us.

I express my gratitude to Sh. Rajinder Nath Ji, Honrary Treasurer, DAV College Managing Committee, New Delhi, and Chairman, Local DAV Institutes, for acting as a oasis of ideas and passions for quality education system.

I, shall remain grateful to Honorable Sh. M.L. Aeri, Director Colleges, DAV College Managing Committee, New Delhi, for illuminating dark recesses of our minds with his clear thinking and excellent ideas.

I am immensely thankful to Dr. Vivek Kohli, Principal and Editor-in-Chief for his tireless energy, team work spirit, poise, and dynamic leadership. All thes traits ar of great help for the publication of this Volume.

I am thankful to Dr. K.K. Sharma, Professor and Ex-Pro-Vice- Chancellor, North East Hill University (NEHU), Shilong for acting as an inexhaustible source of inspiration for organizing various activities of Centre of Innovations, Research and Development (CIRD) and for the Publication of this Volume.

I am specially thankful to the members of editorial board, Dr. Neelam Luthra, Associate Coordinator, Dr. Narender Kaushik, Mrs. Satnam Kaur, Dr. Nirmal Goyal for their significant contribution.

I am extremely grateful to the faculty of this college especially Dr. B.S. Wadhwa, Mrs. Bharti Alagh and Ms. Gurpreet Kaur for rendering their services as and when required for editing, compiling and enriching the context of this publication.

Once again, I would like to thank all concerned, who helped us in successful completion of this publication.

Dr. Sushma Gupta
Coordinator

EDUCATIONAL RESEARCH

VOLUME-IX

ITEMS

Aritcles **Page No.**

1. A Study of Concept of Ignorance and Knowledge in Sri Aurobindo's Philosophy and It's Educational Implications 12
Prof.K.K.Sharma and Mrs. Renu Chander

2. A Study of the Pollutants Released by Tau Devi Lal Thermal Power Plant Panipat and their Impact on /its Surrounding Environment 18
Prof. K.K.Sharma, Dr. Sushma Gupta and Ms. Suvidha Dutta

3. Independent Learning: Need of The Hour 32
Dr. Sushma Gupta and Ms. Sakshi Manocha

4. Effective of Mathematical Model of The Development of Reasoining Ability of Secondary School Students 41
Dr. (Mrs.) Rita Chopra and Mrs. Sheetal Batra

5. Attitude Of Parents Towards Learning Mental Arithmetic Through Abacus. 49
Mrs. Ruchi Manchanda and Dr. Ramana Sood

6. Depression In Adolescents: Causes, Impact And Treatment 54
Dr. Mukesh Ahlawat

7. Relationship of Socio-Economic Status And Rural-Urban Background With Occupational Aspirations 66
*Richa (M.Ed.) and Dr. Sanjeev Kumar

8. Computer Based Concept Mapping In Acquisition of Concepts of Chemistry 79
Aarti Aggarwal, Dr. Ravinder Kaur and Dr. Sunil Dutt

9. Adolescence: The Search For Identity 90
* Mrs. Anupamjit Kaur

10. Identification of Students With Learning Disabilities In The Subject of Science. 95
Meenakshi Gupta

11. Inclusive Education: An 'Education For All 105
Ms. Garima Batra

12. Attitude of pupil-teachers toward teaching in elation to their human values 109
Mrs. Babita Gupta

13. Organizational climate of senior secondary schools of chandigarh as perceived by principals and teachers 116
Subhash Chander Khullar

14. Poverty & Education 131
Mrs. Bharti

15. उपसंहार 134
डॉ. रमा खन्ना

16. Prospective Primary School Teachers' Perceptions on Boiling and Freezing 140
Mr. Sushil kumar

17. Quality Teacher Education in 21st Century 149
Mr. Rajender Kumar

18. Environmental Education: Characteristics, Need, Goal Objective and Guiding Principles 157
Dr. Bala Rani

19. Stress Management: Some Alternatives 167
Mrs. Saroj Sobti Farwaha and Mr. Baljit Singh

Absract of M.Ed. Dissertations (2008-2009):

1. An Analytical Study of President Smt. Pratibha Patil's Contribution to Education 175
Dr. Vivek kohli, Sarita Ahalawat

2. A Study of Dayanand's Ideas on Women Emancipation and their Educational Implications 177
Dr. Vivek Kohli, Rajni Khurana

3. Impact of Audio-Visual Aids on Achievement of Mathematics Among The Students of Class IX 183
Dr. Vivek Kohli, Meenu

4. A Comparative Study of Educational Philosophy of Swami Dayanand and Sri Aurobindo 186
Dr. Vivek kohli, Deepli Sharma

5. Leadership Behaviour and Emotional Maturity of Prospective Teachers in Relation to their Teaching Competencies 190
Dr. Sushma Gupta , Ms. Anupamjit Kaur and Shweta Raina

6. A Study of Environmental Awareness and Attitude of Teachers Teaching in Secondary Schools 192
Dr. Sushma gupta and Nivedita rai

7. A Study of Environmental Awareness and Attitude of Prospective Teachers 195
Dr. Sushma Gupta, and Beena

8. Effectiveness of Integrating ICT in Teaching Mathematics to Secondary School Students in Relation to their Intelligence 198
Dr. Sushma Gupta and Geeta Pali

9. Evaluative Study of Mid-Day Meal Programme in the Rural Areas of the State Of Haryana 200
Dr. Narender Kaushik and Kiran Deep Gill

10. A Study of Relationship Between Emotional Intelligence and Job Satisfaction of Secondary School Teachers 202
Dr. Narender kaushik and Pooja Gupta

11. Effect of Socio-Emotional School Climate on Mental Health of Students Studying in Government and Public School of Ambala District 205
Dr. Narender Kaushik and Amrita Sahney

12. Leadership and Cooperation Skills of Secondary School Students in Relation to their Sex, Locality and Types of School 209
Dr. Narender Kaushik and Sushil Kumar

13. Effect of Computer Aided Instruction on Achievement 212
Dr. Neelam Luthra, and Garima Batra

14. Effectiveness of Edusat Programme in Mathematics at Senior Secondary School Level in Haryana 215
Dr. Neelam Luthra and Priti Kalisia

15. Development and Evaluation of Mathematics Style Programme In Mathematics For Grade Viii Students 218
Dr. Neelam Luthra and Isha Sekhri

16. A Study of Reservation Policy in Panchayati Raj in the Context of Empowerment of Women in Kurukshetra District 221
Dr. Neelam Luthra, Mrs. Renu Chander and Gurpreet Singh

17. Comparative Study of Education System of India and U.S.A. In relation to modern needs
Mrs Satnam Kaur and Rajni 223

18. A Study of Effectiveness of Bilingual Method and Direct Method of Teaching English
Mrs. Satnam Kaur and Ranjeet Singh 226

19. श्री अरविन्द से सम्बन्धित अध्ययन सामग्री और क्रिया–कलापों का छात्र–अध्यापकों तथा छात्र–अध्यापिकाओं की सामान्य जानकारी पर प्रभाव। '
श्रीमती सतनाम कौर और 'प्रदीप कुमार 228

20. Number Sense in Pre-School-An Investigation of Children at Risk for Mathematics Difficulties
Dr. Pooja Gupta and Harvinder Kaur 230

21. Awareness about Learning Difficulty among Teachers and Parents
Dr. Pooja Gupta and Kamini Jain 232

22. Arithmetic Error Profile of Dyscalculics Remediating Arithmetical Difficulties
Dr. Pooja Gupta and Jaspreet Kaur 234

23. A Study of Awareness of Secondary School Teachers About the Disabled Coefficient
Dr. Pooja Gupta, Mr. Pawan Bhatia and Anil 236

24. To Study Educational Facilities in the Secondary Schools of Ambala
Dr. Mukesh Ahlawat and Veenu Saini 237

25. स्वामी विवेकानन्द एवं स्वामी दयानन्द सरस्वती के शैक्षिक विचारों का तुलनात्मक अध्ययन।
डॉ. मुकेश अहलावत और दीपा रानी 241

Higlights of the Institution:

Report of the College: 247

- Achivements of the College
- Faculty Achievements
- Extension Activities
- Results:
- Potentials of the College

"A STUDY OF CONCEPT OF IGNORANCE AND KNOWLEDGE IN SRI AUROBINDO'S PHILOSOPHY AND IT'S EDUCATIONAL IMPLICATIONS"

***Prof.K.K.Sharma** ****Mrs. Renu Chander**

RATIONALE

A poet, philosopher, and mystic, Sri Aurobindo has through his theory and practice, contributed a lot towards understanding the message of the Vedic heritage and the meaning of the modern renaissance. He is one of the outstanding" builders" of Indian philosophy in recent times. He formulated his philosophy of integralism on the basis of his own authentic experience. Experience is manifold; it may relate to any field- art, poetry, religion, philosophy, occultism, and so on and when it is organized as a verifiable field of knowledge, it is philosophy. Sri Aurobindo's philosophy is described as integral for two reasons. It takes into account the whole of reality as it reveals itself to the uplooking /in looking human mind. It is also integrative as it leaves no grade of experience behind once another experience comes by. The lower is taken up and integrated into higher, the smaller into the larger. Sri Aurobindo did not arrive at his philosophy by a sudden revelation. His was a steady growth of consciousness with dimension adding it self to dimension. His philosophy is thus a result of his own inner experiences.

The concept of ignorance finds an important place in the philosophy of Sri Aurobindo. He believed that any attempt to determine the nature of knowledge should be preceded by an understanding of various aspects of ignorance. Ignorance according to him does not mean Absence of knowledge. It has two extremes, at one end `there is complete absence of knowledge and at the other; there is a state of complete knowledge' and in between the two, 'is the area of ignorance'. As such, it is already moving from the absence of knowledge towards knowledge.

** Prof K.K.Sharma, Visiting Professor, Centre for Sri Aurobindo Studies, Sohan Lal DAV College of Education, (IASE), Ambala City, Former Pro-Vice Chancellor, North-Eastern Hill University (NEHU), Shillong.*

*** Mrs. Renu Chander, Assistant Professor, Sohan Lal DAV College of Education, (IASE), Ambala City.*

This Ignorance ,according to Sri Aurobindo, is sevenfold, the *original Ignorance* relates to our ignorance of the Absolute which is the origin and source of all; the cosmic ignorance or ignorance of the Timeless and Space less which is behind the world of changing forms the *egoistic ignorance* which takes the ego as the true self and all else besides the ego as false and unreal; the *temporal ignorance* which takes the creature of the moment dwelling in limited space as thee sole, reality, "ignorant of our eternal becoming in Time" *psychological ignorance* is what arises out of our total identification with the temporal surface being without any knowledge of its higher dimensions, or even of the surface being in its fullness; *constitutional ignorance* is what is due to our identification with the mind or lift, or body, any two or all three of them as the totality of our being; the *practical Ignorance* is the consequence of all the ignorance aforementioned and is reflected in a blind and aimless existence.

The remedy for all Ignorance is the recovery of true, consciousness-"a sevenfold revelation within our consciousness."

JUSTIFICATION OF THE STUDY

Mostly people are not aware and are ignorant of many things in life as awareness or ignorance has direct link with the perceptions and thinking of a person. There may be a number of levels of ignorance due to which we frequently commit mistakes. There are many other factors and reasons which affect one's understanding and thinking which consequently results into ignorance.

All the confusions in mans life in today's competitive world are created due to ignorance, unawareness and miscommunications among themselves. This results in personal problems, social issues and other human problems. In this context Sri Aurobindo has mentioned seven types of Ignorances. If proper knowledge is created in man through education, then different types of Ignorance can be removed as knowledge is one indivisible whole in which the highest (the spiritual) and lowest (the physical) are linked through all the mediating links i.e. the -vital, the mental, and the physical.

In order to create knowledge and removal of Ignorance, educational institutions need to formulate multisided content of studies and introduce other practices. Aims of Education have to be comprehensive which cover all aspects of Child's nature. Methods of teaching should be such which induce learning spontaneously and automatically without any external pressures. Pupil should be given a central place and teachers have to be a philosopher and a guide. Child needs to

be made conscious about his inner self through self discipline. At the same time his freedom should become an integral part of his spirit. Evaluation should be such which evaluates all the aspects of child's development-mental, physical, social, moral and spiritual. His philosophy of education is most suitable as it encompasses all ingredients of science and philosophy in 21st century.

The purpose of this study was to study Sri Aurobindo as a thinker and visionary whose view of human being is purely based on self-realization. The researcher was tempted to study Sri Aurobindo's concept of Ignorance and knowledge in his philosophy and its educational implications with a view to call out a system for human emancipation.

In the light of and back ground of above stated points, the researcher undertook the present study and, therefore, through the study undertaken the researcher tried to get the answers of the following questions

- What are the basic ideas in Sri Aurobindo's philosophy which have humanistic and spiritualistic appeal?
- Why does Ignorance exist?
- What is the right approach to remove Ignorance?
- What is the nature of true knowledge?
- How does Sri Aurobindo conceptualize spiritual knowledge?
- In what manner Sri Aurobindo's perception of Ignorance and knowledge could contribute to the development of Indian Education system.

OBJECTIVES OF THE STUDY

The objectives of the study were as follows

- To study life and works of Sri Aurobindo
- To study the main tenets of Sri Aurobindo's philosophy and his views on different aspects of philosophy.
- To study the concepts of Ignorance and knowledge according to Sri Aurobindo.
- To draw out the educational implications with a special focus on aims of education, curriculum, methods of teaching, role of pupil, role of teacher, and freedom and discipline.etc.

SIGNIFICANCE OF THE STUDY

"A study of concept of Ignorance and knowledge in Sri Aurobindo's philosophy and its Educational implications" was found to be significant for the following reasons:

- To understand the concept of ignorance and knowledge in its right perspective.
- To root out the problems of education and the remedial measures suggested through path of integral knowledge.
- His concept of ignorance and knowledge, involution and evolution, leading to triple transformation will help the individual not only in attaining self realization but also make him see heaven on this earth itself.

CONCLUSIONS

After going through his life and works, philosophy `and views on different aspects of philosophy at length found that Sri Aurobindo is relevant to us even today because he has given a positive philosophy, an affirmative spirituality. He points out how higher minds were so long turned to the Beyond. He explains and justifies the purpose in life. Each one of us is made to feel that life is an opportunity, some thing sacred, which we cannot fritter away. He has given due value to Matter, the material civilization, and material technology. Everything that has been evolved has purpose and we must know how-to utilize it, not throw it away in ignorance.

The key to understand Sri Aurobindo's philosophy is the *spiritual evolution.* All ideas are centered around this central theme. Yoga is a method for its realization. Philosophy, religion, science and ethics are stepping stones to this supreme purpose of man and nature and the inherent Divine in both. Spirituality implies the discovery of our inner self and the conquest of ignorance. The growth and the perfection of the intellect, the moral and ethical sense, religiosity and idealism are all stages towards the realization of the spiritual life but none of them or not even ail of them together is the true end. They are dim lights which reveal ignorance but do not dispel it.

Knowledge refers to an understanding of any situation in one's life in which a systematic action is taken for achieving a specific goal. It involves clarity in ideas, new information and proper perspective of its applications.

Ignorance refers to the state of mental confusion which obstructs the process of taking right decision at right time one lacks clarity while taking any action in one's life.

Ignorance in human beings exists due to the and to the level of evolution. At each stage of growth, a new awareness comes in and ignorance disappears. The process education of helps in understanding the process of growth, development and evolution and enables the individual to remove ignorance in his personal life. Therefore, the more we understand our self and get into the realm of spirituality, the ignorance is removed.

The Ignorance as seen is many sided the *original Ignorance* relates to our ignorance of the Absolute which is the origin and source of all; the *cosmic ignorance* or ignorance of the Timeless and Space less which is behind the world of changing forms the *egoistic ignorance* which takes the ego as the true self and all else besides the ego as false and unreal; *the temporal ignorance* which takes the creature of the moment dwelling in limited space as thee sole, reality, "ignorant of our eternal becoming in Time" *psychological ignorance* is what arises out of our total identification with the temporal surface being without any knowledge of its higher dimensions, or even of the surface being in its fullness; *constitutional ignorance* is what is due to our identification with the mind or lift, or body, any two or all three of them as the totality of our being; the *practical Ignorance* is the consequence of all the ignorance aforementioned and is reflected in a blind and aimless existence.

Man, the mental being, is distinctly above all animal creation by virtue of his reason, knowledge and skill-but his knowledge is still clouded by Ignorance and egoism. Further progress of the individual, therefore, depends on the conquest of Ignorance which still covers his mind and his emergence into the full light of the Super mind and the Super consciousness.

Ignorance, as the investigator found, is not the absence of knowledge but the knowledge that is latent, hidden under a veil. Man, the mental being, progresses from ignorance to knowledge and from knowledge to higher knowledge. To limit our knowledge only to what can be grasped by the senses and restrict it to the material and physical or concrete is, therefore short sighted. Knowledge thus restricted is ignorance wearing the deceptive appearance of wisdom. *The attainment of integral knowledge would mean the rejection of ignorance which is limited knowledge claiming to be the whole of knowledge and the synthesis in terms of spirit of all fragments of separative knowledge that we now possess* The Ignorance under which we live and move is sevenfold and has to be expelled in all its forms. Then alone can we be dwellers in the realm of knowledge and light. *The remedy for all Ignorance is the recovery of true, consciousness-"a sevenfold revelation within our consciousness."*

According to Sri Aurobindo, the *nature of true knowledge* is spiritual realization by man. He has suggested different types of Ignorance. The very purpose of removing ignorance and making the individual realize the secrets of spirituality is the right way to attain true knowledge.

Educational Implications. The educational implications of Sri Aurobindo's philosophy with reference to its epistemological aspects in the context of concepts of Ignorance and Knowledge have been reported. The instruments of education and the principles of teaching have also been stated since these instruments and principles form the basis and pave the way for deriving these

implications. In this background, the educational implications with reference to Ignorance and knowledge have been drawn in relation to the aspects of education on aims of education, integral curriculum, methods of teaching, freedom and discipline , role of student and role of teacher. His theory of education is developed in a most comprehensive background and the concepts of ignorance and knowledge harmonize into his theory of education with his nature of epistemology.

A STUDY OF THE POLLUTANTS RELEASED BY TAU DEVI LAL THERMAL POWER PLANT PANIPAT AND THEIR IMPACT ON /ITS SURROUNDING ENVIRONMENT

***Prof. K.K.Sharma** ****Dr. Sushma Gupta** *****Ms. Suvidha Dutta**

BACKGROUND

At present there are varieties of pollutions which are increasing everyday in all human societies on this earth. The study of Environmental Pollution has become a great challenge in big cities. It has created many hazards and health problems. People have developed many diseases which are created by many Environmental Pollutants.

Any place where more industries are established and working, they have become the source of Environmental Pollution. In this regard the researcher has undertaken a study of pollution confining to Tau Devi Lal Thermal Power Plant Panipat at Panipat City in Haryana. Since this town is famous for a variety of industries and industries sponsored by centre. Therefore the study of pollution will bring good information to the people in general and industries in particular.

In spite of generating electricity,this thermal factory has created many hazards for the public affecting the health of the soil of surrounding agricultural land, pollution of air, pollution of water and sound in the vicinity of the plant. **In this background,** the investigator made an attempt to study **Tau Devi Lal Panipat Thermal Power Station (TDL PTPS), Haryana** as a case in respect of its need, functioning, production and effect on the local environment.

STATEMENT OF THE PROBLEM

"A Study of the Pollutants Released by Tau Devi Lal Thermal Power Plant Panipat and their Impact on its Surrounding Environment".

**** Prof K.K.Sharma, Visiting Professor, Centre for Sri Aurobindo Studies, Sohan Lal DAV College of Education, (IASE), Ambala City, Former Pro-Vice Chancellor, North-Eastern Hill University (NEHU), Shillong.***

***** Dr. Sushma Gupta, Associate Professor, Sohan Lal DAV College of Education, (IASE), Ambala City.***

******Ms. Suvidha Dutta, M.Phil (Env. Sc.) from Global Open University, Nagaland, Project Fellow in UGC Sponsored Major Research Project on Environmental Education, Sohan Lal Dav College of Education (IASE), Ambala City***

OPERATIONAL STATEMENT OF THE PROBLEM

A study of Sulphur, Nitrogen, Carbon and their oxides and Ash types of Pollutants Released by Tau Devi Lal Thermal Power Plant, Panipat as perceived by Engineers and the Residents of nearby villages using observation and structured interview methods.

DELIMITATION OF THE STUDY

1. The study is limited to the study of Tau Devi Lal Panipat Thermal Power Station.
2. The Study is confined to the Pollutant released from Tau Devi Lal Panipat Thermal Power Station.
3. The Study is confined to the study of the effects of pollutants only of one village, that is, Khukhrana adjacent to Tau Devi Lal Panipat Thermal Power Station.

OBJECTIVES OF THE STUDY

1. To study organizational and functional structures of Tau Devi Lal Panipat Thermal Power Station.
2. To study the various types of pollutants released from Tau Devi Lal Panipat Thermal Power Station.
3. To study the effects of Pollutants released from Tau Devi Lal Panipat Thermal Power Station on its surrounding environment.
4. To find the ways for combating various pollutants released from Tau Devi Lal Panipat Thermal Power Station.
5. To bring awareness in youth, general public and Government authorities about the impact of thermal plants on environment in general and life in particular.

SIGNIFICANCE OF THE STUDY

i. This study was based on the pollutants released by Thermal Power Plants and their effects on human beings, animals, plants including air, water, soil that is the whole ecosystem.

ii. Tones of coal are being used by every Thermal Power Plant in our country. This study can help to find out various methods to reduce the adverse effects of Thermal Power Plants on environment.

iii. This study will help the government authorities to realize the adverse effects of pollution and about various technologies and equipments with many different methods which can prove eco-friendly while doing their efficient work for the thermal plant.

iv. This study will bring the awareness about the various health problems to all life forms which occur due to coal burning and crushing and enlightening the government authorities to know the critical conditions of the poor villagers in near by villages.

SAMPLE OF THE STUDY

In the present study the researcher has collected the data for Tau Devi Lal Thermal Power Plant Panipat. After selecting this power plant researcher has selected the following samples:

- 15 Engineers of Panipat Thermal Power Station (PTPS)
- 10 Engineers of private company working in PTPS for ash handling and disposal
- 50 Villager residing in the village Khukhrana because they are effected by the various forms of pollution created by the plant.
- 1 President and 5 other members of Smaj Sudhar samiti of the village Khukhrana

SOURCES OF DATA COLLECTION

The investigator has collected the data from various primary and secondary sources. Such as:

1. Authorities of Tau Devi Lal Panipat Thermal Plant and Villagers of the Adjacent Village named Khukhrana.
2. Library Study, Discussion with experts, Internet, Newspaper etc.

RESULTS OF THE CASE STUDY OF TAU DEVI LAL THERMAL POWER PLANT BASED ON TOOLS USED IN THE PRESENT STUDY

I. Findings on the basis of Observation Schedule:

Name and Location	**Area Occupied**	**Different Sites of PTPS on L.H.S**	**On R.H.S**	**Divisions and Departments**	**Hierarchy of Authority in** HPGCL	**Functions of the Plant**	**Objectives of the Plant**	**Number of Employees**	**Facilities to the Workers residing the Colony of Power Plant**
Tau Devi Lal Thermal	Total 2000 acres out of	Ash Disposal Area, Ash	**Jay Pee Cement**	**1. HPGCL** (Haryana Power	Director, Managing	Generation of	1. To enhance production of	About 2705 of employees	1. 80 units of

Power Station situated at a distance of 14 Kms from Panipat, on Panipat Assandh road near the village Assan.	which 700 acres is for the power station, 900 acres is for ash disposal (water pool and DYKE) and 400 acres is for the residential colony	Water Recovery System, Mallba Dumping Yard, PTPS Raw Water Pump House (Units 6 to 8), Ash Water Recovery System (Units 1 to 6), Rain Water Pump House (Units 7 and 8), PTPS Raw Water Pump House (Units 1 to 5)	**Grinding Unit,** (A Unit of Jai Prakash Associates Ltd.), Village-Khukhrana, Post Office-Assan Kalan, Tehsil Madlana, Panipat. **Capacity-15 Lacs Tonne per Annum**	Generation Corporation Limited) **2. HVPNL is categorized in the following two type:** **- HPDCL** (Haryana Power Distribution Corporation Limited) - **PTCL** (Haryana Power Transmission Corporation Limited)	Director, Chairman, Superintendent Engineer, Executive Engineer, Assistant Engineer, Junior Engineer, Operator/ Foreman, Technician, Helper.	Electricity, Transmission of Electricity, Distribution of Electricity	power for the total development of haryana state. 2. To empower the industrial units for production. 3. To provide employement to the local community. 4. To provide facilities to the employees/personnel of the plant like: School, Sports Club, Hospital, Community Hall, Shopping Center, Play Ground, Temple, and Gurudwara etc.		electricity per month are free for every employee living in the colony. 2. As colony is far from the city so there is free bus service is provided (colony to city) for the employees. 3. School facility for the children in the colony. 4. Facility of Health centre. 5. Facility of ambulance. 6. Community Hall 7.Temple and Gurudwara 8.Shopping Center 9.Play Grounds 10.Sports Club

Procedure Used for Generating Electricity	**Main Gases Released**
The procedure used in the electricity production involves different steps. All of these steps are inter-related to each other. - To start electricity production there is a need to light up the plant. For that a chemical substance High Speed Diesel Oil (HSD) is melt at 13Kg steam. When HSD melts completely, it comes to the different oil guns through pipes fitted over there. These pipes are start from the furnace where the HSD melts and ends at the oil guns. There are four oil guns at different points. All these four guns producing fire at the same time and makin a fire ball. This firein the oil guns is due to melted HSD coming to the oil guns through different pipe lines. When HSD starts burning it produces black smoke with harmful gases. There is no substitute for this black smoke coming from this burning. - In the second step boiler feed pump (BFP) are used for	- When HSD burns it releases a very toxic gas **carbon monoxide** which is very much harmful in different ways due to its physical and chemical properties. - When coal burnt it releases SO2, CO2 and NO2. All these gases are harmful to plants, animals and human beings. - Though it is not part of the above stated processes which are instrumental to release harmful pollutants in the air yet during the process harmfull substance are released which results in air pollution. Coal is burnt in the chimneys. The chimneys are made up of rein force concrete (RCC). When coal and RCC comes in contact they produce Ni and Al. This comes in contact

boiling water. This BFP takes 3500 kw of electricity to boil water. This consumption of electricity is equal to the consumption of electricity used by 100 of tube wells at the same time. The pressure, which exerts is increase step by step 10, 20, 30, 40, …..100kg/cm.. Steam pressure could be 100 to 140kg/cm only. After steam pressure, steam temperature is given there. The temperature given is 540 Degree Celcius. - After these steps burning of coal starts. Where burning of coal occurs is known as coal mill system. In this the equipments used are motor, bunkers, belt and coal handling system. The process occurs in coal furnace. This furnace is having temperature 700 degree celcius to 800 degree celcius. In power production there is release of large number of dust particles,smoke, ash etc. These are harmful for human health, agriculture, animals, Coz. they are destroying or polluting our atmosphere. This is the reason why further study is necessary.	with air and pollutes the air.

Stages, Units, Capacity, Date of Commissioning

Stages	Units	Capacity	Date of Commissioning
Stage-I	Unit-I	117.8 MW	01.11.1979
	Unit-II	110 MW	27.03.1980
Stage-II	Unit-III	110 MW	01.11.1985
	Unit-IV	110 MW	11.01.1987
Stage-III	Unit-V	210 MW	28.03.1989
Stage-IV	Unit-VI	210 MW	31.03.2001
Stage-V	Unit-VII	250 MW	28.09.2004
Stage-VI	Unit-VIII	250 MW	28.01.2005

II. Results based on the questionnaire-I given to the Engineers Working in a Private Company in Panipat Thermal Power Plant for Ash

Handling Purposes:

1. The raw materials being used in the plant were mainly Coal, oil, gas, water, chemicals etc.
2. The rate of production of ash daily in the plant is :14500X40% bottom=5800. They considered only bottom ash not fly ash in this.
3. They told that PTPS is using best quality of coal with less ash, high heat production, instead of petcock and others even for sometimes oil firing. This is best energy saving institution till now.
4. CO2, CO, S and its oxides, N and its oxides etc are the gases formed along with the ash in the operation of the plant.
5. Now a day's fly ash is used for various consumable purposes like in cement industry, paint industry, tiles and brick industry etc. by which control of pollution, wastage of energy is saved by the government. These measures are taken by company to control ash.
6. Minimum 10 to 15 Kms of area is affected by pollution due to ash.
7. Various skin diseases, short height, sightedness and other eye problems, heart, lungs and kidney problems etc.are the effects of ash pollution on human habitation
8. Skin diseases, short life span, less fertility, no or less milking in milk yielding animals are the effects of ash pollution on animals.
9. Barren soil, dwarfism in plants, low yield and of poor quality of grains are the effects of ash pollution on plants and soil.
10. After burning coal heavily unburnt material first comes to the bottom, and then rest of the heavy material gets collected in economizers. Then air realer and lastly fly ash gets accumulated in Electrostatic Precipitator Hooper (ESP). Out of 100% quantity of ash 40% goes normally to the bottom. Out of rest 60%, 20% gets accumulated in ECO, APH and rest 40% comes to ESPs. Then from all the four main points we dispose of the Ash to make them empty. We follow two phases, Vacuum Phase (Snack) and Dense Phase (Blow) for the purpose of ash handling. This is the procedure used for ash disposal and handling

III. Results Based on the Questionnaire-II given to the Engineers Working In Panipat Thermal Power Station:

Most of the engineers in thermal power plant viewed:

1. In total there are Eight Units. Units 1,2,3,4 are in common state and Units 5,6,7,8 are in different and advanced state.

2. Different area of the power plant are:
    1. Coal Handlling Area(CHM-2)
    2. Field Hostel or yard
    3. Switch Yard (Tower Station)
    4. Fire Station

    All these four areas are within the plant area and the fifth area is in the village Khukhrana which is named as:

- Ambient Quality Station

3. Monitoring in Coal Handling Area, Field Hostel, Switch Yard, and Fire Station is a tower basis twice in a week monitoring while in Ambient Quality Station that is in village Khukhrana 48 hours basis continuous monitoring.
4. SPM, RSPM, SOX, NOX, CO, CO2 are the gaseous pollutants measured by PTPS.
5. Monthly monitoring of pm level of SOX, NOX, CO, CO2. Electrostatic Precipitators (ESPs) are fixed in the plant to control pollution. These steps are taken by us to control the use of these pollutants.
6. Following Steps are taken by authorities in PTPS to control pollution:
    a) Overall performance of all ESP's is continuously monitored by routine operations. Maintenance is carried out.
    b) Need waste assessment and tuning is also carried out. Tuning of ESPs is done by BAECON.
    c) Controllers are there to meet designed parameters.
    d) To control Ambient Air Quality dust suppression system and sprinkle system are being provided.
    e) Lifting of rejects, faults and coal bolder from ash handling system are removed properly.
    f) Dry fly ash is generated and evaluation system for this dry fly ash exists or has been installed in all units and the surrounding areas and the fly ash is stored and is lifted by trucks.
    g) Fly ash has been allotted to different cement industries. Like: Gujarat Ambuja Cement, M/S. Jai Prakash Cement Ltd. etc. These agencies are lifting the dry fly ash from the PTPS.

h) PTPS is also is in consultation with authorities managing infrastructure/ express corridors developers for utilization of pond ash for road embankment development.

i) Water quality effluent discharge is regularly monitored. Results are within parameters. Effluent Treatment Plant (ETP) is installed to treat the effluent in water. Water is recirculated from ash DYKE. Sewage Treatment Plant (STP) has been installed.

j) Characteristics and concentrations of effluents are not exceeding the prescribed limits.

7. Remedial Measures are as follows:

a) Base line emission levels for Particulate Matter (PM). NO2 and SO2 are being monitored regularly

b) Coal with high heat content and low sulphur is preferred.

c) Vast coal is also used.

d) Ash evacuation and checks for accumulation of ash at ESP hooper and timing of bottom ash and fly ash evacuation in case of wet ash handling is well managed.

e) Distribution of Ash evacuation of all ESP Hoopers is also well managed.

f) Dust from coal storage handling and operations at transfer points and crushers are being controlled to minimize the dust control and fugitive emission.

g) Pre-wetting and wetting in coal tippler area and in coal handling (CHM) area is being done regularly

h) We have joined hands with Central Pulp and Paper Research Institute (CPPRI) for high environmental concern.

8. Overall functioning of the power plant:

There are eight conventional coal fired units compromising of four units of 110MW, each commissioned during the 1980s, two units of 210MW and two units of 250 MW each resulting in a total generation capacity of 1360/MW. There are six stacks for all eight units. One stack is attached to units 1 and 2, the second serves units 3 and 4, the third is a multiflue sack attached to units 5 and 6. And units 7 and 8 have one stack. Each unit has its own natural draft cooling tower. Other infrastructure and auxillary facilities include three coal handling systems, two raw water storage ponds, two common raw water pump houses (One each for units 1-6 and units 7 and 8). Six dematerialised Water Plants (DM Plants)

one each for units 1 and 2, 3 and 4, 5, 6,7and 8, ash handling system and ash pond areas, switch yard and two common administrative buildings. The plant generates electricity using coal-fired boilers coupled with stem-turbine generators. PTPS receives coal from 4 sources namely:

i. Central Coalfield Limited
ii. National Coalfield Limited
iii. Western Coalfield Limited
iv. Bharat Coalfield Limited

IV. RESULTS BASED ON THE STRUCTURE INTERVIEW OF THE VILLAGERS RESIDING IN THE NEAR BY VILLAGE – KHUKHRANA, PRESIDENT AMD MEMBERS OF KHUKHRANA SUDHAR SAMITI:

1) They were very happy when they came to know that a thermal power plant is going to start in their village. At that time they were not aware of the after effects of the plant.
2) At that time government had promised them a lot like:
   a. One capable person from each family will get a job in thermal plant.
   b. The PTPS Authorities promised them to provide twenty four hours electricity.
3) They have been getting electricity from the last few years only after winning the High Court case for the supply of twenty four hour electricity. High court has ordered power plat authorities to supply full time electricity to the village-Khukhrana. And only those who were recommended by some VIP'S', or some who were rich, others are still facing court cases for getting job benefits.
4) They are not getting any concession in the electricity bill.
5) There are no academic facilities provided by the government to their children. Except this there is an old government school in the village. There is water which surrounds the building of the school as well as inside the school building also due to thermal plant and walls of the school building are cracked.
6) Medical facilities are very important as almost every villager is ill. Suffering from asthma, tuberculosis, other respiratory diseases and skin diseases due to worse atmosphere which occur due to power plant. There are no medical facilities provided to us by the government.

7) No member from village is involved in committee of Panipat Thermal Power Station (PTPS)

8) The major disturbing factors are:

   a. Ash coming from the power plant is increasing day by day as units in thermal plant are increasing day by. Around eight trains full of coal come daily to the plant and burnt daily after crushing. They not only get the ash from burning coal, but fine black dust produced from crushing of coal is also the major problem for them.

   b. One side of our village is occupied by the plant, other by cooling towers and remaining one side is occupied by J.K. Cement Factory, to face the hazardous consequences. Water mixed with ash or crushed coal particles come directly into their village through huge size pipelines, which not only affect them but to their Soil, water, plants and animals. Due to this the water level is around ½ feet and 6 inches above the ground in their village.

9) Major problems faced by villagers are as follows:

- Due to the huge pipelines ground water level is much increased and is coming out itself from the hand pumps without pumping it out from of the hand pump
- Not only this, water is coming out itself from The ground of the houses, school, roads, streets, fields, etc. due to which they are facing every time flood like situation.
- Their children cannot even play outside the houses.
- In school the teachers find no space as water is coming out by itself from ground, where the students be made to sit and study.
- They cannot hang our clothes outside the rooms in sunlight to dry because they get black due to ash in the atmosphere.
- Their 50 acres of land in their fields has become barren due to air, water and soil pollution created by thermal plant, which was very well vegetative in the past. Fertility of their fields has become zero.
- The cattle straw (Chara) placed outside become black due to ash, in the morning they wash the straw with dirty water which is the source only available to them and is given to their cattle due to which they become ill. High milk yielding animals are not found in their village now. Fertility rate of their cattle's is

becoming nil day by day. Skin diseases and other serious diseases are common in their cattle's. There life span is also decreased. In the past, every house in their village was having cattles but now only 30 percent of people have cattles in their houses due to these problems.

- In past their village was well known for the good quality of potable water but now the situation is this they don't have potable water in their village. Those who can afford to have RO's and other water purifiers at their homes but those who cannot afford these things borrow drinking water from the nearby villages.

10) Many times they have given written applications to the government and power plant authorities regarding the problem of pollution due to plant faces by them.
11) Government authorities always justify that they are doing well. They are taking steps to reduce the problem. But the results of their problem are still invisible.
12) Their main demand to the governments is to transfer their village to a safer pollution free area. They give example that in Panipat city itself there is a Oil Refinery is located. When a nearby village of refinery was facing the same problem like them. Then the authorities of refinery shifted the whole village away from the pollution created due to Refinery. They are requesting the PTPS authorities for the same. They want from Government to shift their village to some other place. They have also suggested government a place and they have already won the case for that place. But due to some political reasons we are not authorized to go to that place.

V. Results Based on the Paper Clippings:

Many articles are frequently publishing in the daily News Papers but the article in The Tribune Newspaper by Manish Sirhindi on 11th July, 2010 states as:

Thermal Plant Makes Life hell for Khukhrana Villagers

KHUKHRANA (PANIPAT), JULY 11

Even as the Panipat thermal power plant has been contributed its bit to the overall development of the state by providing the much needed electricity, residents to this dusty little village have been paying a heavy price for it.

Thanks to the constant pollution being caused by the plant, there is hardly a household here where one or more persons are not suffering from problems like asthma, tuberculosis and other related

respiratory diseases. It is believed that the polluting power plant has also contaminated the water in the area which has lead to various skin diseases among people.

The constant ash being emitted from the plant has almost given the entire village a pasty white look.

The Punjab and Haryana High Court had directed the Haryana Government to shift the entire village to some pollution-free area after the local residents had filed o petition in the court in 2007. Though the local administration initiated a move to acquire 55 acres near sodhapur village in the district for the purpose, it got caught in a legal tongie when the owner of the land moved the court and got a stay against the acquisition.

For over a decade, after it was set up here in 1979, the plant had been a source of pride for the local residents. But now it has turned into pollution-emitting monster with a total of eight units consuming over 22,500 tonnes of coal each day. According to experts about 35 percent of the total coal burnt at the plant gets converted into ash. The plant authorities used to sprinkle water on ash which was an effective way of keeping the pollutants in control. But with the more and more ash being generated here each day, it almost became impossible for the authorities to tame the ashes.

Residents of the village told this correspondent that the problem here was so acute that some of them, who could afford, had already left the village and settled in Karnal or other pollution free places in the state.

Besides ash, fine dust produced by crushing of coal has also caused extensive pollution in the area. **Sohan Lal, president of the Khukhrana Sudhar Samiti**, which had moved the High Court in 2007, said there was no relief in sight for them. Villagers had even boycotted the recently help panchayat elections in order to register their protest and no one from here filed nomination papers.

EDUCATIONAL IMPLICATIONS OF THE STUDY

The earth is constantly trying to heal itself from the damage we implicit upon it. The reason of this healing process is not working fast is because we consume natural resources and pollute the environment faster than the earth can recover from it". The modern environment movement starts with fighting against polluting factories, power plants, oil spills, sewage and toxic dumps.

FOLLOWING PRECAUTIONS SHOULD BE TAKEN BY THE POWER PLANT AUTHORITIES:

1. Electrostatic precipitators should be run properly.
2. Coal used should be of good quality i.e high heat and low pollution.
3. Coal used should be low sulphur coal to reduce SO2, pollution.
4. Coal used should have less carbon content and ash contents.
5. Timely use of water sprays to reduce pollution.
6. Table below is showing the percentage of contents should be use in making coal to reduced pollution.

Percentage of Coal Contents

Ash Content	Volatile Material	Fixed Carbon
38.94%	**16.69%**	**39.75%**

FEW IMPORTANT SUGGESTIONS

1. Pollution control equipments like electrostatic precipitators are present in every chimney in this plant. But still you can see a large amount of dust containing smoke coming out from some of the chimneys. The reason behind this is that Electrostatic precipitator is not working completely or not working at all. It is regular happening process not by the chance. You can see ash or dust containing smoke coming from the chimneys. So there is a need to look after the equipments regularly, used for controlling pollution.(ESP is to reduce pollution but black smoke is emitted. It pollutes the air, which is not controlled by the equipments or by other means).
2. Agricultural land near thermal plant is destroying day by day. So there is a need to take steps to reduce this kind of pollution, which is really harmful for our land.
3. People living near by are facing various health hazards and different diseases. Asthma and various respiratory diseases are commonly found in the villagers nearby the plant.
4. As the Punjab and Haryana high had directed the haryana government to shift the entire village to some pollution free area after the local residents had filed a petition in the court in 2007. So the whole village should be shifted to a safer place as soon as possible.

6.12 CONCLUSIONS

Tau Devi Lal Thermal Power Plant, Panipat, is a prestigious plant and is very important in context of industrial development and economic development of a city, state or the country. Although this plant is using good quality of coal but due to the use of such a large quantity of coal -it's crushing and burning daily, plant authorities are not capable to control the problem of pollution. Thermal power plant no doubt is very very important for the city and its residents. But we can not avoid the adverse consequences by the plant activities, but still we can manage ash emission by changing the direction of wind to the inhabitant area or shifting the area.:

- Plant is generating the considerable amount of electricity and using a good quality of coal. But the quantity of coal consumed by the plant daily is over 22,500 tonnes. So the problem of environmental pollution cannot be controlled easily. Authorities should think seriously on the problem.
- The direction of the wind is the key agent for controlling the pollution. As we know that mostly flow of air is towards sun. However, employee's residential area is in the back side of the plant. For controlling the pollution the habitation of employees is protected from the ash. Colony is said to be ash or smoke free in normal weather conditions.
- With the increase of the height of chimney to through out smoke, the ash and dust particles are affecting the human population of the city which is more dangerous.
- The pond where the ash and other chemicals are mixed, are vulnerable and hazardous for the health of animals and human life. This also affects the working of pond water. This creates problem for employees in their working process.

SUGGESTIONS FOR FURTHER STUDIES

The following studies need to be undertaken in order to control air pollution and making Tau Devi Lal Thermal Power Plant"-Panipat (Haryana) disease free.

1. Research study should be undertaken to find out the effect of ash emitted from the chimneys on the health of the local people, nearly people and the city people.
2. Research study should be taken to find out the alternative ways to control the smoke coming from High Speed Diesel (HSD) burning.
3. Research study should be taken –to find out the reasons for black smoke emitted from the chimneys while electrostatic precipitators are present in every chimney.

INDEPENDENT LEARNING: NEED OF THE HOUR

***Dr. Sushma Gupta** ****Ms. Sakshi Manocha**

In knowledge driven society where life-phased and just-in-case learning are no longer adequate, students must learn on their own so that they can remain viable with life long and just-in-time learning. Paradoxically then, good teaching is that which ultimately makes the teacher redundant: the good teacher enables the learner to become independent. This can be done through various-possibly all-teaching activities, provided the goals impelling the 'thinking schools, learning nations' vision is kept clearly in mind and informs the philosophy and envisioned outcomes of education.

(Pan, 2007)

The changing nature of the workforce, the information age, and new understandings in the science of learning are leading to a changing consciousness about the goals of higher education (National Research Council 2000, Barnett 1999). Increasingly focus has moved from 'teaching' to 'learning' (Barr and Tagg 1995) and developing " active learners who seek to understand complex subject matter and are better prepared to transfer what they have learned to new problems and settings" (National Research Council, 2000). As a result, many new aspects of learning have emerged and one of which is the rising precedence of independent learning also known as self-directed learning or self regulated learning or autonomous learning or life long learning where learners take on more active and participative roles in their learning experience. Independent learning is a process, a method and a philosophy of education whereby a learner acquires knowledge by his or her own efforts and develops the ability to undertake enquiry and critical evaluation (Candy, 1991). It involves pupils taking the initiative in recognizing learning requirements and undertaking activities to meet them. At one level it may involve providing pupils with "extension" work for them to do individually: on another level it may present pupils with an extended block of work in which they must formulate strategies to accomplish the task. It is a process during which learners develop the values, attitudes, knowledge and skills needed to make responsible decisions and take appropriate actions in regard to their own learning. (Bates and Wilson, 2002: Gorman, 1998: Kesten 1987: Willams 2003).

Associate Professor, Sohan Lal DAV College of Education, Ambala City

****Assistant Professor, M.M. University, Mullana***

Independent learning is both a goal and a process- It is mode of learning and a characteristic of learners found in varying levels (candy, 1991). It aims to develop competent, self-motivated, confident and adaptable thinkers who are deeply involved and interested in what they are doing and are keen to take ownership of their learning. Essentially, it is concerned with preparing one for life. Learner centered processes in Independent learning allows greater autonomy for learners to make decisions and take risks with the ability to make choices about what they wish to explore and how to go about completing a task, learners have the freedom to use their preferred strategies and seek information from a range of sources. Greater freedom given to learners allows them to think through ideas, enabling deep learning (Knowles, 1975) and in the process builds enthusiasm and a desire to learn and solve problems. Independent learning also allows learners to be realistic about what they know and what they do not and yet understand when they encounter roadblocks. This encourages flexibility and adaptability which are demands of our dynamic world.

INDEPENDENT LEARNING SKILLS

There are many skills required for independent learning. These skills can be divided into Cognitive skills, Metacognitive skills and Affective skills. (Malone and Smith,1996; Carr, 1996; Bockaerts, 1997; Anthony, 1994; Zimmerman et al, 1996; Zimmerman, 1998; Weiss, 2004) highlights that for independent learning to occur it is necessary for pupils to have good basic Cognitive skills such as memory, attention, problem solving and creativity. They further suggest that independent learning may not be possible until pupils have reached a specific level in their cognitive development.

Bullock and Muschamp (2006), highlighted the importance of Metacognotive skills required for IL. These skills involve pupils being able to talk about learning, for example stating how they learn best. Bransford et al (2000) suggests that metacognition develops gradually and depends on knowledge as experience. He found that between the ages 5-10 children are already to talk about and reflect on learning and this ability grows throughout the school years. Malove and Smith (1996) states the importance of pupils being able to reflect on their achievement, monitor their progress and use self-assessment for IL because this ensures that pupils take responsibility for their own learning. Pupils view assessment by teachers as a formality since they already know their own level of understanding from self-assessed assessment. Assessment by teachers should

provide valuable feedback to use for their own self-assessment. (Bishop, 2006; Malone and Smith, 1996).

Marcon and Philippon, 2005; Neber and schommer- Aikins, (2002) identifies motivation as the most important affective skill in relation to independent learning. Ommundsen (2003) studied Nowegian ninth grade pupils concludes that pupils use of self-regulatory strategies is not sufficient for them to learn: motivation is also necessary. He described the motivational beliefs in terms of pupils believing in the role of effort, hardwork and their capacity to succeed. From the studies of Zimmerman (2002) and Bishop (2006), it has been concluded that motivation is both associated with increased independent learning and simultaneously an outcome of independent learning. Another important skill necessary for independent learning that is related to motivation is 'delay of gratification' (Corno, 1992). Delay of gratification refers to the ability to wait to obtain something that one wants. Mischel et al 1989, in his study found that the delay time in pre-school predicts later school related competencies and ability to cope or display self-control in stressful situation.

KEY ELEMENTS OF INDEPENDENT LEARNING

1. Learning environment created by the teacher

In the formal education system, the teacher should try to create an enabling learning environment that allows students to consciously accept responsibility and make decisions of their learning. Enabling/supportive learning environment encourages student's motivation, self confidence, curiosity and desire to learn. Mac Beath (1993) proposed a hierarchy of environmental support that is needed for independent learning. It includes enabling

a) 'Physical environment' which is the base and without which nothing is feasible. Physical environment refers to the environment in which independent learning takes place, such as library or a classroom.
b) 'Time environment' which refers to the length of time teachers give pupils to work on specific tasks.
c) 'Peer environment' which increases or decreases pupils willingness and ability to undertake independent learning.
d) 'Material resources' which refers to study aids such as books, audio tapes etc and
e) 'Tutor resources' which refers to the traits, knowledge and skills of teachers, tutors and mentors.

2. Relationship between Teacher and Student

Healthy relationship between teacher and learner which includes mutual trust and responsibility helps in fostering independent learning. As students grow in maturity and understanding, they are able to take on greater responsibility for their own learning. At this time, teacher should as a instructor, guide and facilitator control their decision-making, provide a solid base of knowledge and experience as well as help students to discover personal meaning of this knowledge and experiences in terms of their own needs. This will lead to more meaningful learning experiences for them, they will be motivated to take greater control over their learning as it is relevant to their needs, both as individual and members of the society. Sharp et al (2002) suggests that the new relationship is based on the creation of a more informal atmosphere within lessons, which includes teachers being highly spontaneous in responding to pupils interest and needs.

With the encouragement to students to take greater responsibility, teachers must also judge students' readiness for such responsibility. Such judgments are based on the learner's age, maturity, ability and knowledge and can only be made if the teachers know their students well. For fostering healthy relationship teachers must use instructional techniques, strategies and approaches based on collaboration between teacher and learner. This will encourage students participation, both in determining goals and monitoring the learning process as well as develops in them the self-confidence and empower students to take responsibility for their own learning.

3. Teaching and Modeling Skills

Herber and Herber (1987) has given 5 principles to provide an outline of how teacher can incorporate these skills in order to foster independent learning.

a) Modeling and Practicising skills: Students should be provided with the opportunities which facilitates independence through modeling , demonstration and direct instruction of learning skills followed by the practice opportunities provided by the teacher, who monitor's students progress towards their goals of independent decision making.

b) Transfer of responsibility from teacher to learner: Keeping in view the needs, interests, abilities and interests of the students the teacher should transfer their responsibilities to learners. This should be done in four steps- show students how, provide practice, have student's structure activities and finally use those activities independently. The pace of this sequence will depend upon the age and background of the students, the level of task to be done and attitudes of both teacher and student. This transfer will lead the students to discover how their efforts affect their learning and in turn they will be motivated to continue learning.

c) Knowledge and Understanding of students: In order to help students succeed as independent learners, the teacher should have a good understanding of their student's strengths and weaknesses- socially, emotionally, intellectually and physically –their exceptionalities, their health, their cultural backgrounds etc. This helps teachers to offer support to the students at crucial intervals. The learning experiences should be based on students' interest and needs so that they can become enthusiastic learners. Student choice must become a regular part of the classroom environment, including structuring of assignments, topics, group processes and timelines.

d) Collaborative instructional techniques: Independent learning is not carried out in isolation. It includes co-operative, small group and whole class learning. The instructional approaches to be included to facilitate independent learning are: divergent thinking, Concept mapping, Journal writing, Learning centers, Inquiry process, Independent research, and student teacher conferences. Teacher should also vary the setting, topic, assignment, time, depth and group processes to foster independent learning.

e) Support and encouragement to students: The teacher should be a patient facilitator, encouraging and provide feedback and support their effort for fostering independent learning in them.

In this way, teachers can create supportive classroom environment and motivate students to learn. Through this process, student will develop into individuals with self-respect, self-direction and self-determination and be better able to effectively participate in society and interact reflectively with rapid social change.

CONCLUSION

Fostering a culture of independent learning has become an educational buzzword especially with changing paradigm of learning and the skills desired by the global knowledge economy. But the point of concern is that there is no consensus on what the independent learning is & what are its parameters, what the desired goals are & how these goals impact stakeholders. Hence, this paper has briefly outlined these certain areas and suggested that the diff skills of Independent Learning along with the element of relationship between student and teacher and the enabling environment helps in making the independent learning a classroom reality.

REFERENCES

Anthony, G. (1994). Learning strategies in the mathematics classroom: what can we learn from stimulated recall interviews? *New Zealand Journal of Educational Studies*, 29 (2), 127-40.

Bates, I. and Wilson, P. (2002). Family and education: supporting independent learning. *Learning and Skills Research*, 6(1), 3.

Barr, Robert B. and John Tagg. (1995) From Teaching to Learning: A new paradigm for undergraduate education. Change 27:12-25.

Barnett, R. (1999) *Realizing the University in an Age of Supercomplexity* Buckingham: SRHE & OU

Boekaerts, M. (1999). Self-regulated learning: where we are today. *International Journal of Education Research*, 31(6), 445-457

Bullock, K. and Muschamp, Y. (2006). Learning about learning in the primary school. *Cambridge Journal of Education,* 36(1), 49-62.

Bransford, J.D., Brown, A.L. and Cocking, R.R. (2000). *How people learn: brain, mind, experience, and school*. Washington: National Academy Press.

Candy, P. (1991). Independent learning: some ideas from the literature. Oxford Brookes University, Wheatley Campus, Wheatley, Oxford OX33

Carr, M. (1996). *Teaching children to self-regulate: a resource for teachers.* Athens: National Reading Research Centre.

Corno, L. (1992). Encouraging students to take responsibility for learning and performance. *The Elementary School Journal*, 93(1), 69–83.

DfES- RR051 (2008). *Independent Learning: A Literature Review.* Nottingham: Department for Children, School and families

Gill & Halim (2007). The "I" in Independent learning: The Risk of Self-Managing Learners. Research Impcahts: proving or Improving. AARE 2007 conference, Fremantle.

Gorman M (1998). The 'structured enquiry' is not a contradiction in terms: focused teaching for independent learning. *Teaching History*, 92, 20-5.

Kesten C (1987). *Independent learning*. Saskatchewan: Saskatchewan Education

Knowles, M.(1975). *Self-Directed Learning: A Guide for Learners and Teachers*. New York: Association Press.

MacBeath J (1993). *Learning for your self: supported study in Strathclyde schools*. Strathclyde: Strathclyde Regional Council

Malone G and Smith D (1996). *Learning to learn: developing study skills with pupils who have special educational needs.* London: National Association of Special Education Needs.

Marcou A and Philippou G (2005). Motivational beliefs, self-regulated learning and mathematical problem solving. In HL Chick and JL Vincent (eds.), *Proceedings of the 29th conference of the International Group for the Psychology of Mathematics Education*, 3, 297-304.

National Research Council 2000. How People Learn: Brain, Mind, Experience, and School: Expanded Edition. 2nd ed. National Academies Press,

Neber H and Schommer-Aikins M (2002). Self-regulated science learning with highly gifted students: the role of cognitive, motivational, epistemological, and environmental variables. *High Ability Studies,* 13(1), 59-74.

Ommundsen Y (2003). Implicit theories of ability and self-regulation strategies in physical education classes. *International Journal of Experimental Educational Psychology*, 23(2), 141-57.

Pan, D. (2007) 'Independent Learning', Learning to Teaching, Teaching to Learn: A handbook for NUS teachers. (online) Available : http//www.cdtl.nus.edu.sg/handbook/ (accessed 10th October 2007)

Williams J (2003). *Promoting independent learning in the primary classroom*. Buckingham: OUP.

Sharp C, Pocklington K and Weindling D (2002). Study support and the development of the self-regulated learner. *Educational Research*, 44(1), 29-41.

Weiss M (2004). *Developmental sport and exercise psychology: a lifespan perspective.* Morgantown, West Virginia: Fitness Information Technology Inc.

Zimmerman B J, Bonner S and Kovach R (1996). *Developing self-regulated learners: beyond achievement to self-efficacy.* Washington, D C: American Psychological Association.

Zimmerman B J (1998). Developing self-fulfilling cycles of academic regulation: an analysis of exemplary instructional models. In Schunk D H and Zimmerman B J (eds.), *Self-regulated learning: from teaching to self-reflective practice.* New York: Guilford Press.

Zimmerman BJ (2002). Becoming a self-regulated learner: an overview. *Theory into Pactice*, 41(2), 64-72.

EFFECTIVE OF MATHEMATICAL MODEL OF THE DEVELOPMENT OF REASOINING ABILITY OF SECONDARY SCHOOL STUDENTS

Dr. (Mrs.) Rita Chopra** * Mrs. Sheetal Batra**

The present study is conducted to find out the effectiveness of mathematical model on the reasoning gability of secondary school students. The experiement was conducted on 100 students of class VIII. Sample of 100 students was selected from C.B.S.E. school of Ambala City. Simple random sampling teachnique employed for selecting the sample. Two groups were matched on the basis of their intellignence, previous achievement in mathematics and pretest reasoning ability scores. Out of 100 students 20 students were selected for experimental group and the rst 50 studnets were selected for control group. Reseracher taught the experimental group with the help of mathematical model and control group with traditional method. The investigator gave a 40 days intervention programme. The findings of th present study revealed that there exist a significant difference in the reasoning ability scores of students taught through mathematical model and traditional method. Students taught through mathematical model gain higher in the reasoning ability in comparison to traditional method.

INTRODUCTION

In the present investigation the term reasoning ability has been used which is essentially a cognitive ability and is like a thinking in many aspects. It is an implicit act and involves problem solving behaviour. It involves the use of one's previous knolwege and experiences. Reasoning is mental exploration instead of motor exploration as it involves mental exploration of the reason or cause of an event or happening. Garrett (1968) has supported this assumption and stressed that reasoning is step wise thinking with a purpose or goal in mind. Differnet methods have been adopted by various educational organizations from time to time to develop reasoning ability. The most commonly known approach is problem solving where a task-oriented situation is presented to the problem solver, the solution of which he does not know but at the same time he possesses the necessary basic information needed to solve that problem. Kundu and Chakarbarti (1975) have advocated that this is essential for the reasong development process. In these methods all possible

** Professore in Education, Kurukshetra University, Kuruksehtra*
*** Assistant Professor, Sohan Lal DAV College of Education, Ambala City*

solutions of any given problem are analyzed completely in an unbiased way by combinationof various attributes of variables of an problem. On the other hand if one take different subject of a school curriuculum, mathematics is one of the main subject which is directly linked with the reasoning ability of the individual. Mathematics offers opportunities for opening the mind of new lines of crative ideas and challenging thoughts. So mathematics and resoning ability are ocmplementary of each other. Where there is a concept of mathematics, there is concept of reasoning gand logics. So it became a need to see the interactive effect fo mathematics teaching and development of reasoning ability. The model of teaching named mathematical model developed for the present study realtes to this process. The model of teaching developed for the present study belongs to the information processing famility and behaviour modification family. The aim of this model is concept development through problem solving approach. Model developed here firstly work for developing the concepts when the concepts are fully developed, then these concepts are practiced until mastery learning is achieved. Every concept is developed in a logical and sequential way. The model is based on the principle of induction i.e. every concept is induced in a systematic way. So this principal is helpful in developing the reasoning gability of the students specially in the field of mathematics. The research study of Jenson (2008) has provide devidences that problem solving traing helps in developing reasongin. But the effiencey of these methods may be subjected to feasibility as well as the cultural set up of a place. There is a need to find out wheter these methods show similar outcomes when used in India classrrom where the students are less exposed to free classroom atmosphere. It was in this direction that present study was planned to find out if mathematical model helps in developing reasoning ability amongst secondary school students. The present study grew out of this felt need by the investigator.

OBJECTIVES

* To find out the diffeence in the Reasoning ability of students taught through mathematical model and traditional method.

HYPOTHESE

* There exists no significant difference in the reasoning ability scores of the students taught through mathemaitical model and traditional method.

METHOD AND PROCEDURE

DESIGN

In the present study Experimental control group design was followed. Two group of 50 students each were maticed by paried comparison method on basis of their intelligence, previous achievement in mathematics and pretest reasoning ability scores. The experimental group was given mathematical model treatment and control group was taught through traditional process.

SAMPLE

A sample of 100 students was selected randomly from the VIII class of the DAV Public School Ambala City. They belonged to both sexes and their ages ranged from 13 to 14 years. Their achievement scores in VII standard examination were above 60 percent.

TOOL USED

The sample students were administred the reasoning ability test developed and standardized by Dr. Sadhna Bhatnager in 1985. The test contains 35 items. All the items are based on mathematical reasoning concept. Th split half reliability of the test is 0.86 and validity established against the external criteria is 0.78. The test items were scored for measuring the reasoning ability of the students. Mathematical model was prepared and standardized by the investigator herself. The success rate for mathematical model was 97.34 percent.

CONTROLS APPLIED

In order to partial out the effect of mathematical model on the reasoning ability of the students, various factors which are said to be affecting it were controlled.

- First factor was time which was controlled by conducting the experiment in the month of November when there is not much pressure on the minds of students for preparing themselves for final examination.
- The second factor was socio-economic status the students selected for the sample belonged to familty of governemt service employees.
- The third control was their intelligence level. For this students were matched on the intelligence scale by S.S. Jalota.
- The foruth control was academic achievement because of which, the students who obtained more than sixty per cent marks were selected for the sample.

- The fifth control employed was the pretest reasong ability scores of students as the matching of the two groups. The result of which have been entered in Table-1 revealing hereby that the two groups are equal on pretest reasong ability scores as the t-ratios is not significant.

Table-1 t-ratio between the mean pretest scores of experimental and control group for reasoning ability

	Experimental Group		Control Group		t-ratio
	Mean	S.D.	Mean	S.D.	
Reasoning Ability Score	24.2	2.3	23.7	2.6	0.43

TREATMENT EMPLOYED

Experimental group was given mathematical model treatment in forty sessions of forty five minutes each. The steps so followed are given below:

1. In the first step the investigator developed reports with the students of the experimental group.
2. The problems related to mathematics of class VIII on which the module was prepared were selected. The number of such modules was 15 and each module was discussed in two sessions.
3. The students were then told the objectives of the study as well technique in the words of Clark" We have a judicial mind which is illogical. No doubt we need both but too often our judicial mind completerly dominates our creative mind. Because of this fact we are going to used a technique called problem solving in which judgment is ruled out and every one contributes one idea which occurs to him/her spontaneously.
4. In the next stage, the students were provided with one problem in one session. They were asked to react to the problem and restate that in their own words prompt were given by the investigator. A long list of ideas which was based on constructivism was prepared. Out of those ideas relavant ideas were selected by investigator with the help of students in a logical way. Every concept was discussed in this way to the students.

The care ws taken that subjects of experimental group did not mix-up with the subjects of control group so as to avoid the interchange of ideas between control group and experimental group.

DATA COLLECTION

Before starting the treatment the students of both groups were administrered form A of reasoning ability test standardized by Dr. Sadhna Bhatnagar in 1985. At the end of treatment both

the group were administered form B of this test. The data so collected was analyzed through t-test. The pre-test and post test reasoning ability scores of each of the two groups were compared and also mean difference between the gain scores (difference between pre-test and post-test scores) of both the groups was found.

RESUTLTS AND DISCUSSION

The results of t-ratio for the mean difference between the pretest and post test reasoning ability scores for experimental as well as control groups are entered in Table-II. Further t-ratio for the mean difference between gain scores (differne ce in pre test and posttest scores of the two groups (experimental and control group) are given in Table-III

Table-II Mean, S.D and t-ratio for pre-test and post-test score of experimental and control group for reasoning ability

	Experimental Group				**Control Group**			
	Pre-test		Post-test	t-ratio	Pre-test		Post-test	t-ratio
	M	S.D	M S.D		M	S.D	M S.D	
Resoning ability score	24.2	2.3	33.2 2.1	4.38*	23.7	2.6	26.4 2.2	2.48*

* Significant at .01 level

Table-III Mean, S.D and t-ratio for gain score of experimental and control groups for reasoning ability

	Experimental Group		**Control Group**		**t-rato**
	Mean	S.D	Mean	S.D	
Resoning ability score	9.0	2.2	2.7	2.4	4.7*

* Significant at .01 level

It may be inferred from table-II that t-ratio is significant for the differnence between pre-test and post-test scores of experiental group. This shows that the experimental group significantly gained after the treatment of mathematical model. In other words it may be said that mathematical

model treatment helped in improvement of reasoning ability of students of experimental group. These results are further supported by significant t-ratio (vide table-III) which conveys that mean gain score of experimental group are more than that of control. On the basis of statistically significant results it may be said that mathematical model helps in the development of reasoning ability of the students. The results may be explained by the findings of Jensen (2008) who pointed that students excelled in reasoning ability because of the exposure of problem solving treatment. The sesulty further reveal that the differenence between mean scores on reasoning ability (pre-test and post –test) for control group also improved in reasoning ability without having mathematical model treatment. This may be either because of the test of reasoning ability used in this study or of mutual talk amongst the students of experimental and control group. But the question here is does mathematical model help in higher increase in reasoning ability among experimental group. The answer to this question is apparent from the significant t-ratio (vide Table-IIII) which means that gain scores on reasoning ability of experimental group are more than that of control group. These results may be explained through the findings of Denny (1970) who observed that motivational climate structured by the teacher was facilitator to develop reasoning ability amongst students. On the basis of this discussion it may be said that such a treatment is helpful to the students in developing reasoning ability amongst them by creating co-operative environment, stimulating interest and promoting a quantity of ideas having a bearing upon particular subject.

CONCLUSION

From the above results it is clear mathematical model helps in developing resaong ability amongst students. The free-use of imagination and active participation and criticism less atmosphere is helpful in promoting reasoning in students. Thus result of present study proves into the efficiency in the mastery of mathematical model for developing reasoning ability. Mathematics teaching based on the principles of mathematical model can develop all cognitive abilities in the students because the process mainlyt concentrates on tehe concept development rather than memorization. A concept cannot be developed meaningfully if the students have not acquired it through proper understanding. Therefore curriculum of mathematics should be developed by taking in view the concept development and problem solving approach.

REFEENCES

Banerjee, S. (1997) A study on the mathematical competencies of the pupils of the primary school leaving class. Journal of Centre for pedagogical studies in mathematics, 20,4, 14-17, April.

Brian, L. (2005) Anaogical reasoning in children's reading and addition. Retrieved from http.//proquest.umi.com/DAI-C 66/03, P.549, Fall 2005.

Chauhan, A. (2008) A study of ht effectiveness of mastery learning model and traditional model of teaching in terms of achievement of the students at different levels of intelligence. The Rajasthan Board Journal of Education, 36,2,34-38, December.

Dange, J.K. & Wahab, S.A (2006) Effectiveness of computer assisted instruction on the academic achievement of class IX student's physical science. Journal of Educational research and extension, 43,1,22-30, September.

Denny, D.A. (1970) Effect of structuring on the productiveness of children's thinking. Journal of Experimental Education, 36,1,13-18.

Garabedian, C. (1981) The effects of proof on achievement and reasoning ability of students in geometry. Retrieved from http.//proquest.umi.com/DAI-A 42/02 P.586, Aug 1981.

Gupta, N. (1993) Effect of Concept attainment Model and Inductive Model of Teaching on Achievement, Self-concept and Attitude towards Science, Journal of Indian Education, 25,2,40-45, April.

Gupta, S. (1995) The effect of different information Processing Model of teaching on class IX students in relation to congnitive style, achievement motivation and self concept, Journal of North-East India Council for Social Science Research, 19,1,51-55, June.

Joye & Weil (1972) Model of teaching, Prentice Hall of India Private limited, New Delhi.

Jenson, B. (2008) Factors contributing to mathematical problem-solving performance-An exploratory study. Educational Studies in Mathematics, 18,4,399-415, July.

Kaul, L. (1996) Methodology of Educational Research, Vikas Publising House Private Limited, New Delhi.

Kundu, R. N. and Chakarbarti, R.K. (1975) A study of creative approach to problem solving Creativity News Letter, 3,1,39-43.

Narang, V.K. (2004) Effectiveness of software technology in the acquistion of mathematical concepts in relation to study habits and intelligence at secondary stage, Journal of Centre for Pedagogical Studies in Mathematics, 28,2,33-38, June.

Pabla. T.K. (2007) Effect of Computer assisted instruction, video-assisted instruction and self-learning modules on achievement in Matheamatics in relation to congnitive style, Educational and Psychological Measurement, 55,1,30-36, April.

Perrine, V. (2001) Effects of a problem solving based mathematics course in the proportional reasoning of secondary school students. Retrieved from http.//proquest.umi.com/DAI-A 62/02, P-502, August, 2001.

ATTITUDE OF PARENTS TOWARDS LEARNING MENTAL ARITHMETIC THROUGH ABACUS

*** Ruchi Manchanda** ****Dr. Ramana Sood**

RATIONALE OF THE STUDY

Mathematics has indispensable contribution to the development of society in all the times; it may be industrial revolution era, green revolution era or electronic era. Even in the present era of Information and Technology the role of Mathematics cannot be undermined. But, if we ask school children about their least favorite subject at school, there is fair chance that most of them will say Mathematics and if we ask why, they will say it's boring and difficult. .**Upadhaya** (2005) found that major cause for the failure in mathematics is the ways in which children learn mathematics rather than the difficulty of mathematics itself.

Learning Mental Arithmetic through Abacus means learning to perform mathematical operations mentally by using Abacus. Abacus' is an ancient computing methodology developed in China wherein students learn to solve mathematical problems using a very simple instrument called 'abacus'. Basic mathematical operations like addition, subtraction, multiplication and division are solved by simple movement of beads in this instrument. **Hayashi (20001)** found that abacus study not only improves the ability to calculate mentally, but also provides a beneficial ripple effect on other disciplines. Thus in the background of this, the investigator got interested to study the Attitude of Parents towards learning Mental Arithmetic through Abacus.

OBJECTIVES

1) To find out the significant difference between the attitude of working and non working parents towards learning Mental Arithmetic through Abacus.
2) To find out the significant difference between the attitude of parents of male and female child towards learning Mental Arithmetic through Abacus.
3) To find out the significant difference between the attitude of parents belonging to low and high income group towards learning Mental Arithmetic through Abacus.

** Assistant Professor, Sohan Lal DAV College of Education, Ambala City*
*** Professor, Education Department, Kurukshetra University, Kurukshetra*

HYPOTHESES

1) There exists no significant difference in the attitude scores of working and non working parents towards learning Mental Arithmetic through Abacus.
2) There exists no significant difference in the attitude scores of parents of male and female child towards learning Mental Arithmetic through Abacus.
3) There exists no significant difference in the attitude scores of parents belonging to low and high income group towards learning Mental Arithmetic through Abacus.

METHOD USED

In the present study, survey method was used.

SAMPLE

In the present study, a sample of 60 parents whose children were learning Mental Arithmetic through Abacus was taken.

TOOL USED

In the present study, a scale to measure the Attitude of parents towards learning Mental Arithmetic through Abacus, constructed by the investigator herself was used. It is a Likert type scale having 39 statements; 9 of them are negative statements and remaining are positive statements. Each statement is set against a five point scale of 'Strongly Agree', 'Agree', 'Undecided', ' Disagree', 'Strongly Disagree' and weights 4,3,2,1,0 for positive statements and 0,1,2,3,4 for negative statements. The investigator met the parents and told the purpose of the survey and collected the data. An individual score is the sum of all the scores of the 39 items.

FINDINGS

TABLE 1

The significance of the difference between the means of the attitude scores of working and non working parents towards learning Mental Arithmetic through Abacus.

Group	N	Mean	S.D	S.Ed	t	Significance
working	35	133.03	5.84	2.35	5.42	Significant at 0.01 level
Non working	25	120.48	10.48			

N = 60
df = 58

From table 1 it is clear that the 't' value calculated from the mean attitude scores of working and non working parents is 5.42 which is greater than the table value of 't' at 0.05 and 0.01 level of significance, which indicates that there is significant difference in the attitude scores of working and non working parents towards learning Mental Arithmetic through Abacus.

TABLE 2

The significance of the difference between the means of the attitude scores of parents of male and female child towards learning Mental Arithmetic through Abacus.

Group	N	Mean	S.D	S.Ed	t	Significance
Parents of male child	32	134.6	7.46	1.94	1.08	Not significant at 0.01 level
Parents of female child	28	132.5	7.57			

N=60

df =58

From table 2 it is clear that the 't' value calculated from the mean attitude scores of parents of male and female child is 1.08 which is less than the table value of 't' at 0.05 and 0.01 level of significance, which indicates that there no significant difference in the attitude scores of parents of male and female child towards learning Mental Arithmetic through Abacus.

TABLE 3

The significance of the difference between the means of the attitude scores of parents belonging to low and high income group towards learning Mental Arithmetic through Abacus.

Group	N	Mean	S.D	S.Ed	t	Significance
Low income	27	133.92	8.15	1.99	0.64	Not significant at 0.01 level
High income	33	132.63	7.04			

N =60

df = 58

From table 3 it is clear that the 't' value calculated from the mean attitude scores of parents belonging to low and high income group is 0.64 which is less than the table value of 't' at 0.05 and 0.01 level of significance, which indicates that there is no significant difference in the attitude scores of parents belonging to low and high income group towards learning Mental Arithmetic through Abacus.

CONCLUSION

On the basis of above findings following conclusions were drawn:

1) As the mean attitude scores of working parents (133.03) is greater than the mean scores of non working parents (120.48), so it can be concluded that the working parents have more favourable attitude towards learning Mental Arithmetic through Abacus than non working parents.

2) As there is very little difference between the mean attitude scores of parents of male child (134.6) and parents of female child (132.5), so it can be concluded that the parents of male and female child have almost similar attitude towards learning Mental Arithmetic through Abacus.

3) As there is very little difference between the mean attitude scores of parents belonging to low income group (133.92) and parents belonging to high income group(132.63), so it can be concluded that the attitude of parents towards learning Mental Arithmetic through Abacus is not effected by the income.

Keeping in mind the importance of learning Mental Arithmetic through Abacus, efforts should be made to make parents more aware about the importance of learning Mental Arithmetic through Abacus. For this school may invite the parents in seminars and workshops on 'Importance of Abacus'. School should also emphasize the importance of Abacus Mental Arithmetic in P.T.M.

REFERENCES

Bajwa, H.S. (2008). Evaluation Study of Quality of Mathematics Education in Secondary Schools of Jagraon, Punjab. *Journal of Recent Researches in Education and Psychology*, 13(1-2), 15-18.

Edward, M. ("n.d."). Importance of mathematics. Retrieved on 6th June, 2011 from World Wide Web: www.advanceyoureducation.com

.

Garret, H.E. (1987). Statistics in Education and Psychology. Bombay : Vikas Febhar and Simsons Pvt. Ltd.

Ifrah, G. (2000). A brief history of Abacus. Retrieved on 6th June, 2011 from World Wide Web: www.ee.ryerson.ca/~erf/abacua/history.html

Kaul, L. (1989). Methodology of Educational Research, New Delhi: Vani Educational Books.

DEPRESSION IN ADOLESCENTS: CAUSES, IMPACT AND TREATMENT

Dr. Mukesh Ahlawat

Depression has been considered to be the major psychiatric disease of present era. The suicide rate for adolescents has increased more than 200% over the last decade. Recent studies have shown that greater than 20% of adolescents in the general population have emotional problems and one-third of adolescents attending psychiatric clinics suffer from depression. The majority of teenage depressions can be managed successfully by the primary care physician with the support of the family, Depression is a medical condition that can cause a wide variety of psychological and physical symptoms. Depression may be described as feeling sad, blue, unhappy, miserable, or down in the dumps. Most of us feel this way at one time or another for short periods.

True clinical depression is a mood disorder in which feelings of sadness, loss, anger, or frustration interfere with everyday life for a long period of time.

Depression in adolescents is probably underdiagnosed because the symptoms can be difficult to recognize. It is sometimes difficult to differentiate the signs and symptoms of depression from the occasional bad mood, acting out, and negative attitude that most adolescents experience at some point. It is not uncommon for the transition from childhood to adulthood to include conflict and anger as the teen tries to adjust to their changing body and role among family and friends. The primary difference between "normal" adolescent behavior disruptions and depression is that depression leads to a significant change in mood that lasts for at least two weeks and includes some associated symptoms.

The definition of a "depressed mood" in adolescents is somewhat different than depressed mood in an adult. Many adolescents describe feeling down, sad, or blue much of the time. In adolescents, irritability may be a better indicator of depression.

Signs of irritability include feeling "annoyed" or "bothered" by everything and everyone. Rather than expressing sadness, the depressed adolescent may be moody, negative, and argumentative, picking fights as a means to express his or her emotional distress. He or she often is unable to tolerate frustration and responds to minor provocations with angry outbursts.

* *Assistant Professor, Sohan Lal DAV College of Education, Ambala City*

Other characteristics of depressed mood in adolescents include:

- Finding others uncaring
- Brooding about real or potentially unpleasant circumstances
- A gloomy or hopeless outlook
- Belief that everything is "unfair"
- Feelings that they disappoint parents or teachers

The three distinct types of depression (major depression, dysthymia, and depressive disorder not otherwise specified) will be discussed here.

Major depression — Major depression is the medical term for depression that includes at least five of the symptoms listed below. A person can have mild, moderate, or severe major depression.

- Depressed or irritable mood for most of the day nearly every day
- Markedly diminished interest or pleasure in almost all activities
- Change in appetite or weight
- Insomnia or excessive sleep
- Talking or moving more slowly or quickly than normal
- Fatigue or loss of energy
- Feelings of worthlessness or guilt
- Difficulty concentrating or making decisions
- Recurring thoughts of death or suicide

One of first two symptoms must be present to diagnose depression: the adolescent must have either a depressed/irritable mood or loss of interest or pleasure for most of the day, nearly every day, for at least two weeks. In addition, four or more of the other symptoms must also be present during the same period.

Dysthymia — Dysthymia is a less intense but more persistent condition than major depression. Dysthymia is usually diagnosed when a person has a depressed or irritable mood for at least one year and has at least two other symptoms of depression. The most common symptoms of dysthymia include changes in appetite and/or sleep, fatigue, low self-esteem, difficulty concentrating and making decisions, and feelings of hopelessness.

Other types of depression — A teen can have some, but not all, of the features of major depression or dysthymia. Depression, independent of the type, results in problems with daily functioning and development. It is important that depression be addressed to prevent a worsening

of symptoms and problems in daily life. Although other types of depression may have fewer or less severe symptoms, the adolescent should still be evaluated by a healthcare provider.

SYMPTOMS OF DEPRESSION

Depression in adolescents is probably underdiagnosed because the symptoms can be difficult to recognize. Depression can change or distort the way adolescents see themselves and their lives, as well as other people around them. People who have depression usually see everything with a more negative attitude, unable to imagine that any problem or situation can be solved in a positive way.

Extreme and enduring sadness is the best-known symptom of depression, although adolescents can have a number of other symptoms, including irritability, difficulty at school, changes in sleep habits, and/or feelings of worthlessness. Depression is different than occasional blues and grief because depression is persistent and often interferes with the teen's ability to get along with parents and friends, complete school work, and appropriately participate in other normal daily activities.

Others Symptoms include:

- Agitation, restlessness, and irritability
- Dramatic change in appetite, often with weight gain or loss
- Extreme difficulty concentrating
- Fatigue and lack of energy
- Feelings of hopelessness and helplessness
- Feelings of worthlessness, self-hate, and inappropriate guilt
- Inactivity and withdrawal from usual activities, a loss of interest or pleasure in activities that were once enjoyed (such as sex)
- Thoughts of death or suicide
- Trouble sleeping or excessive sleeping

Depression can appear as anger and discouragement, rather than as feelings of hopelessness and helplessness. Use of alcohol or illegal substances may be more likely to occur. Suicide is a tragic and preventable consequence of severe depression. Any mention of suicide or self-harm should be taken seriously. Signs that a teen is considering suicide include the following:

- Ideation — Talking about or threatening to kill or hurt oneself; looking for ways to kill oneself; talking or writing about death, dying or suicide
- Substance abuse — Increased substance use

- Purposelessness
- Anxiety — Anxiety, agitation, or changes in sleep pattern
- Trapped — Feeling like there is no way out
- Hopelessness
- Withdrawal — Withdrawing from friends, family, and society
- Anger
- Recklessness
- Mood changes

If depression is very severe, there may also be psychotic symptoms, such as hallucinations and delusions. These symptoms may focus on themes of guilt, inadequacy, or disease.

CAUSES OF DEPRESSION

The exact cause of depression is not known. Many researchers believe it is caused by chemical imbalances in the brain, which may be hereditary or caused by events in a person's life. Studies suggest that depression is a biologic disorder resulting, at least in part, from an imbalance of neurochemicals in the brain, including serotonin, norepinephrine, and dopamine. These neurochemicals allow cells in the brain to communicate with each other and play an essential role in all brain functions, including movement, sensation, memory, and emotions. This interaction is supported by studies demonstrating the benefit of antidepressants, which help restore the neurochemical balance in the brain.

Some types of depression seem to run in families, but depression can also occur in people who have no family history of the illness. Stressful life changes or events can trigger depression in some people. Usually, a combination of factors is involved.Many adolescents are unsure why they are depressed. Depression sometimes occurs in response to a stressful event, such as a recent death or break-up, or it can occur for no apparent reason. Although anyone can develop depression, certain factors increase an adolescent's risk for becoming depressed, including:

- A prior history of depression
- A history of anxiety disorder, attention deficit hyperactivity disorder, learning disability
- Chronic illness
- Alcohol or drug abuse
- Difficulties with school work
- Negative outlook or poor coping skill

- Breaking up with a boyfriend or girlfriend, failing a class, illness or death in the family, or parents divorcing (for adolescents)
- Childhood events, such as abuse or neglect
- Divorce, death of a friend or relativeMedical conditions such as hypothyroidism (underactive thyroid), medications (such as sedatives and high blood pressure medications), cancer, major illness, or prolonged pain
- Sleeping problems

IMPACT OF DEPRESSION

Many adolescents who are depressed are not aware that depression is the basis for the changes in their emotions, ability to interact with others, and school performance. These changes can have serious, life-altering consequences that increase the risk for future depressive episodes, especially if the depression is not recognized or treated. Adolescents who are depressed are at increased risk for the following problems:

Diminished interest or pleasure — Adolescents experience diminished interest by feeling that events, hobbies, interests, or people are less interesting or fun than they used to be. They may use terms like "boring," "stupid," or "uninteresting." They may withdraw from or lose interest in friends. If they are sexually active, they may have decreased libido or interest in sex.

Change in appetite or weight — Appetite changes and weight loss are common in people with depression, although this may be less common in depressed adolescents than in depressed adults.

Changes in sleep — Sleep disturbance is common in depressed adolescents; complaints may include not feeling rested after sleeping or having difficulty getting out of bed in the morning. A depressed adolescent may have difficulty falling or staying asleep, may sleep excessively during the day or night, or may sleep at odd hours.

Slowed or rapid movement — Talking or moving more slowly or quickly than normal is common in depressed youth; the medical term for this is psychomotor retardation or agitation. Adolescents can have alternating periods of retardation and agitation within a single episode of depression.

- Psychomotor retardation (slowing) is defined an abnormal slowing of movement. It is directly related to brain activity and causes the person to appears as if he or she is moving in slow motion; the feeling of being slowed down is not psychomotor retardation.
- Psychomotor agitation may cause trouble sitting still, pacing, hand wringing, pulling at or rubbing clothes, tantrums, yelling, shouting, or non-stop talking.

Fatigue or loss of energy — A depressed adolescent may report feeling tired all the time, exhausted, listless, and without energy or motivation. He or she may feel the need to rest during the day, experience heaviness in their arms or legs, or feel like it is hard to get going much of the time. Parents can sometimes misinterpret this behavior as laziness, a bad attitude, or a desire to avoid responsibilities. Alternatively, some parents are concerned that the adolescent is medically ill.

Feelings of worthlessness or guilt — Many depressed adolescents have feelings of inadequacy, inferiority, failure, or worthlessness. One or more of the following may be present:

- Reluctance to try to do things (fear of failure)
- Excessively self-critical assessment of accomplishments
- Difficulty identifying positive self attributes
- Desire to change several aspects of themselves
- An "I don't care" attitude to avoid feelings of insecurity
- Compulsive lying about success or skills to bolster self-esteem
- Envy or preoccupation with the success of others
- Marked self-reproach or guilt for events that are not their fault
- Belief that they deserve to be punished for things that are not their fault

Impaired concentration, indecisiveness — Depressed adolescents usually have problems with attention and concentration that were not present to the same degree before the episode of depression. Their thinking and processing of information may be slowed. In addition, they are indecisive, which may cause procrastination, helplessness, or inability to take action. They take longer to complete homework and class work than before the depressive episode; school performance may decline. It may be necessary to obtain information from the school to determine if this problem is present.

Recurring thoughts of death or suicide — Some depressed adolescents experience recurrent thoughts of death (not just fear of death) or suicide or even attempt suicide. Morbid thoughts are common in depressed teens and manifest as:

- Thoughts that life is not worth living
- Thoughts that others would be better off if they were dead
- Preoccupation with music and literature that has morbid themes

DEPRESSION DIAGNOSIS

There is currently no medical test that identifies depression, although blood tests are often done to rule out other medical conditions that could be causing depression. Major depression is diagnosed if a person reports having five or more depressive symptoms for at least 2 weeks.

The diagnosis of depression is based upon a person's symptoms, the duration of their symptoms, and the overall effect of these symptoms on the person's life. Information from parents and teachers is often considered during the evaluation. The evaluation usually begins with the child's primary care provider (eg, pediatrician, family practitioner), although the ideal treatment for depressed adolescents should include referral to a trained mental health provider (eg, child psychiatrist, psychologist, or other specialist).

Related conditions — There are a few conditions that cause features similar to those of depression, including mood disorders related to a medical condition, substance abuse (eg, alcohol), or a loss. Other conditions that can cause symptoms of depression include bipolar disorder and adjustment disorder. As the healthcare provider evaluates the child's signs and symptoms of depression, he or she will determine if one of these other conditions could be the cause.

Mood disorder related to a medical condition — Several medical disorders can cause symptoms of depression, including hypothyroidism, adrenal insufficiency, post concussive syndrome, vitamin B12 deficiency, lupus, and mononucleosis..)

Substance-related mood disorders — Drugs of abuse (eg, alcohol, cocaine, heroin, amphetamines) and prescription medications (eg, corticosteroids, epilepsy treatments, attention-deficit hyperactivity disorder treatments, birth control pills) can cause symptoms of depression in some adolescents.

Grief — Grief, also known as bereavement, is a normal reaction to many situations, including the loss of a loved one. It is often difficult to know if an adolescent who is grieving also suffers from depression. Adolescents who have feelings of hopelessness, helplessness, worthlessness, or guilt may be depressed, especially if these symptoms persist for several months beyond the loss.

Adjustment disorder with depressed mood — An adjustment disorder is a significant emotional or behavioral reaction to an identifiable stressor (eg, parental divorce, academic failure, or peer problems). Adjustment disorder with depressed mood (ADDM) is a likely diagnosis if the adolescent's symptoms are significant, develop within three months of the onset of the stressor(s), and resolve within six months after the stressor or its consequences. ADDM can persist beyond six months if the stressor continues (eg, ongoing parental conflict).

Bipolar disorder — Adolescents with bipolar disorder (manic depression) have periods of mania (feeling excessively elated, impulsive, irritable, or irrational) or hypomania (a milder form of mania), sometimes with periods of major depression

Dealing with the diagnosis — Being diagnosed with depression is reassuring for some adolescents and their families; the diagnosis provides an explanation for symptoms such as fatigue, difficulty sleeping, and changes in appetite. Some families worry that they contributed to their adolescent's depression as a result of a divorce, move, or other life event. Still other families have difficulty recognizing that the adolescent's symptoms are those of depression, and continue to hope that the symptoms will simply go away without treatment.

These emotions can be difficult to sort out, and it is often helpful for the parent(s) as well as the adolescent to meet with a therapist or counselor, either together or separately.

WHEN TO SEEK HELP FOR DEPRESSION

Parents who are not sure if their adolescent is suffering from depression or just experiencing normal adolescent issues can consider the following questions:

- Does the teen's behavior differ from his or her normal behavior?
- Are the changes significant or severe?
- How long have the symptoms been present?
- Is the teen "annoyed" or "bothered" by everything and everyone?
- Is the teen moody, negative, or argumentative?
- Does the teen respond to minor provocations with angry outbursts?
- Does the teen have a hopeless outlook? Believe that everything is unfair?
- Has the teen withdrawn from or lost friends?
- Have relationships within the family been affected by the teen's mood?
- Have the teen's grades or schoolwork declined recently?

TREATMENT OF DEPRESSION IN ADOLESCENTS

There are two main avenues to treatment: psychotherapy and medication. Often, both may be required. The majority of mild depressions in teenagers respond to supportive psychotherapy with active listening, advice and encouragement. Issues of alcohol and substance abuse may have to be addressed by referral to relevant agencies. Formal family therapy may be required to deal with specific problems or issues. Comorbidity is not unusual in teenagers, and possible pathology,

including anxiety, obsessive-compulsive disorder, learning disability or attention deficit hyperactive disorder, should be searched for and treated, if present.

Medicines that you take for other problems could cause or worsen depression. You may need to change them. DO NOT change or stop taking any of your medications without consulting your doctor.

People who are so severely depressed that they are unable to function, or who are suicidal and cannot be safely cared for in the community may need to be treated in a psychiatric hospital.

Most people benefit from antidepressant drug therapy, along with psychotherapy. As treatment takes effect, negative thinking diminishes. It takes time to feel better, but there are usually day-to-day improvements.

MEDICATIONS FOR DEPRESSION

Drugs used to treat depression are called antidepressants.

- Selective serotonin re-uptake inhibitors (SSRIs) are the most commonly used antidepressants. Names include: fluoxetine (Prozac), sertraline (Zoloft), paroxetine (Paxil), fluvoxamine (Luvox), citalopram (Celexa), and escitalopram (Lexapro).
- Serotonin norepinephrine reuptake inhibitors (SNRIs) are also commonly used. Names include desvenlafaxine (Pristiq), venlafaxine (Effexor), and duloxetine (Cymbalta).
- Other medicines used to treat depression include: tricyclic antidepressants, bupropion (Wellbutrin), and monoamine oxidase inhibitors.
- People with psychotic symptoms, such as delusions or hallucinations, may need antipsychotic medications.

Some people with major depression may feel better after taking antidepressants for a few weeks. However, many people need to take medication for 4 - 9 months to get a full response and to prevent depression from coming back.

Some people who do not improve with routine dosages of antidepressants and talk therapy have what is called treatment-resistant depression. They are often prescribed higher (but still safe) doses of their antidepressants, or a combination of medications. Lithium and thyroid hormone supplements also may be added to help the antidepressants work better.

Young adults ages 18 - 24 should be watched more closely for suicidal behavior, especially during the first few months after starting medications.

TALK THERAPY

People with depression benefit from some type of talk therapy and counseling. Talk therapy is a good place to talk about feelings and thoughts, and most importantly, learn ways to deal with them.

Types of talk therapy include:

- Cognitive behavioral therapy teaches depressed people ways of fighting negative thoughts. People can learn to be more aware of their symptoms, learn what seems to make depression worse, and learn problem-solving skills.
- Psychotherapy can help someone with depression understand the issues that may be behind their behaviors, thoughts, and feelings.
- Joining a support group of people who are experiencing problems like yours can also help. Ask your therapist or doctor for a recommendation.

OTHER THERAPIES

ELECTROCONVULSIVE THERAPY (ECT):

ECT may improve the mood of severely depressed or suicidal people who don't respond to other treatments. It may also help with depressed patients who have psychotic symptoms.

TRANSCRANIAL MAGNETIC STIMULATION (TMS):

TMS uses high frequency magnetic pulses that target affected areas of the brain. It is often thought to be a second-line treatment after ECT.

Use of light therapy for depressive symptoms may help in the winter months to restore a normal sleep cycle. However, by itself it is not an effective treatment for major depression.

GROUP THERAPY

Some schools and community organizations offer group therapy sessions led by a school counselor or psychologist. These groups can be formed to help kids of various ages, from elementary school through high school, learn more about issues that bother them and how to solve them.

Most teens, however depressed, do not come to therapy voluntarily. Unlike their adult counterparts, they have not identified an area in which their depression is compromising their quality of life. When asked why they are in treatment, the likely answer is "she" (mother) or "he" (father) made me come.

At this point, group sessions are often less threatening and can teach social skills in a more relaxed, less stigmatizing environment. Rules of respectful sharing (not interrupting) are enforced but, unlike adult groups, food and drink may be served, kids may sit on the floor or move about, and are encouraged to contact the therapist and each other between sessions.

INDIVIDUAL THERAPY

People who visit a therapist alone, rather than in a group, often do so because they have a problem that they don't feel comfortable talking about with others. Individual therapy is also appropriate when a group is not available or a person's issue is more complex and requires personalized attention. Although every emotional or psychological issue is important, some just don't lend themselves well to group interactions and are best dealt with one on one.

EXPECTATIONS (PROGNOSIS)

The outcome with treatment is usually good, but not for everyone. Depression is a recurring problem for many people.

For people who have repeated episodes of depression, quick and ongoing treatment may be needed to prevent more severe, long-term depression. Sometimes people will need to stay on medications for long periods of time.

COMPLICATIONS

- Alcohol- and drug-related problems, as well as tobacco dependence are more likely in people with long-term depression
- Increased risk of problems with physical health and premature death due to medical illness
- Suicide (up to 15% of people with major depressive disorder die by suicide)

Call your doctor right away if:

- You hear voices that are not there.
- You have frequent crying spells with little or no provocation.
- Your depression is disrupting work, school, or family life.
- You think that your current medications are not working or are causing side effects. DO NOT change or stop any medications without consulting your doctor.

Adolescent depression is a disorder that occurs during the teenage years, and involves persistent sadness, discouragement, loss of self-worth, and loss of interest in usual activities. In its extreme form, the sufferer experiences a slowdown of both time and the ability to think and often

takes to bed as a refuge. Appetite, sexuality, and communication with others may be severely compromised. Even breathing may feel difficult as hopelessness fills each pore.

Most depressed adults have a name for their disorder and know when "the depression" hits. Teens are not as well educated about feelings and somatize (express their emotions through their body) instead of talking. Thus "my head hurts" or "my stomach hurts" are ways of saying "I hurt." Unfortunately, these complaints are usually treated with medicine rather than therapy.

Depression in children and adolescents does not always manifest in this way. Instead of being sad and debilitated, a depressed youth may be agitated and irritable, have physical symptoms such as headaches and stomachaches, and even be able to move in and out of a depressed mood.

Adults with major depression usually turn their anger inward and have a flat emotional tone or affect. Their teen counterparts may snap at friends and family over the smallest things. "It is as though I wanted to push everyone away that was close to me," said one recovering youth. "The only way I could do it was to behave like a jerk."

Finally, adults who are severely depressed are usually continuously depressed. Teens react more to their external environment and periodically leave their sadness behind. Thus, a depressed teen who is successful in getting tickets to see a famous music group may enjoy a spurt of excitement/happiness before and during the concert before returning home to emotional darkness.

Clinicians may have difficulty diagnosing teens because of these factors. The good news is that effective psychotherapeutic treatments are available for those properly identified as having major depression.

Treating adolescents for depression has come a long way in the past decade. As we learn more about the physical, social, and emotional causes of this disorder, even more
Progress will be made in the future.

RELATIONSHIP OF SOCIO-ECONOMIC STATUS AND RURAL-URBAN BACKGROUND WITH OCCUPATIONAL ASPIRATIONS

***Richa (M.Ed.)** ****Dr. Sanjeev Kumar**

ABSTRACT

Occupational aspirations are individual's expressed career related goals or choices. (Johnson, 1995). Occupational aspirations hold a very important place in one's life. Choosing a vocation is one of the salient decisions of life, which not only shapes the future of the individual but of the whole nature at large. Thus, occupational aspiration is the most important contributing factor in choosing an occupation, as it makes an individual to strive for a particular occupation and adequate occupational choice would not only lead to personal growth and satisfaction, but would also help in making maximum utilization of a nation's human resources. Occupational aspirations depends on number of factors. In this paper, the investigator, studied the relationship of socio-economic status and occupational aspirations of rural and urban students studying at the bachelor level. The results of the present study do not show any relationship among the variables.

INTRODUCTION

Occupational aspirations are the thoughts, feelings, fantasies and goals that people have about their work, that affect their motivation and decision making in respect of their occupational choice and subsequent participation in their occupation. Johnson (1995) defined occupational aspirations as an individual's expressed career related goals or choices. Further Johnson (1995) argued that aspirations are multidimensional in nature and influenced by complex personal constructs people hold about their world. Occupational aspirations are influenced by four factors:

1. Personal ambitions for autonomy and financial reward,
2. The nature of work task involved,
3. How the work deals with people,
4. The perception of an occupation as being male or female.

**M.Ed., Government College of Education, Chandigarh.*
*** Assistant Professor (Chemistry), Government College of Education, Chandigarh*

Occupational aspirations hold a very important place in one's life. Choosing a vocation is one of the salient decisions of life, which not only shapes the future of the individual but of the whole nature at large.

Thus, occupational aspiration is the most important contributing factor in choosing an occupation, as it makes an individual to strive for a particular occupation and adequate occupational choice would not only lead to personal growth and satisfaction, but would also help in making maximum utilization of a nation's human resources.

Crites, J.O. (1969) explains the concept of occupational aspirations as, "Whether occupational aspiration is defined by a single score on a scale or a discrepancy between scores, it almost always refers to the level at which an individual wishes to work. It seldom, if ever, refers to the field which one wants to enter. Viewed in this manner, it becomes more apparent why the sociologist interprets choice as aspiration". Vocational aspirations usually mean what the individual considers to be an ideal vocation for him and refer to the point in the vocational prestige hierarchy of various vocational fields which an individual views as a goal. Defined in this way, aspiration is quite similar, if not identical with a person's fantasy choice.

SOCIO-ECONOMIC STATUS

Socio-economic status is the position of an individual in the society, which is determined according to his respect and prestige in the society and according to his economic strength. According to **Hawes and Hawes (1982),** "Socio-economic status is the background or standing of one or more persons in the society on the basis of both social class and financial situation".

RURAL-URBAN BACKGROUND

Rural population may be described as the society or community which has less population, less social differentiation, slower rates of social change and agriculture as the major occupation. Urban population is that the city dwellers are associated with more modernized jobs in the public sector related to manufacture and trade.

EMERGENCE OF THE PROBLEM

Occupation is one thing which is needed by a person to sustain his living in the society. Occupation can be in the form of self employment or employed under some individual or organization- government/ private/ public. It is the desire of every person to earn to the maximum

of his capacity so as to enjoy the luxuries of life. Hence the aspirations of a person remains ever increasing. Many studies were conducted in relation to occupational aspirations and varying results were found. **Toong, S. (1982)** concluded that the significant percentage difference was observed between realistic and unrealistic aspirants for vocations. **Lee (1984)** conducted research which indicates that higher socio-economic status levels have a positive effect on adolescence aspirations. **Mehta, Mathur, and Pant (1985)** found that residential status did not influence level of occupational aspirations. **Mc.Whirter, Hackett and Bandalos (1998)** found that lower socio-economic status levels reflect a perceived lack of parental support for adolescent occupational aspirations. **Arita Shin (2005)** compared the occupational aspirations of High school students in Korea and Japan and found that occupational aspirations of Japanese High school students were horizontally differentiated, based on the tendency to aspire to the same occupation as their parents and differences in their occupational values orientation, while Korean student's occupational aspirations were vertically differentiated, based on the student's grades in correlation with socio-economic status of each occupation. **Togunde Dimeji (2008)** found that parental socio-economic variables determine children's educational and occupational aspirations. **Bhatnagar, H. (1983)** found that the girls had diversified occupational choices and no significant difference was found amongst urban and semi-urban girls in the congruence of their occupational choices and their vocational interests. **Mohan, V.; Sujata and Banth, S. (1985)** found that the rural youth preferred outdoors, arts and entertainment and urban youth preferred organization and science as their first preference on semantic differential scale of occupational choice. **Apostal Robert and Bilden Janet (1991)** suggested that rural students, in comparison to their urban counterparts, have had unique circumstances to contend with when making decisions about education and careers. The variability in the studies for occupational aspirations compelled the investigator to undertake the present study.

OBJECTIVES OF THE STUDY

- To study the relationship of socio-economic status with occupational aspirations.
- To study the significant difference in the mean scores of occupational aspirations for high socio-economic status and low socio-economic status.
- To study the significant difference in the mean scores of occupational aspirations for rural-urban background.

HYPOTHESES

- There is significant relationship between socio-economic status and occupational aspirations.
- There is significant difference between the mean scores of occupational aspirations of those belonging to high socio-economic status and low socio-economic status.
- There is significant difference between the mean scores of occupational aspirations of those belonging to rural and urban background.

DELIMITATIONS OF THE STUDY

1. The study was delimited to colleges of Chandigarh.
2. The study was delimited to third year students of graduation.
3. The study was further delimited to female students.

DESIGN OF THE STUDY

This study is primarily designed to see the relationship of socio-economic status and rural-urban background with occupational aspirations. In this study, descriptive survey method of research is employed by the investigator which includes

SAMPLE

The population of the study was the female students studying in third year of graduation in different colleges of Chandigarh. Out of this population, a sample of 100 students was drawn randomly for the study i.e. random sampling technique was used for the identification and selection of the sample. First of all, colleges were chosen through lottery method and then the choice of class to carry out the study was again made using lottery method. After this, the sample students were selected randomly.

TOOLS EMPLOYED

1. To measure occupational aspirations, **occupational aspiration scale** developed and standardized by **Dr. J.S Grewal (1975)** and published by National Psychological Corporation, Agra was used.
2. To measure socio-economic status, **socio-economic status scale** developed and standardized by the investigator herself was used.

STATISTICAL TECHNIQUES

In this study, descriptive statistics and inferential statistics were used to analyze the data. Mean, Median, Mode, Standard Deviation were worked out to study the general nature of the sample in relation to occupational aspirations scores and scores on socio-economic status. Skewness and kurtosis were worked out to see the trend of departure of the sample distribution from the normal probability curve. The coefficients of correlation were computed to determine the relationship between occupational aspirations and socio-economic status.

T-test was applied to see the significant difference between the means of occupational aspirations of urban and rural adolescents, difference between the occupational aspirations of those having high socio-economic status and low socio-economic status.

DESCRIPTIVE STATISTICS

The computed values of frequency distribution of occupational aspiration scores is shown in table-1 and Mean, Median, Mode, Standard deviation, Skewness, kurtosis for occupational aspirations is given in Table-2. Frquency Distribution Polygon for the scores of occupational aspiration is shown in figure-1.

Table 1

Frequency Distribution of Occupational Aspirations

Class Interval	**Frequency**
30-35	7
36-40	13
41-45	29
46-50	29
51-55	15
56-60	7
Total Frequency	100

Table-2

Table Showing Mean, Median, Mode, Standard Deviation, Skewness and Kurtosis of Scores of Occupational Aspirations of the Sample Students

Mean	45.94
Median	46
Mode	49
Standard Deviation	6.01
Skewness	-0.042
Kurtosis	-0.545

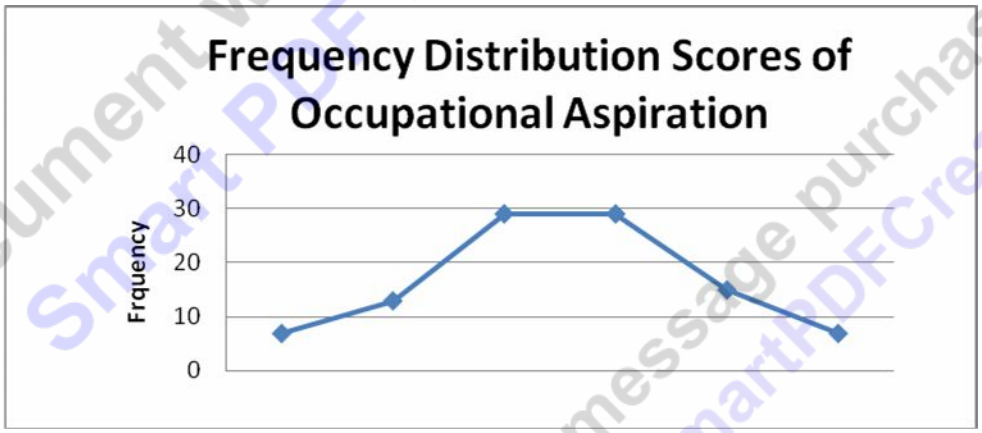

Figure 1 Frequency Distribution of Scores of Occupational Aspiration.

The computed values of frequency distribution of scores of socio economic status is shown in table-3 and Mean, Median, Mode, Standard deviation, Skewness, kurtosis for scores of socio economic status is given in Table-4. Frquency Distribution Polygon for the scores of occupational aspiration is shown in figure-2.

TABLE 3

Frequency Distribution of Socio-Economic Status

Class Interval	Frequency
40-45	17
46-50	24
51-55	15
56-60	11
61-65	15
66-70	8
71-75	7
76-80	3
Total frequency	100

Table-4

Table Showing Mean, Median, Mode, Standard Deviation, Skewness and Kurtosis of Scores of Socio-Economic Status of the Sample Students

Mean	55.99
Median	54
Mode	45
Standard Deviation	10.00
Skewness	0.501
Kurtosis	-0.92

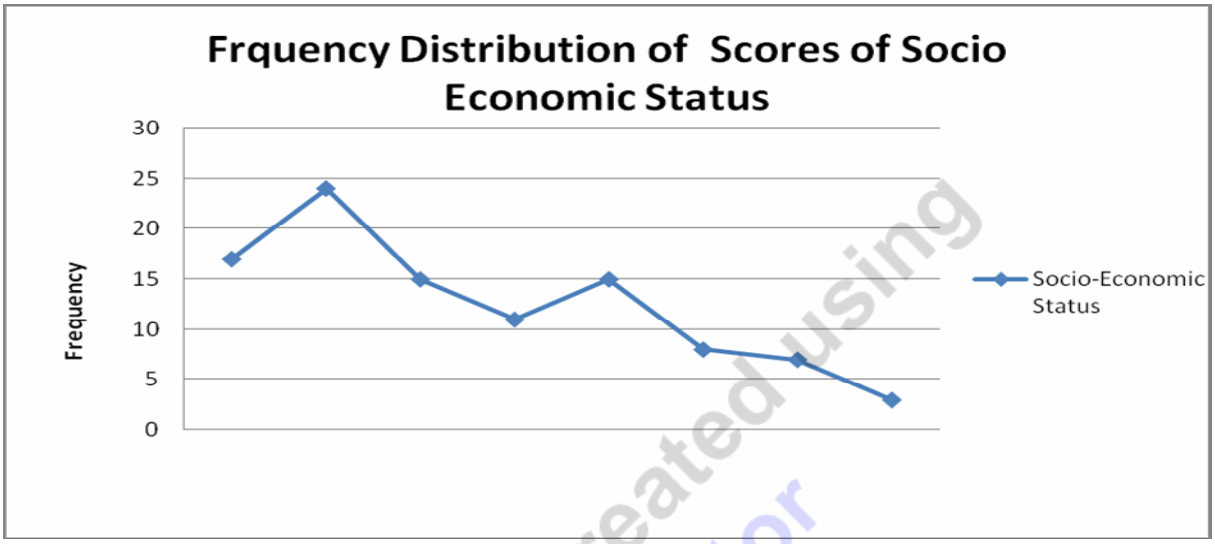

Figure 2 Frequency Distribution of Scores of Socio Economic Status

INTERPRETATION

In Table -1 shows the frequency distribution of scores of occupational aspirations of the total sample and table-2 shows Mean-45.94 and Median-46 which are very close to each other. This shows that the scores are normally distributed. The same can be seen from the figure -1. The Skewness- -0.042 value shows that scores are massed at the high end of the scale, i.e., the right side of the curve and are spread out gradually towards the low end. Kurtosis value of -0.54487 shows that the curve is Leptokurtic, i.e., the frequency is more peaked at the centre than in the normal distribution curve.

In Table-3 shows the frequency distribution of scores of socio-economic status and the table-4 shows Mean as 55.99, Median as 54 which shows the tendency towards normality. The Skewness value of 0.500887 shows that scores pile up at the low end (or left) of the distribution and spread out more gradually towards the high end of it. The Kurtosis value of-0.92 shows that the curve is Leptokurtic.

INFERENTIAL STATISTICS

The hypotheses of the study were tested by employing pearson's correlation and t-test on the raw data.

INTERPRETATION AND DISCUSSION BASED ON COEFFICIENT OF CORRELATION

Table-5

Table Showing Coefficient Of Correlation Between Occupational Aspirations And Socio-Economic Status

Variables	Total Students	Coefficient Of Correlation
Occupational aspirations	100	
socio-economic status	100	0.10

Table-5 shows the coefficient of correlation between the scores of occupational aspirations and socio-economic status. The coefficient of correlation value of 0.10 is positive but not significant at .05 levels. Hence, the hypothesis, 'There is significant relationship between socio-economic status and occupational aspirations' may not be accepted. The study of Mehta, P.H.; Mathur, R.K and Pant, D. (1985) also supported the same result.

INTERPRETATION AND DISCUSSION BASED ON T-TEST

TABLE 6

Table Showing T-Ratio Between Occupational Aspirations Of Those Having High Socio-Economic Status And Low Socio-Economic Status

Variables	Total Students	Mean	Standard Deviation	Standard Error	T-Ratio
Occupational Aspirations of those Having High Socio-Economic Status	27	47.03704	6.17365	4.831702	0.39455
Occupational Aspirations of those	27	46.59259	4.829869		

Having Low Socio-Economic Status					

Table-6 shows the t- value of 0.39455 between the mean scores of occupational aspirations of those having high socio-economic status and low socio-economic status. The t-vaue is not found to be significant at .05 levels. Any difference which is there may be due to the sampling error.

Hence, the hypothesis, 'There is significant difference between occupational aspirations of those belonging to high socio-economic status and low socio-economic status' may not be accepted.

TABLE 7

Table Showing T-Ratio Between Occupational Aspirations Of Those Belonging To Rural And Urban Background

Variables	Total Students	Mean	Standard Deviation	Standard Error	T-Ratio
Occupational Aspirations of those Belonging to Rural Background	40	45.2	5.35987	6.478713	0.1501
Occupational Aspirations of those Belonging to Urban Background	60	46.43	6.402771		

Table-7 shows the t- value of 0.1501 between the mean scores of occupational aspirations of those belonging to rural background and those belonging to urban background. The t-vaue is not found to be significant at .05 levels. Any difference which is there may be due to the sampling error. Hence, the hypothesis, 'There is significant difference between occupational aspirations of those belonging to rural and urban background' may not be accepted. The study of Bhatnagar, H. (1983) also supported the same result.

FINDINGS AND CONCLUSIONS

- There is no significant relationship between socio-economic status and occupational aspirations.
- There is no significant difference between occupational aspirations of those belonging to high socio-economic status and low socio-economic status.
- There is no significant difference between occupational aspirations of those belonging to rural and urban background.

Hence, due to changing times, increasing awareness among people and arrival of the modern world which is full of competitions, occupational aspirations have no longer remained in the bars of the factors, viz. socio-economic status and rural-urban background. It has been observed in the present study, that in the recent times, especially in a city like Chandigarh the above factors do not play a significant role in aspiring for an occupation.

REFERENCES

Apostal, Robert and Bilden, Janet (1991) Educational and Occupational Aspirations of Rural High school students,www.springerlink.com/index/J2LG4261241/No13.pdf

Arita Shin (2005) A comparative study of occupational aspirations in Korea and Japan: Occupational objectives of High school students and Educational systems, KEDI journal of educational policy; University of Tokyo, vol.2, No.1, 51-68,http://eng.kedi.re.kr

Bhatnagar, H. (1983) A study of Occupational Choices of Adolescent Girls and factors influencing them. Fourth survey of Research in Education, New Delhi: N.C.E.R.T.

Best, W. (2005) Research in Education, Delhi; Prentice Hall of India publishing Pvt. Limited.

Bordin, E.S. (1943) A Theory of Vocational Interests as Dynamic Phenomena: Educational and Psychological Measurement, 3, 49-66.

Crites, J.O. (1969) Vocational Psychology, the Study of Vocational Behaviour and Development, New York; Mc Graw Hill.

Garret, Henry, E. (1967) Statistics in Psychology and Education, Bombay; Vakils Feffer and Simmons Pvt. Limited.

Gerth, H.H. and Miller, C.W. (1958) Training and Education from Maxweber essay in Sociology.

Grewal, J.S. (1975) Manual for Occupational Aspiration Scale, Agra; National Psychological Corporation.

Hall, A.; Kevin, R. and Van-Buren, J.B. (1995) Effects of Grade-Level, Community of Residence and sex on Adolescent Career Interests in the zone of Acceptable Alternatives, Journal of Career Development,Vol.21(3),223-232.

Hawes, G.R.and Hawes, L.S. (1982) The concise dictionary of education, New York; Van Nustrand Reinhold Company.

Jersild, A.T. (1968) Essentials of Educational Psychology, New York; Pentice Hall Inc. (281).

Jhonson, L. (1995). A Multidimensional Analysis of the Vocational Aspirations of College Students (online version). Measurement and Evaluation in Counseling Psychology,28(1),25-44, in

Career Development and Counseling Putting Theory Research to Work, edited by Steven D. & Robert W. Lent (2005), Pub. By John Wiley & Sons Inc., Hoboken, New Jersey.

Kaul Lokesh (1988) Methodology of Educational Research, New Delhi; Vikas Publishing house Pvt. Limited.

Lipset, S.M. (1955) Social Mobility and Urbanization, Rural Sociology, 20, 220-228.

Lynd, R.S. and Lynd, H.M. (1984) Importance of Vocation in the life of Adolescent.

Mehta, P.H.; Mathur, R.K. and Pant, D. (1985) Influences on level of Occupational Aspirations of Adolescents: Fourth Survey of Research in Education, New Delhi, NCERT.

Mohan, V.; Sujata and Banth, S. (1985) Occupational Choices of Rural and Urban Youth, Indian Journal of Community Guidance Service, Vol.3 (3).

Parson, F. (1909) Choosing a vocation, Boston: Houghton Mifflin.

Smith, M. and Renee, P. (1994) African American Eight Graders: Factors affecting their Educational and Occupational Aspirations, Dissertation Abstract International, Vol.55 (7).

Stephen, J.H. (1958) Educational Psychology: The study of educational growth revised, New York; Henry Hall and Company, 209-210.

Tiwari, S.C.; Kumar, A. & Kumar, A. (2004). Development & standardization of a scale to measure socio-economic status in urban & rural communities in India. Indian J Med Res 122, October 2005, pp 309-314.

Togunde Dimeji (2008) Children's educational and occupational aspirations in urban Nigeria: Implications for policy development, Research Journal of International studies, Issue-7, Michigan, U.S.A;http://www.eurojournals.com

Toong, S. (1982) Vocational Aspirations in relation to Creativity, Personality, Achievement and Socio-economic status of High school students. Fourth Survey of Research in Education, New Delhi: N.C.E.R.T.

Trice, A.D.; Hughes, M.A.; Odom, C. and Woods. et al (1995) The Origin of Children's Career Aspirations: Testing Hypothesis from four theories, Psychological Abstracts, Vol.82 (10), 36448.

Trow, W.D. (1941) Fantasy and Vocational Choice or Occupations, 20, 89-93.

COMPUTER BASED CONCEPT MAPPING IN ACQUISITION OF CONCEPTS OF CHEMISTRY

***Aarti Aggarwal** ****Dr. Ravinder Kaur** *****Dr. Sunil Dutt**

Abstract

This research study is an attempt to investigate the significance of computer based concept mapping over the lecture method as instructional strategy for teaching of chemistry at IX standard. Pre-post quasi experimental design, using ANOVA was employed. The sample of 240 students was selected randomly from three schools of Amritsar city. The results revealed that students taught by computer based concept mapping had higher mean achievement score than those students who were taught by lecture method. There was a significant effect of treatment on student's achievement score in chemistry. Gender did not account for differential achievement.

Introduction

In the past three decades, there have been enormous advances in understanding of human learning at every stage of its development. These advances when combined with the explosive development of the internet and other technologies permit advances in educational practices. It is clear that today's education needs to prepare citizens who are empowered to lead productive lives and to enjoy the best possible quality of life. To achieve this, science education at school level must be based upon scientific & technological literacy. It will help the students to achieve such literacy and they feel confident in applying their knowledge for the development of the society. The idea of concept mapping has been shown to work by enabling students to make visual connections between information and thus helping them to better understand the subject.

Aidman et al. (1998) found that the idea of using concept mapping demonstrated that the knowledge retained by students was "accurate and meaningful". Concept mapping is a type of knowledge representation. Novak (1984) stated that concept maps are two or three dimensional spatial or graphic displays that make use of labeled nodes to represent concepts and lines or arcs to

** Science mistress, Govt. High School, Aliwal, Ldh.*
***Principal, Malwa Central College of Education for Women, Ldh*
****Associate. Professor, NITTTR, Chandigarh*

represent relations between pairs of concepts. It has been suggested that their structure parallels the human cognitive structure, as they show how learners organize concepts. Jonassen & Grabowski (1993) said that structural knowledge is most often depicted in terms of some sort of concept map that visually describes the relationships between ideas in a knowledge domain. As concept maps involve visual representation, they are quickly and easily recognized. The concept maps involve minimum use of text, thus makes it easy to scan for a word, phrase, or the general idea.

Concept mapping has been a subject of investigation for some time now, giving rise to a new interest since computer based tools have rendered the easy creation and modification of concept maps. Often concepts, some of which had been spatially organized, remained unlinked. Anderson-Inman et al observe that the process of map modification and revision is messy and cumbersome. So, Computer Based Concept Mapping (CBCM) tools can have a determinant role for that purpose, since revisions are much easier than on paper. Anderson-Inman and Zeitz (1993) describe the benefits of concept mapping using computer software over traditional pencil and paper methods of organizing information. These electronic formats can then be stored, sent, manipulated, used, printed, and deleted just like any computer file. Several other authors sum up all these advantages: easy restructuring, highlighting, comments, export or ease of adaptation and manipulation, dynamic linking, conversion, communication, storage. It is possible that computer-based concept mapping helps to reorganize mental functioning in ways not possible outside the electronic medium. The student may therefore be more easily involved in the learning process, and maps are an arte fact of a process by which learning occurs. In addition to traditional tools computer-based tools also allow for mappings in a hypertext-like format by using sub-maps and links. By means of linking concept knowledge, content knowledge and resource knowledge may be represented in a coherent representational format. Computer-based mapping tools may contribute to foster processes of knowledge communication in several ways. They may, for example, be used to communicate the concept structure of a subject matter and enhance knowledge acquisition.

Rationale of the study

Across the country there are fine examples of the technology use in few schools, but the challenge is to bring a technology rich learning environment to every student. The National research council's committee on developments in the Science of learning articulated an idea central to this new understanding of human learning. These new learning opportunities should take place in

learning environments that are student centered, knowledge centered, assessment centered & community centered and the new technologies are seen as consistent with the principles of a new science of learning.

Moreover new technologies are interactive, it is now easier to create environment in which students can learn by doing, receive feedback and continually refine their understanding to build new knowledge. According to Bransford (1999) new technology provide access to a vast array of information, including digital libraries, real world data for analysis and connections to other people who provide information, feedback and inspiration, all of which can enhance the learning of teachers and students. The investigators had tried to invest the efforts in developing & utilizing new technology driven method i.e. Computer based Concept Mapping (CBCM) for teaching of chemistry at secondary level that would serve as an intelligent partner to human cognition and that would help the students to become self regulated learners.

Related Studies

Okebukola and Jegede (1988) concluded that the concept mapping subjects were significantly more successful at solving biological test questions than were the controls.

Andal (1991), Horton et al (1993) and Rao (2003) showed Concept Map has positive effects on student achievement and attitudes. Pendley, Bretz and Novak (1994) suggested the use of concept maps as an aid in ensuring that meaningful learning rather than rote learning has occurred among students. Roth (1994) demonstrated a good understanding of concept maps and emphasized their usefulness as a learning tool. Kharatmal & Nagarjuna (2006) claimed the effectiveness of concepts mapping for learning science.

The following related studies mainly focus on the use of computer based concept mapping for assessment of academic achievement (Chiou,Chei-Chang,2008, Asan 2007, Bruillard 2000, Aidman and Egan 1998), for curriculum planning (Edmondson 1994), and for meaningful learning (Lyne, Lesile, Ditson 1996,Kim 2005, Daley and Torre 2010). Studies also focused on development of the software for concept maps (Chiung 1999, Kim 2005, Shyong 2007).

From this it is clear that almost negligible work is done for using computer based concept mapping as an effective teaching strategy. So, in the present research investigators had developed computer

based concept mapping (CBCM) package for teaching of chemistry at secondary level and had analyzed its effectiveness over the lecture method (LM) in relation to gender.

Objectives of the study

- To compare the effect of computer based concept mapping with lecture method in acquisition of concepts of chemistry.
- To study the effect of gender on achievement in acquisition of concepts of chemistry.
- To study the interaction effect between instructional strategies and gender.

Hypotheses

The study was conducted to test the following hypotheses:

1. There will be no significant difference between mean achievement scores of students exposed through computer based concept mapping and lecture method.
2. Gender does not account for difference in achievement in learning of concepts of chemistry, irrespective of instructional strategies.
3. There will be no significant interaction between instructional strategies and gender.

Research Design

2x2x2 factorial (pre-post quasi experimental) design was employed. Computer based concept mapping was taken as experimental group, and lecture method as control group. Gender was taken as classifying variable.

Sample

A sample of 240 students was drawn randomly from class IX studying in three schools of Amritsar city affiliated to PSEB. The students were divided into two groups and each group was given separate treatment of two instructional strategies, i.e., computer based concept mapping and lecture method in acquisition of concepts of chemistry.

Tools and Learning Materials used

The following techniques and tests were used for the purpose of collecting the data:

1. Achievement test on 23 selected topics of chemistry were developed to measure the performance of students before and after the treatment.

2. Learning material in the form of Computer based concept mapping package on 23 topics of chemistry was developed by the investigators.

3. Lesson plans on the same topics were developed by the investigators.

Statistical techniques used

Descriptive statistics, Three-way analysis of variance was computed to find out the main effects and interaction between the independent variables. The t-ratios were computed to find out the significance of difference between means of pre-test scores and post-test scores.

Results and Interpretation

The descriptive analysis was done to compute mean, median, mode, standard deviation, skewness and kurtosis to see the normal distribution of the data. The gain scores were calculated from pre-test and post-test scores to see whether there is any significant difference between the achievement of the two groups before and after the treatment. The t-ratio thus calculated indicates that there is significant difference between the gain scores of two groups namely computer based concept mapping and lecture method. Since the gain score of computer based concept mapping (mean=33.60) is significantly greater than the gain score of lecture method (mean=5.99), it is concluded that teaching through computer based concept mapping has helped the students to achieve more in the achievement test. The inferential analysis was performed to test the hypotheses of the study. For it, F-value and t-ratios were calculated in respect of achievement (post-test) scores by applying three way ANOVA and t-test respectively.

Table-1 Summary of two ways ANOVA on post achievement scores

Source	Type I Sum of Squares	Degree of Freedom	Mean Square	F	Inference
Strategy	2520.833	1	2520.833	72.202	Significant *
Gender	93.633	1	93.633	2.682	Insignificant*

Strategy * gender	40.833	1	40.833	1.170	Insignificant*
Error	3112.100	116	26.828		
Total	116073.000	120			
Corrected total	4747.792	119			

Significance at 0.01 level = 6.86 for 1/119 degree of freedom.

Significance at 0.05 level = 3.92 for 1/119 degree of freedom.

Findings of the studies

The results of Table 1 indicate that there is significant difference between the scores of the two groups taught by computer based concept mapping and lecture method. Consequently the difference between mean of the two groups (CBCM=33.60 and LM=23.90) could not be attributed to sampling error or chance factor. Thus the null hypothesis that **there will be no significant difference between mean achievement scores of students exposed through computer based concept mapping and lecture method is not accepted.** The difference between the achievement post-test scores of the students taught through different teaching strategies was also tested for significance within two strategies through t-test.

Table-4.2 t-ratio between instructional strategies

Group	**N**	**Mean**	**S.D.**	**t-value**	**Inference**
CBCM	56	33.60	2.58	11.701	Significant at 0.01 level of significance
LM	66	23.90	6.91		

The t-ratio of 11.701 at 0.01 level of significance of groups taught through different instructional strategies was found to be significant. Thus, it was concluded that students taught through computer based concept mapping achieved significantly higher than the students taught through lecture method.

The results of Table 1 also indicate that there is no significant difference between mean achievement scores of boys and girls taught by different instructional strategies viz. computer based concept mapping and lecture method.

Thus, the null hypothesis that **gender does not account for difference in achievement in learning of concepts of chemistry, irrespective of instructional strategies is accepted.**

It is also interpreted from Table 1 that there no significant difference between mean achievements scores of boys and girls taught by computer based concept mapping .It means that both the sexes are equally benefitted from this method. Thus the null hypothesis that **there will be no significant interaction between instructional strategies and gender** is accepted.

Discussion and Conclusion

This study provides an additional insight into prior research conducted in concept mapping and its effect on learning. The findings reveal that computer based concept mapping has a noticeable impact on student's achievement in chemistry. This result is supported by various research studies (Bruillard 2000, Aidman and Egan 1998). This is also claimed by Kharatmal & Nagarjuna (2006). The students better remember information when it is represented and learned through senses both visually and verbally. Computer based concept mapping tools are based on proven visual learning methodologies that help the students to think, learn and achieve. Visual learning is absorbing information from illustrations, photos, diagrams, graphs, symbols, icons and other visual models. By representing information spatially and with images, students are able to focus on meaningful concepts easily. The use of concept mapping as a learning tool should therefore be more widely encouraged.

Computer-based concept mapping also acts as a wonderful tool for students who are oriented toward visual learning or who have difficulty reading and writing text. These students can use electronic concept mapping software to produce graphic representations of what they are learning. It is supported by the fact that concept maps generated through computer act as powerful tool in increasing the interest of the students in learning the concepts of chemistry at secondary school level. The concept mapping supported by various pictures, animations etc. do more concept clarity. The computer based concept mapping also act as strong memory aids. Rao (2003) also showed that concept mapping has positive effects on student achievement and attitude. It increases the retention power of the students. Thus, students exposed to this method achieve high in achievement test as compared to those students who are exposed to lecture method.

As regards the achievement of boys and girls exposed to the different instructional strategies, there is no significance difference between the mean achievement scores of both boys

and girls when they were exposed to CBCM. It revealed that boys and girls are equally benefitted from this method. In the present scenario, the gender bias is disappearing due to changing socio-economic set up. The girls in the present set up also take more interest in new technological driven aspects with logical thinking just like boys. Findings of many studies also revealed that there is no significant difference between boys and girls with respect to achievement and attitude towards science. (OECD2001a, American Sociological Association Council statement 2005) .

Students, in general, showed a very positive attitude towards using computer based concept mapping in teaching. They agreed that computer based concept mapping was a very good technique for learning and found it very beneficiary. These students suggested that concept maps helped them summarize and organize new information, retain information longer and simplify their learning tasks. Furthermore, computer based concept mapping helped to discover and correct their mistakes. Thus, it could be concluded that computer based concept mapping helped students develop and use meta-cognitive skills, which resulted in better achievement.

The investigators thus consider the use of computer based concept mapping as most suitable method to teach chemistry at secondary school level and recommend its use in science teaching at school level. The investigators further recommend that seminars and workshops should be organized by the concerned authorities for secondary school teachers to make this method familiar to them. The science teacher should also take initiative to teach their students with this strategy by bringing more innovations in it and thus developing the interest of the secondary school students in chemistry.

Educational Implications

This study has following educational implications:

- Concept mapping tools in science classes will help the students to develop better understanding of important concepts.
- It will help the students to do preparation for future science courses.
- It will help the science teachers to incorporate effective and meaningful learning in their teaching methodology.

- Computer based concept mapping tools are based on proven visual learning methodologies that help the students to think, learn and achieve.

- By representing information spatially and with images, students are able to focus on meaningful concepts easily. The use of concept mapping as a learning tool should therefore be more widely encouraged.

REFERENCES

American Sociological Association Council Statement on the Causes of Gender differences in Science and Math Career Achievement. Harvard's Lawrence Summers and the Ensuing Public Debate. Feb 28, 2005. ASA News. Retrieved from: http:// www.asanet.org/page.ww?section=Issue+Statements&name=Statement+on+Summers.

Anderson-Inman, L.,& Zeitz, L. (1993, August/September). Computer-based concept-mapping: Active studying for active learners. "Computing Teacher," 21(1). 6-8, 10-11. (EJ 469 254).

Aidman, E. and Egan, G. 1998; "Academic assessment through computerized concept mapping: validating a method of implicit map reconstruction." International Journal of Instructional Media 25(3): 277-294.

Asan, A. (2007). Concept Mapping in Science Class: A Case Study of fifth grade students. *Educational Technology & Society*, 10(1), 186-195. *186* ISSN

Bosung, Kim. 2005; Review of computer mediated collaborative concept mapping : Implications for future research. Proceedings of the 2005 conference on Computer support for collaborative learning. International Society of the learning sciences. Taipei, Taiwan.

Bransford J.D.et al; 1999; How people learn: Brain, mind, experience, and school. Washington DC, National Academy Press.

Bruillard Eric, Baron Georges Louis.2000; Computer based concept mapping; a review of a cognitive tool for students. Institute National de Recherche Pedagogique (INRP) Montroughe, France.

Chiou, Chei-Chang, 2008; . The effect of concept mapping on students' learning achievements and interests Innovations in Education and Teaching International.

Daley, B. J. and Torre, D. M. (2010), Concept maps in medical education: an analytical literature review. Medical Education, 44: 440–448.

Edmondson, K. M. 1994. "Concept maps and the development of cases for problem-based learning." Academic Medicine 69(2): 108-110.

Horton, P. B., McConney, A. A., Gallo, M., Woods, A. L., Senn, G. J. andHamelin, D. (1993). "An investigation of the effectiveness of concept mapping as an instructional tool." Science Education 77(1): 95-111.

Inman Anderson Lyne,Ditson Lesile, Ditson Mary. 1997; computer based concept mapping :Promoting meaningful learning in science for students with disabilities, University of Oregon. ditson@oregon.uoregon.edu.

IHMC. (2005). *IHMC CmapTools*. "Institute for Human Machine Cognition. Retrieved", 23

May 2007, from the World Wide Web: http://cmap.ihmc.us/download/index.php

Jonassen, D. H., & Grabowski, B. L. (1993). "Handbook of individual differences: Learning & instruction." Hillsdale, NJ: Lawrence Earlbaum Associates. ISBN: 0-8058-1412-4/0-8058-1413-2.

Kharatmal Meena, Nagarjuna G.2006; A proposal to refine concept mapping for effective science learning. Proc. of the second international conference on concept mapping. A.J.Canas, J.D.Novak,eds, SanJose, Costa Rica.

Novak, J. D. (1991). "Clarify with concept maps: A tool for students and teachers alike." The Science Teacher 58: 45-49.

Novak J.D. and Canas A.J.2004; Building on new constuctivist ideas and cmap tools to create a new model for education. Institute for human and machine cognition. www.ihmc.us2004.

OECD (2001a). Education at a Glance-OECD Indicators,2001 Edition. Paris: OECD Publications.Retrievedfrom:http://www.eusereu.org/showcase.asp?caseTitle ID=799&MenuID=52.

Okebukola, P. A. and Jegede, O. J. (1988). "Cognitive preference and learning mode as determinants of meaningful learning through concept mapping." Science Education 72(4): 489-500.

Pendley, B., Bretz, R. and Novak, J. (1994). "Concept maps as a tool to assess instruction in chemistry." Journal of Chemical Education 70(1): 9-15.

Rao M.P. 2003; Effects of concept mapping in science on science achievement, cognitive skills and attitude of the students. Indian educational abstracts,Vol. 4, no.1, Jan 2004, p-27.

Roth, W. and Roychoudhury, A. (1993). "The concept map as a tool for the collaborative construction of knowledge: A microanalysis of high school physics students." Journal of Research in Science Teaching 30(5): 503-554.

Shian-Shyong, Tseng 2007, "New approach for constructing the concept map" Computers & Education archive, Volume 49 , Issue 3, Pages: 691-707.

ADOLESCENCE: THE SEARCH FOR IDENTITY

*** Mrs. Anupamjit Kaur**

ABSTRACT

As adolescence has been given a special label of stress and strain. Here, one may pose a very pertinent question: Is the degree of stress and strain experienced by an adolescent of 21st century of the same intensity as that experienced by an adolescent of 19th or 20th century? It all depends upon the identity level of adolescents. There has been a continuous struggle between the needs of the individual and the external forces since time immemorial. According to Darwin's (1859) theory of evolution, those species which adapted successfully to the demands of living, survived and multiplied while others who did not, died out. Therefore, the adaptation or changing of oneself or one's surroundings according to the demands of the external environment became the basic need for our survival. So, James Marcia has suggested four identity alternatives for adolescents. i.e., identity achievement, identity foreclosure, identity diffusion, moratorium.

INTRODUCTION

Adolescence is an exciting, but challenging, developmental stage. It is a time of many changes: physical growth and puberty; changes in self-esteem; the search for increased independence; the importance of peer groups; and increased responsibilities and social expectations. All of these can cause teenagers to feel stretches and pulls on their past coping strategies and the need to develop new skills to help their inner "rubber-band" retain its shape.As the mighty Ganga starts from the Great Himalayas and struggles the hard way to reach the GangaSagar, 90 miles south of Kolkata, in the same manner many challenges threaten adolescent's safety as well as their personal and social development to become an adult.

At this stage, the adolescent's primary task is to establish a secure sense of identity; the process is arduous, time consuming and intense. It is that central issue which will provide a firm basis for adulthood. The individual has been developing a sense of self since infancy. But adolescence marks the first time that a conscious effort is made to answer the now- pressing question "Who am I?" the conflict defining this stage is identity versus role confusion. Identity

**Lecturere, Pine Grove College of Education, Bassi Pathanan (FGS)*

refers to the organization of the individual's drives, abilities, beliefs and history into a consistent image of self. It involves deliberate choice and decision, particularly about work, values, ideology and commitments to people and ideas. If adolescents fail to integrate all these aspects and choices, or if they feel unable to choose at all, role confusion threatens.

IDENTITY STATUSES

James Marcia has suggested that there are four identity alternatives for adolescents, depending on whether they have explored options and made commitments.

IDENTITY STATUSES

IDENTITY ACHIEVEMENT	**IDENTITY FORECLOSURE**	**IDENTITY DIFFUSION**	**MORATORIUM**

1. **DENTITY ACHIEVEMENT**

This means that after exploring the realistic options, the individual has made choices and is committed to pursuing them. It appears that few students achieve this status by the end of high school; students who attend college may take a bit longer to decide, but even durng college, about 80% of students change their majors atleast once and some adults may achieve a firm identity at one period in their lives, only to reject that identity and achieve a new one later, So identity once achieved, may not be unchanging for everyone.

2. IDENTITY FORECLOSURE

It is commitment without exploration; foreclosed adolescents have not experimented with different identities or explored a range of options, but simply committed themselves to the goals, values and lifestyles of others, usually their parents but sometimes cults or extremist groups.

3. **IDENTITY DIFFUSION**

It occurs when individuals do not explore or commit. They reach no conclusions about who they are or what they want to do with their lives; they have no firm dissection. Adolescents experiencing identity diffusion may be apathetic and withdrawn, with little hope for the future, or they may be openly rebellious.

4. **MORATORIUM**

It is when adolescents in the midst of struggling with choices are experiencing. Erikson used the term moratorium to describe exploration with a delay in commitment to personal and occupational choices. This delay is very is very common, and probably healthy, for modern adolescents. Erikson believed that adolescents in complex societies have an identity crisis during moratorium. Today, the period is no longer to as a crisis because, for most people, the experience is a gradual exploration rather than a traumatic upheaval.

CONSEQUENCES OF DIFFERENT STATUSES

Both identity achievement and moratorium are considered healthy alternatives. The natural tendency of adolescents to "Try on" identities, experiment with lifestyles, and commit to cause is an important part of establishing a firm identity. But adolescents who can't get past either the identity diffusion or foreclosure stage have difficulties adjusting. For example, identity diffused adolescents and young adults often give up, trust their lives to fate, or go along with the crowd, so they are more likely to abuse drugs. Foreclosed adolescents tend to be rigid intolerant dogmatic and defensive. Schools that give adolescents experiences with community services, real world work internships, and mentoring foster identity formation.

GUIDELINES FOR SUPPORTING IDENTITY FORMATION

1. Develop a realistic "locus of control" or appraisal of one's environment. For a while, those in the helping professions thought it was better to encourage an "internal locus of control"- the idea that it was within ones power to control his\her life and to alter his\her environment. However, not everything is realistically in the control of 14 years old and this is especially true for teens in high risk environments. Therefore, you can help teens to cope by teaching them to make a realistic appraisal of their circumstances and to work on the things that it is in their power to change.
2. Nurture a skill or talent. Most teens can do something praiseworthy; whether it is through an artistic or literary talent, a sport's skill, a degree of technological savvy, being a volunteer, etc. Encouraging the development of a skill or talent not only increases a teen's self-esteem, but also helps them to receive "positive attention" from their peers and the adults in their world.

3. Encourage the development of "fair fighting" and good conflict resolution strategies. Adolescence and conflicts seem to go hand-in-hand, so helping teens develop meditation strategies when a conflict is brewing: State their views calmly and clearly using "I" statements; brainstorm possible solutions; agree on an alternative; and spell out how the outcome will be monitored.
4. Develop the ability to adaptively distance themselves from negative influences. We all know it's not as easy as "just say no." Helping adolescents to recognize the negative influences that they may encounter and develop a specific strategy to cope can promote protectiveness in the face of risks.
5. Promote the development of a mid\long term purpose or goal. Adolescents often are focused on the here and now. They have difficulty in developing a realistic goal for a year from now or five years from now. Yet, youth who have a life purpose, a goal, and a belief in their future seem to be better able to stay focused and avoid negative distractions. For example, I worked with a youth in foster care whose goal was to be the first one in his family to graduate high school and go on to some form of post-secondary education. This youth was better able to cope with the traumas in his life through coaching on how to stay focused on the steps needed to achieve his goal… and he did.
6. Be (or help identity) a mentor, guide, role model, coach, or tutor for a teen. Adolescents benefit from having a variety of caring and concerned adults in their life when stress is pulling at their "inner rubberband." Although they may seem to only listen to their peers or the popular media, the knowledge that they have an adult in their corner (waiting in the wings) can make a big difference for a teen.

CONCLUSION

It is the nature of all adolescents, adopted or not, to question everything and everyone. It is also in their parents' nature to worry about their children's futures and their own survival in this period. Establishing a stable identity includes being able to live and work on one's own to maintain a comfortable position in one's family, and to become a contributing citizen in one's community. Almost everyone agrees that, although often extremely difficult, open communication can smooth the process.

REFERNCES

Anderson, J., 1990. Cognitive psychology and its implications. New York: Freeman.

Compas, B.E. 1987. Coping with stress during childhood and adolescence. Psychological Buletin, Vol.101, No. 3, American Psychological Association.

Eastwood, A.1995. Psychology for living; Adjustment, Growth and Behaviour Today, Prentice Hall of India Pvt. LTd., New Delhi

Freud, A. 1959 Adolescence; Psychological Study of Child, Vol. 13, Universities Press, New York, USA

Jersild, A.T. 1965 The Psychology of Adolescents, New York, USA.

Rogers, D. 1981 Adolescents and Youth, Englewood Cliff: Prentic Hall Inc, New York, USA

Seligman, B., 1994. Developmental Career Counseling and Assessment (2nd ed.) Thousand Oaks, CA:Saga.

IDENTIFICATION OF STUDENTS WITH LEARNING DISABILITIES IN THE SUBJECT OF SCIENCE

***Meenakshi Gupta**

ABSTRACT

Science, as a discipline, includes facts, concepts, explanation, interpretation, translation, reasoning, analysis and many other higher learning and thinking skills. Students face problems in different areas of science. And, sometimes, these problems appear in the form of learning disorders which reflects in the form of learning disabilities. The investigator is interested in identification of students with learning disorders in the subject of science and specially the comprehension aspect of science. The comprehension aspect of learning disabilities deals with learning disorder relating to receptive and expressive language. Investigator is of the view that receptive and expressive language is key to understanding science. Any problem in comprehension creates problem in understanding of scienc.

INTRODUCTION

'Science searches for relations which are thought to exist independently of the searching individual,'-*Albert Einstein*.

Science is a systematized body of knowledge, organized common sense, and a way of investigation.

The report on policies for the Science Education reveals, 'Science is a cumulative and endless series of empirical observations which result in the formation of concepts and theories, with both concept and theories being subject to modification in the light of further empirical observations. Science is both a body of knowledge and the process of acquiring and refining knowledge.'

Science as a discipline includes facts, concepts, explanation, interpretation, translation, reasoning, analysis and many more higher learning and thinking skills. Students face problems in different areas of science. And, sometimes, these problems appear in the form of learning disorders which reflects in the form of learning disabilities. There is a need of identification of students with learning disorders in the subject of science and specially the comprehension aspect of science. The comprehension aspect of learning disabilities deal's with learning disorder relating to recepetive

**Ph.D. Scholar, Department of Education, Panjab University, Chandigarh*

and expressive language. Investigator is of the view that receptive and expressive language is key to understanding science. Any problem in comprehension creates problem in understanding of science.

LEARNING DISORDER

Language is the medium through which human beings express their ideas, thoughts and feelings to the world in meaningful way. Well developed language is the only means to establish effective communication among individuals and pass on knowledge and ideas to one another. Through language we can speak or write about an object without the necessity of having the object present in front of us and even others can understand it. Language is acquired in the sequence of listening, speaking, reading and writing. Each skill is built on the preceding one. If acquired completely, it gives a way of expression to an individual. However, if one experience difficulty in acquiring one or more skills then he is said to have language disorder.

Language disorder may be classified as difficulties in (a) receptive language and (b) expressive language.

Receptive language is the ability to understand verbal language. Poor understanding of word meanings, grammar rules, recalling names and interpreting is the common difficulties faced by children with this disorder. This ability is further reduced in case of learning disabled children as they get confused when the same words appear in long sentences. As a result their reading and writing comprehension abilities are severely affected.

Expressive language is the ability to communicate with others. Children with this disorder may comprehend what they read or what is said to them but they fail to express it. Difficulty in receptive language also contributes to expressive language disorder. The above two processes are actually interdependent and cannot be separated. (Simpson,S., 2000) , Dyslexia is a manifestation of deficit in the language system.It refers to a cluster of symptoms, which result in people having difficulties with specific language skills, particularly reading. Students with dyslexia usually experience difficulties with other language skills such as spelling, writing, and pronouncing words.

LEARNING DISABILITY

The term learning disability was first coined by Kirk in 1963 and it refers to the children attending school who have trouble in learning despite the fact that they have no apparent physical, sensory, intellectual or emotional defect. Such children had for years been ignored,

misdiagnosed or mistreated by terms such as hyperactivity, hyperkinetic syndrome, hyperactive child syndrome, minimal brain dysfunction, learning disorder, learning difficulty and minimum brain damage.

According to Kirk (1962), learning disability refers to retardation, disorder or delayed development in one or more of the processes of speech, language, reading, spelling, writing or arithmetic resulting from a possible cerebral dysfunction and / or emotional or behavioral disturbance and not from mental retardation, sensory deprivation or cultural or instructional factors

National Joint Committee on LD (U.S.A. 1988) defined it as 'a general term that refers to a heterogeneous group of disorders manifested by significant difficulties in the acquisition and use of listening, speaking, reading, writing reasoning and mathematical abilities. These disorders are intrinsic to the individual and presumed to be due to central nervous system dysfunction and may occur across the life span.'

RATIONALE OF THE STUDY

Students face problems in different areas of science, such as, facts, concepts, explanation, interpretation, translation, reasoning, analysis and many more higher learning and thinking skills. These areas relate to receptive and expressive language. The students facing problems in receptive and expressive language are treated as dyslexic. About 13-14% of the school population nationwide has a handicapping condition that qualifies them for special education. Current studies indicate that one-half of all the students who qualify for special education are classified as having a learning disability (LD) (6-7%). About 85% of those LD students have a primary learning disability in reading and language processing. Nevertheless, many more people — perhaps as many as 15-20% of the population as a whole — have some of the symptoms of dyslexia, including slow or inaccurate reading, poor spelling, poor writing, or mixing up similar words. People who are very bright can be dyslexic. They are often capable or even gifted in areas that do not require strong language skills, such as art, computer science, design, drama, electronics, math, mechanics, music, physics, sales, and sports. The above situation itself forms a reason to conduct the study.

OBJECTIVE OF THE STUDY

The study was carried out with the objective of Identification of students having learning Disability in the subject of Science.

DELIMITATION OF THE STUDY

The present study is delimited to:

i. Class VII students only.
ii. Students of Government Model Schools of Chandigarh.
iii. Students with IQ level between the range of 80-90.
iv. Students belonging to middle socio-economic status.

SAMPLE

The population of the study was all the students studying in class VII of schools of Chandigarh. The sample of 800 students was taken from six Government Model Schools of Chandigarh. The schools were randomly selected from all the government model schools of Chandigarh. All the class vii students of the selected schools were taken as sample of the study.

TOOLS USED

The following tools were used for identification of the learning disable students in the subject of science.

a. Previous Academic Records

The marks secured by students in previous year final examination. It includes total marks and marks secured in the subject of science and English.

b. Teacher Made Referral Form

It is a referral form constructed by the investigator herself. It contained fifteen questions relating to the students behavior, achievement, participation in class, problems during speaking, reading, writing and comprehension and other weaknesses of the student. The purpose of the form was to get the feedback of the science teacher regarding the various learning problems faced by the identified students at the first stage.

c. Draw-A-Man Test for Indian Children (2006) by Dr. Pramila Phatak to test the IQ of the Students.

To test the IQ of the students, Draw-A-Man test was administered on the students. Draw-A- Man test for Indian Children (2006) by Dr. Pramila Phatak for testing the IQ of the

children was used to test the IQ of the sample students. It may be administered to a single child at a time or to a group. Material for administering Draw-A-Man test is simple and handy, just the sheets and pencils. It can be administered anywhere where the child is ready to work. Child is required to draw a drawing of a man. He is evaluated according to the type of drawing he made. The reliability of the test was found through test –retest method. The overall reliability coefficient was found to be 0.9. The validity coefficient was calculated against different criteria in various studies.

The students with IQ less than 80 on 'Draw-A- Man test' for IQ was dropped from the study.

d. Schonell Spelling Age Test:

This test was constructed by Fred J Schonell, 1932. The assessment area of the test is English Spellings. It can be administered on on an individual or a group**.** It assess dictated spellings. The purpose of the test is to provide a quick and easy assessment of spelling attainment. It measures spelling ages of the subjects.

SCHONELL READING AGE TEST

The assessment area of the test is English Reading. It can be administered to an individual or in a group. It assesses most basic decoding and comprehension skills.

e. Diagnostic Test of Learning Disability (DTLD-1993) by Swarup & Mehta.

The DTLD is a tool constructed to identify those children, who experience learning problems, because of learning disability. Since learning disability could span over a variety of abilities, ten areas, each representing a basic psychological process, have been selected. A deficit in any of the area or areas or a combination of any would lead to a learning problem. The first six areas represent the processes involved in visual & auditory perception viz. (1) Eye-hand-coordination (EHC) (2) Figure ground perception (FG) (3) Figure constancy (FC) (4) Position in space (PS) (5) Special relations (SR) (6) Auditory perception (AP) (7) Memory (M) (8) Cognitive abilities (CA) (9) Receptive language (RL) (10) Expressive language (EL). A test- Retest method was used to establish reliability of the test. The reliability coefficient of the test was 0.80 and reliability index was 0.87. Content validity was established on the basis of the expert opinions and comments. The items were carefully selected. Construct validity was also checked to test the internal consistency of the test.

f. Teacher made Diagnostic Test of Comprehension in the subject of Science

The investigator prepared a comprehension test in the subject of Science to diagnose the problems of the students in the related subject. The test included a comprehension passage and questions related to the passage.

STATISTICAL TECHNIQUES USED

The researcher used descriptive statistics, that is, percentage to analyze the data.

ANALYSIS AND INTERPRETATION

The raw data obtained by administering the various tools was subjected to analysis and interpretation. Step by step analysis and interpretation was done.

Phase I: The sample schools were selected randomly and interaction was done with students of class vii. Then, to identify the students with learning problems in the subject of Science, the academic record of all the students was scanned. Specially, marks in the subject of science were observed. The students scoring less than 50% marks were segregated at the first instant. All the students scoring more than 50% marks were eliminated from the study. The purpose of dropping students with low score was that they might be slow learners or backward in the subject or lacking interest in the subject.

Then the suggestion of the subject teacher of science and English were taken regarding the sample students through referral form. The purpose was to identify the students facing critical problems in the subject.

Phase II: Further, the IQ of students was tested by administering 'Draw-A- Man test' for IQ. The students with IQ less than 90 were dropped from the study.

Getting cue from above analysis, Schonnel,s spelling age and reading age test was administered to check the spelling age and reading age of the sample. The average spelling age and reading age of sample students was found to be 3-4 years less than the chronological age. This reflects a severe learning problem with the sample students.

Phase III: To confirm that the sample which was being segregated actually had learning disability problems or not, 'Diagnostic Test of Learning Disability' was administered.

The analysis of the raw data of DTLD test helped to identify the learning disabled students in the subject of science. It has been found that the selected sample at this stage was strong at Eye-hand-coordination (EHC), Figure ground perception (FG), Figure constancy (FC) and secured less in Position in space (PS), Special relations (SR), Auditory perception (AP), Memory (M),

Cognitive abilities (CA), Receptive language (RL) and Expressive language (EL). The score of 5 or less in any test was considered to be critical. Even students securing 6-7 marks in few tests were put under observation. The percentage mean scores of students under each category is shown in Table 1.0 .

Table 1.0: Table showing Percentage Mean Scores of Sample students under each category of DTLD

Parameters of DTLD Test	**EHC**	**FG**	**FC**	**PS**	**SR**	**AP**	**M**	**CA**	**RL**	**EL**
Mean Scores	7.3	8.0	8.2	5.9	5.0	4.5	4.1	4.1	5.0	2.0
Percentage Mean Scores	73	80	82	59	50	45	41	41	50	20

The weakness in the above areas show that the sample students are facing problems in relating various things in the space, auditory perception, forming concepts, organizing thoughts, retrieving relevant information at the appropriate time, understanding given instructions and performing accordingly and expressive and receptive language. These are required for higher order thinking and learning skills which are key to learning of science.

Since the study undertaken was delimited to comprehension problems of learning disabled students in the subject of Science, so a Teacher made Diagnostic test of Comprehension in the subject of Science was given to the students under study. The purpose was to have that sample in which those students were there whose comprehension problem in English was effecting achievement in Science.

INTERPRETATION OF THE RESULT

From the above results it has been interpreted that out of 600 students of Grade VII, around 90 students of various Government Model Schools of Chandigarh are facing learning disability problems in the subject of Science. This means that the rate of prevalence of the problem is 15% in Government Model Schools of Chandigarh as depicted in table 2.0.

Table 2.0: Percentage of students having Learning Disability Problem in the Subject of Science

Total no. of students in Grade VII	**No. of Students with Learning Disability in Science**	**Percentage**
600	90	15

The same can be depicted through a pie chart given in figure 1.0

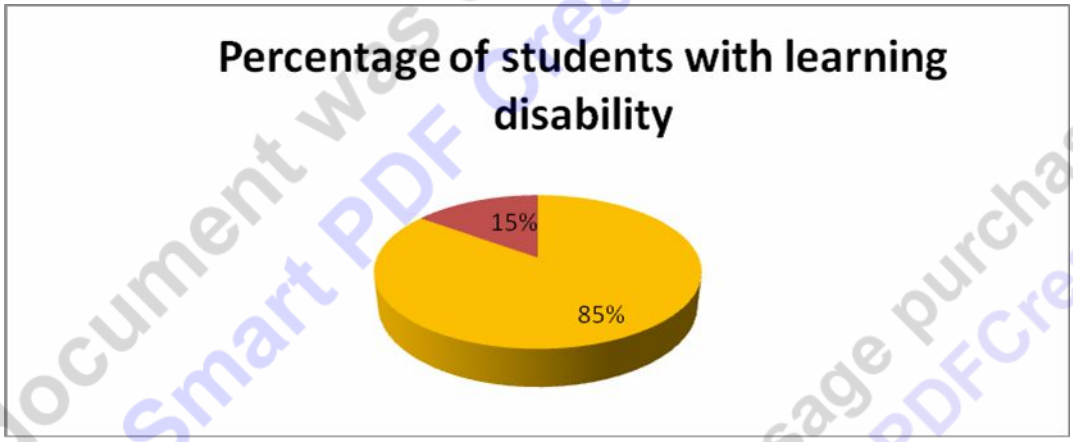

Figure 1.0

CONCLUSION

Science plays an important role in the life of a person. The knowledge of science helps a person to take maximum advantage of the material, the facts, the concepts and the processes around him. But the language is the medium through which science is expressed. To understand science, comprehension, that is, expressive and receptive language of a person needs to be strong. The problem in this area creates learning disorders in the subject of science. Thus identification of students with learning disability in the subject of science becomes necessary.

REFERENCES

Advani, Lal. & Chadha, A.(2003) *You And Your Special Child.* UBS Publishers' Distributors Pvt. Ltd., New Delhi.

Ford**,** Alan & F.David Peat. (1988) The Role of Language in Science, Foundations of Physics Vol 18, 1233.

Kirk, S. (1963). Behavioural diagnosis and remediation of learning Disabilities. Paper presented at the Ist Annual Meeting of the Conference on Exploration into the Problems of the Perceptually Handicapped Children, Chicago.

Koul, L. (2009) *Methodology of Educational Research*. Vikas Publishing House Pvt. Ltd., Delhi.

Lin, Robert L. & Groundlund, N.E. (2005) *Measurement and Assessment in Teaching*. Pub. By Pearson Education (Singapore) Pte. Ltd.., Indian Branch, New Delhi.

Nakra, Onita.(1988) *Children And Learning Difficulties.* Allied Publishers Pvt. Ltd., Mayapuri Phase II, New Delhi.

National Advisory Committee "Special Education for Handicapped Children. Washington, D.C., US Department of Health Education and Welfare, Office of Education, 1968.

National Joint Committee on Learning Disabilities: Issues on Definition, Tampa, Florida, 1981.

National Joint Committee on Learning Disabilities. Letter to the Member Organisation of NJCLD,1988.

Phatak, Pramila (2006) Draw-A-Man Test for Indian Children. Child Development Unit, M.S. University, Baroda.

Robinson B. & Robinson, G.L. (2008) *Cognitive Psychology Applying the Science of Mind.* Dorling Kindersley (India) Pvt. Ltd., New Delhi.

Schonell, Fred J. (1932**)** Schonell Spelling Age Test, http://www.rrf.org.uk/Schonell.

Schonell, Fred J. (1932**)** Schonell Reading Age Test, http://www.rrf.org.uk/Schonell.

Swarup, S. & Mehta, D. (1993), Diagnostic Test of Learning Disability. Centre of Special Education, SNDT Women's University, Mumbai, India.

http://learningdisabilities.about.com/od/learningdisabilitybasics/p/rdgcomprhnsn.htm

INCLUSIVE EDUCATION: AN 'EDUCATION FOR ALL

***Ms. Garima Batra**

INTRODUCTION

"A dominant problem in the disability field is the lack of access to education for both children and adults with disabilities. As education is a fundamental right for all, enshrined in the Universal Declaration of Human Rights, and protected through various international conventions, this is a very serious problem. In a majority of countries, there is a dramatic difference in the educational opportunities provided for disabled children and those provided for non-disabled children. It will simply not be possible to realize the goal of **Education for All (EFA)** if we do not achieve a complete change in the situation."- The United Nations Special Report on Human Rights and Disability.

THE INCLUSIVE SCHOOL

The fundamental principle of the inclusive school is that all children should learn together, wherever possible, regardless of any difficulties or differences they may have. Inclusive schools must recognize and respond to the diverse needs of their students, accommodating both different styles and rates of learning and ensuring quality education to all through appropriate curricula, organizational arrangements, teaching strategies, resource use and partnerships with their communities. There should be a continuum of support and services to match the continuum of special needs encountered in every school.

INCLUSION: A WHOLE-SCHOOL APPROACH

Inclusion should not be viewed as an add-on to a conventional school. It must be viewed as intrinsic to the mission, philosophy, values, practices and activities of the school. Full inclusion must be embedded deeply in the very foundation of the school, in its missions, its belief system, and its daily activities, rather than an appendage that is added on to a conventional school. It should include:

A Sense of Community: philosophy & vision of belongingness of all children and of learning

** Assistant Professor, Sohan Lal D.A.V. College of Education, Ambala City*

Leadership: school administrators play a critical role in implementation

High Standards: high expectations for all children appropriate to their needs

Collaboration and Cooperation: support and co-operative learning

Changing Roles and Responsibilities: of all staff members

Array of Services: e.g., health, mental health and social services

Partnership with Parents: equal partners in educating children

Flexible Learning Environments: pacing, timing, and location

Strategies Based on Research: best-practice strategies for teaching and learning

New Forms of Accountability: standardized tests & multiple sources

Access: physical environment and technology

Continuing Professional Development: on-going

The following approaches are keys to develop Inclusive Schools and Education Setup:

- Understand inclusion as a continuing process, not a one-off event.
- Assess how and why education systems are excluding children, both from access to education
- And within education. The attitudes of adults are a significant factor in this.
- Assess the roles and responsibilities of relevant duty bearers in fulfilling the right to education through an inclusive approach.
- Strengthen and sustain the participation of children, teachers, parents and community members in the work of each school.
- Identify and reduce barriers to learning for all children (rather than simply developing separate services for one group of children).
- Identify and provide support for teachers as well as students.
- Provide an accessible curriculum; appropriate teacher training programmes; and fully accessible information, environments and support for all students.

The fundamental principle of **Education for All (EFA)** is that all children should have the opportunity to learn. The fundamental principle of **Inclusive Education** (IE) is that all children should have the opportunity to learn—together. Diversity is a characteristic that all children and youth have in common—both within each individual child and across individual children. There is strength in diversity, and all children have strengths. It is the fundamental responsibility of all

those who teach and of all those who support teachers to build on children's strength, to believe in all children's capacity to learn, and to uphold their right to learn. Children are our future.

Cheynut put it in his opening address at the UN Special Session on Children (May 2002): **"We are not the sources of problems. We are the resources that are needed to solve them. We are not expenses, we are investments."**

We must invest our beliefs, our resources, and our intellectual problem-solving abilities in IE. We know what works. Every country in the world today has at least one teacher, one school and one inclusive education program committed to IE. Some countries have many successful programs. These **'Islands Of Excellence'** must help the rest of us cross the artificial continental divide between 'special' and 'regular' education. Arguments of excess costs no longer justify exclusion. Compared to segregated programs, IE is cost-effective. Some children start school with more advantages than others—advantages of wealth and health among the most influential. Children in poverty and children with impairments, and all marginalized children (whether due to language, religion, race, ethnicity, or gender) do not have to be disadvantaged by their treatment in schools or by exclusion from schools. It is wisely said **"If we deny disabled people educational opportunities, then it is the lack of education and not their disabilities that limit their opportunities."** Inequalities of opportunity exist, even in the wealthiest countries. These inequalities are a reflection of our beliefs. That is, the ways in which we allocate resources reflect our beliefs about the value of education for all children, and for particular children.

CONCLUSION

Our priorities say more about our values and our philosophical commitment to education than they do about our capacities to provide education. Conditions of marginalized children at the edge of a society reveal more about the state and progress of a society than conditions at the middle. If we are to meet our collective Millennium Development Goals—ratified by 152 countries worldwide-we are challenged to commit ourselves to provide support to IE. Our opportunities will manifest themselves in the day-to-day tasks that we undertake with individual children, in classrooms, in schools and in society. Universal primary education is a worthy goal but it can only be achieved if we make a conscious effort to move in our thinking and planning from **Education for All as Inclusive Education** to ***Education for All—Together.***

REFERENCES

Allan, J. 1999. *Actively Seeking Inclusion: Pupils with Special Needs in Mainstream Schools*. London: Falmer Press.

Armstrong, F., Armstrong, D., Barton, L., ed. 2000. *Inclusive Education: Policy, Contexts and Comparative Perspectives*. London: David Fulton Publishers.

Baker, E. T., Wang, M.C., Walberg, H. J. 1994. The effects of inclusion on learning. *Educational Leadership* 52 (4):33-35.

Ballard, K., ed. 1999. *Inclusive Education: International Voices on Disability and Justice*: London: Falmer Press.

Cameron, D., Valentine, F. 2001. *Disability and Federalism: Comparing different approaches to full participation*: London: McGill-Queens University Press.

Coleridge, P. 1996. *Disability, Liberation and Development*. London: OXFAM.

Dudzik, P., McLeod, D. 2000. Including the Most Vulnerable: Social Funds and People with Disabilities: The World Bank.

EADSNE. 2003. Special Needs Education in Europe. Brussels: European Agency for Development in Special Needs Education.

Ferguson, D. 1992. Regular Class Participation System (RCPS): A Final Report. Eugene, Oregon: University of Oregon.

Habibi, G. 1999. UNICEF and Children with Disabilities. *Education Update* 2 (4).

Ingstad, B. 2001. Disability in the Developing World. In *Handbook of Disability Studies*, edited by G. Albrecht, Seelman, K., Bury, M. London: Sage Publications.

Lansdown, G. 2001. *It's Our World Too! A Report on the Lives of Disabled Children*. London: Disability Awareness in Action.

ATTITUDE OF PUPIL-TEACHERS TOWARD TEACHING IN RELATION TO THEIR HUMAN VALUES

***Mrs. Babita Gupta**

INTRODUCTION

The teachers play an important role in the student's life. They direct the behaviour of their students. They influence the development of students to the great extent. **Ravindranath Tagore** described the teacher as 'rising sun' which gives light, life and energy to the world. It is the teacher who plays pivotal role in the education system. Teaching is considered to be the noblest profession as the teacher remains engaged in the man-kind process which is the highest service to humanity. Teacher is a role-model for the students.

The quality of the teacher is determined by his knowledge, beliefs, values, understandings, assumptions, competencies, skills and attitudes. All these factors together form personal theories of the teacher **(Peter James 2001).** Personal theories of the teacher are important because they help teachers to make generalization and interpretations. They determine the feelings and priority of the teacher.

Attitude is one of the important factors of the personal theory of the teacher. It is a way of thinking that inclines one to feel and behave in certain ways. It has been defined as a mental set to respond to a situation with a prepared reaction. Attitudes are expressed by terms such as liking-disliking, pro-anti, favouring -not favouring and positive-negative. They are the feeling tone aroused by any attitude object. Attitude refers to the ways one think, feels and acts towards others in any social situation. Attitudes are not observable. It is a tendency to react in a certain way towards a designated class of stimuli. It is a learned predisposition to respond either positively or negatively to persons, situations or things. Attitude is a mixture of belief and emotion that predisposes a person to respond to other people, objects or institutions in a positive or negative way. Attitudes summarize past experience and predict future action.

Allport mentions the following facts considering attitude:-

1. Attitude is the mental or natural state of readiness.
2 .Attitude influences the reactions of the individual.

** Assistant Professor, Sohan Lal DAV College of Education, Ambala City*

3. Attitude changes the reactions of the individual.

4. Attitude is what a person believes or how a person feels.

Thurston (1946) "Attitude is the degree of positive or negative effects associated with some psychological objects like symbol, phrase, slogan, person, institution, ideal or idea towards which people can differ in varying degrees".

Teaching attitude refers to how a teacher thinks or feel about the ways in which he intends to act as a teacher. During the teacher education programme student-teachers have various types of experiences which are responsible for shaping their behaviour as a teacher. Favourable attitude of a teacher toward teaching helps the teacher to become effective, forceful and a good teacher. It helps him during decision making and decision implementation process. It strengthens the ability of reasoning, the problem solving attitude, speed, efficiency and accuracy of a teacher .It helps in effective classroom interaction and better understanding of the content matter. Attitude of a teacher is reflected in his behaviour, which he exhibits inside and outside the class. Attitude is a concept to understand human behaviour.

Life with 'values' is meaningful, but life in its absence is useless. Values are the pillars of life and part of education. Values differ from place to place, culture to culture and time to time. Values generally are formed during the course of life of a human being and they are related to the aims of human life. Values are the chief determinants of an individual's behaviour. These values make our life meaningful and also give direction for our future life. Life becomes meaningful when we follow certain values in our life. Our conduct is motivated by our values, in other way; we act to satisfy our wants. Values are determined by the notions of individual and the circumstances in which a person lives. Values have certain characteristics like subjectivity, objectivity, material or elasticity etc.

Value and education are interdependent. In the field of education values refer to those cherished ideals and goals which when achieved, evoke a sense of fulfillment in respect of individual as well as society. Education develops a sense of discrimination between good and bad. This discrimination is based on values and these values are tested in schools. Values are acquired by experiences and these values are transmitted by what we do, not by what to do. If we are to develop a process for assessing values, we must understand the background and environment of our students. Value-education and education for human values are new concepts, hardly a decade old in Indian education. There are different human values explained by different educationists. The

researcher has taken five different human values from Human Value Test (HVT) of Dr. D.K.Diwan.

THE HUMAN VALUES ARE:-

1. Co-operation
2. Dedication
3. Nationalism
4. Scientific-outlook
5. Tolerance

1. Co-operation

Co-operation implies sharing of ideas and recourses acting together for a common goal. At the individual level, it is evoked as empathy to make oneself available to others for render the required help by way of assistance and aid.

2. Dedication

Dedication to the teaching profession implies efficient discharge of the duties in the pursuit of teaching. A dedicated teacher consistently tries to enhance his proficiency along with earnestly performing his duties. They are expected to be more dedicated to the teaching profession as compared to others.

3. Nationalism

Nationalism inspires one's devotion, thought and action to the interest of one's own nation with regard to her unity, security, prosperity and status.

4. Scientific-outlook

Scientific-outlook is the tendency or disposition not to take things superficially or at their face value based on merely subjective experience, but to examine them objectively irrationalized way based on facts or to make valid inferences from facts.

5. Tolerance

Tolerance is the shaping of attitudes of openness, mutual listening and solidarity should take place in schools and universities. Tolerance is the state of an individual which indicates his whole hearted involvement in the job at hand and his continuance of the efforts steadfastly despite, difficulties and obstructions, encountered in the process till the stipulated goal is achieved.

SIGNIFICANCE OF THE STUDY

By looking into the various surveys of education research the investigator has come to the conclusion that hardly any significant study has been made in the area of attitude towards teaching of the pupil-teachers in relation to their human-values. The establishment of relationship between these variables shall be a novel study in the field of education and the results drawn shall throw adequate light for the research as well as for the pupil teachers to become effective teachers for effective interaction in the class rooms.

THE STATEMENT OF THE PROBLEM

A study of the attitude towards teaching of pupil-teachers in relation to their human-values.

OBJECTIVES

1. To study the relationship between the attitude towards teaching and co-operation of pupil-teachers.
2. To study the relationship between the attitude towards teaching and dedication of pupil-teachers.
3. To study the relationship between the attitude towards teaching and nationalism of pupil-teachers.
4. To study the relationship between the attitude towards teaching and scientific outlook of pupil-teachers.
5. To study the relationship between the attitude towards teaching and tolerance of pupil teachers.
6. To study the relationship between the attitude towards teaching and human - Values of pupil-teachers.

HYPOTHESES

1. There is no significant relationship between attitude towards teaching and co-operation.
2. There is no significant relationship between attitude towards teaching and dedication.

3. There is no significant relationship between attitude towards teaching and nationalism.
4. There is no significant relationship between attitude towards teaching and scientific-outlook.
5. There is no significant relationship between attitude towards teaching and tolerance.
6. There is no significant relationship between attitude towards teaching and human values.

METHOD USED

Sample

Hundred pupil-teachers were randomly selected from the two colleges of education, who were willing to co-operate, for the sample of the study.

Tools used

1. Teacher Attitude Inventory (TAI) by Dr.S. P. Ahluwalia.
2. Human Values Test (HVT) by Dr. D.K.Diwan.

Statistical method

Co-efficient of co-relation calculated by product moment co-relation method.

FINDINGS

Pearson's product moment method was applied for finding the co-efficient of co-relation between attitude towards teaching and human-values. In this study, the co-efficient of co-relation was calculated for five variables of human values individually and commonly.

1. It is found that the co-efficient of co-relation between the attitude towards teaching and co-operation is 0.44, which is a significant positive co-relation. This means that the pupil-teachers who have a greater sense of co-operation have a better attitude towards teaching.
2. The co-efficient of co-relation between the attitude towards teaching and dedication is 0.48 which is a significant positive co-relation. This means that the pupil-teachers who have a greater sense of dedication have a better attitude towards teaching. It may be due to the fact that dedication is necessary for any profession. More is the dedication in the field of teaching better will be the education.
3. The co-efficient of co-relation between the attitude towards teaching and nationalism is 0.37, which is evidently significant positive co-relation. It is fact that higher the value of nationalism the better will be the attitude towards teaching.

4. The co-efficient of co-relation between the attitude towards teaching and scientific-outlook is .24 which reveals that there exists low positive co-relation. It means that those pupil teachers who have a better sense of scientific outlook may not have a better attitude towards teaching.
5. The co-efficient of co-relation between the attitude towards teaching and tolerance is 0.53, which is significant positive co-relation. This means that the pupil-teachers who have a greater sense of tolerance have a better attitude towards teaching. A teacher's tolerance is judged everyday in the classroom interaction with the students. .
6. It is found that the co-efficient of co-relation between attitude towards teaching and human-values of pupil-teachers is 0.64, which is highly significant positive co-relation between these two variables. This means that the pupil-teacher who has a greater sense of human values has better attitude towards teaching.

CONCLUSION

The co-efficient of co-relation has been calculated between the attitude towards teaching and human values and a significant positive co-relation has been found. It may be due to the fact that a teacher is an ideal for the society, hence values are supposed to be necessary for a teacher. That is why those pupil teachers who have a greater sense of human values shall have a better attitude towards teaching.

REFERENCES

Morgan, C.T. (1994). Introduction to Psychology (7thed), Tata Mc Grew- Hill publishing Company Limited, New Delhi.

Dandapani, S.A. (2000). A text book of Advance Educational Psychology, Anmol Publication PVT.LTD, New Delhi, India.

Gill, T.K. (2005). Effect of teacher education on attitude of student-teachers towards the teaching profession, Anweshika Indian Journal of teacher education. 2(2), 8-14, Dec.

Buch, M.B. (1959). The Measurement of Attitudes of Secondary School Teachers towards the Teaching Profession, Journal of Education of Psychology, 17 (3).

Allport, G.W. (1967). Attitude in Martin Fishbein (Ed.) Readings in Attitude Theory and Measurement. New York: John Wiley and Sons Inc.

Sachdeva, M.S. (2003). Education in the emerging Indian Society, Parkash book depot, Educational Publishers, Ludhiana.

Garret, H.E. (1981). Statistics in psychology and education, Vikils, Ferrer and Semen PVT.LET, Bombay.

Koul, Lokesh. (2008). Methodology of Educational research, Vikash publishing house PVT.LTD, New Delhi.

Ahluwalia, S.P. (2002). Teaching Attitude Inventory, National Psychology Corporation, Agra, India.

ORGANIZATIONAL CLIMATE OF SENIOR SECONDARY SCHOOLS OF CHANDIGARH AS PERCEIVED BY PRINCIPALS AND TEACHERS

***Subhash Chander Khullar**

ABSTRACT

The environment of the institution affects the teachers and their teaching; the morale leads to group work with collective purposes to fulfill the educational aims and objectives. So it is very useful to identify the organizational climate of each institution for the development of the educational system. The present study is concerned with organizational climate of Senior Secondary schools of Chandigarh as perceived by teachers and heads of the institutions. From the study it is observed that the perceptions of principals and teachers of both types of schools differ significantly in esprit and intimacy dimensions of organizational climate Principal behavior is dominating in 9 schools whereas teacher behaviour is dominating in 8 schools. In 50% private schools principal behaviour is dominating whereas this figure is 26.6% in government schools. Mostly the schools in Chandigarh has controlled climate followed by open and familiar climate. Neither government nor private schools have paternal climate. The perceptions of respondents of different age categories of both types of school differ significantly.

INTRODUCTION

Education is a powerful instrument for change of society. The progress of the country can be measured with quantity and quality of school which provide education. School being social organization can be said to have its own culture, emanating from its role expectations and functions. Society sends its children to school so that they learn, accumulate knowledge and develop skills. A school possesses certain characteristics or factors, which constitute its environment or the climate, or its individuality 'or its inner life'. The climate in the school affects the teachers in their teaching, and the learners of the school and their learning. Unfavourable climate gives rise to the adverse /negative reaction of the teachers and other constituents of the school. Head in the organization dealing with the teacher, with the administrative staff and with the students have a very significant impact in creating an ideal climate in the school. Study of the

**Ph.D. Research Scholar, Deptt. of Education, P.U. Chandigarh*

organizational climate and administrative behaviour are very much useful in improving our educational practices. The things that go into process are inputs. In case of school system, the inputs are students, teachers, leaders, organizational climate, leadership motivation, physical facilities, teaching-learning process and co-curricular activities etc. The most crucial and expensive inputs in the educational system are the teachers. 60-70% of the school budget goes as salaries for the teachers. Hence, it is the cost item increasing rapidly. These days the society feels the failure of teachers to maintain the 'quality' in education. The quality of teacher input does not depend merely upon the academic and professional equipment, but also, to a great extent, on the conditions under which the teacher works. Conditions like, environment, the working conditions, load of work, good lines of communication, participation in policy making, academic freedom, opportunity for professional growth, promotions based on merit, salary, prestige of the institution, calibre of the associate and attitudes towards profession are associated with the quality of teacher. In school it is the teacher who is charged with the responsibility of ensuring success as they instruct the students. Since, schools measure success by examination results, the teacher is faced with the challenge of seeing to it that the students succeed by passing their examinations. Effective pattern of leader behaviour is used in a descriptive sense and considers as that of formal leader or designated head of an institution. The leader in charged with the responsibilities of the institution's prestige, institution's achievement and satisfaction the group needs. Therefore, he must initiate action and get things done through the members of institution without injuring and intactness of the group, he must also maintain good human relations.

Every system has certain boundaries and constraints within which it operates. Beyond the boundaries there exists an external environment and within these internal environment exists, which is, alternatively known as organizational climate. Generally, it refers to internal environment of organization as prescribed by its management and experienced by its members while performing activities and job assigned to them. It is a sum total of interacting, interrelated internal variables and elements which affect working behaviour of its members. Since, organization is a man made system designed and structured deliberately, every part of it is well planned and consciously co-ordinate for achieving its goal. It may also be considered as major frame-work of internal factors within which its members work. Organizational climate has been defined as relatively enduring qualities of internal environment that is experienced by its members,

influences their behaviour and can be described in terms of values of a particular set of characteristics of organization.

Dezmon (1997) proposed some principles of organizational climate. According to him: organizational climate should provide such teachers who can know the children they teach, their needs, their problems, their limitations and their unique potentialities, should facilitates equal educational opportunities to all children, should be appropriate for the educational goals of the school, should contribute to conditions under which children have maximum opportunity to practice democratic behaviour, should encourage teachers to be concerned with the total development of children. Various researchers have observed positive correlation between school climate and students academic achievement (Farr 1999), between principal behavior and school climate scores (Hirase 2000), between teachers worthiness and positive school climate (Stevans 2001), between personal characteristics of teachers, extracurricular activities, good discipline, academic achievement and school climate (Goodrum (2001). Zhao (2007) observed that educational institutions differ from one another in their institutional level their characteristics, their culture and social structure, their objectives and the attitude of their members on one hand and effect they have on the individual pupils through different directions on the other hand environment of the school has a significant impact upon the pupil.

Bryant (1997) while studying the organizational climate of Tamil Nadu School found that percentage of schools having open, familiar and autonomous climate is higher as compared to the percentage of close climate on the other had Krisna (1997), noticed that teachers working in higher controlled climate schools affected the organizational climate more than who were working in the lower controlled climate while Stemler (2001) examined the various administrative functions and school climate He observed that open climate principals perceived the planning directing and co-ordination, more important as compared to perceived by closed climate principals.

Williamson (2007) focused on the school climate of urban and explored the relationship between the variables of school climate and the principal's perceptions of leadership, differences in teachers' view of the principal's leadership style on the basis of teacher's demographics (age, number of years teaching, and number of years at current school) in selected schools. The study revealed a positive relationship and open communication between the principal and teacher is essential to a healthy and open school climate.

Eshbach (2008), determined the relationship that exists between the leadership styles of elementary school principals and the organizational climate of the schools to which they are

assigned to lead. Results revealed that there was a significant relationship between schools having open or engaged climates. Similarly, there was a significant relationship between principals who exhibited more transactional leadership qualities and schools that had closed or disengaged organizational climates. Studies on the subject show that the environmental of the schools differ from one another on the basis of evidences revealed from observations of the behaviour of people in the schools. In closed climate schools: principal seems to emphasize his authority, teachers do not have any say in school policy decisions and no attention is paid to students specially students belonging to lower socio-economics status group. In open climate schools: the staff is relaxed to co-operative fully with the administration of schools, participating of staff in school programme, student's co-curricular activities and listening to students problems and parents interact with their children and visit the school.

Halpin (1966)- described six types of climates in any organization: Open, Autonomous, Controlled, familiar, paternal and closed. The group and leader characteristics of each type of climate are mentioned in table.

Type of Climate	Group Characteristics	Leader Characteristics
1. Open	- low disengagement	- low aloofness
	- low hindrance	- low production emphasis
	- high esprit	- high thrust
	- average intimacy	- high consideration
2. Autonomous	- low disengagement	-high aloofness
	- low hindrance	- low productions emphasis
	- high esprit	- high thrust
	- high intimacy	- average consideration
3. Controlled	- low disengagement	- average aloofness
	- high hindrance	- high production emphasis
	- high esprit	-average thrust
	- low intimacy	- low consideration
4. Familiar	- high disengagement	- low aloofness
	- low hindrance	-low production emphasis
	- average esprit	-average thrust
	- high intimacy	- high consideration
5. Paternal	- high disengagement	- low aloofness
	- low hindrance	- high production emphasis
	- low esprit	- average thrust
	- low intimacy	- high consideration
6. Closed	- high disengagement	- high aloofness
	- high hindrance	- high production emphasis
	- low esprit	- low thrust
	- average intimacy	- low consideration

OBJECTIVES OF THE STUDY

1. To study organizational climate of different senior secondary schools (govt. & pvt.) of Chandigarh as perceived by principals, teachers and students.
2. To study the difference in organizational climate of schools management wise, designation wise, gender wise and age categories wise.
3. To categorize the schools according to their climates.

HYPOTHESES:

1. "There is no significant difference in the organizational climate among both types of senior secondary schools of Chandigarh as a whole."
2. "There is no significant difference among both types of senior secondary school on each dimension of organizational climate."
3. "There is significant difference in the perception of principals of both types of school for each dimensions organizational climate."
4. "There is significance difference in the perceptions of teachers of both types of schools for each dimension of organizational climate."
5. "There is no significant difference in the perception of male and female respondents of both types of school for each dimension of organizational climate".
6. "There is no significant difference in the perception of respondents of different age categories of both types of schools."
7. "The dimensions of principals behaviour are more dominant than the dimensions of teachers behaviour for determining organizational climate of schools."

METHODOLOGY

Collection of Data

For the purpose of collection of data, 25 senior secondary schools of Chandigarh (15 governments and 10 private) were selected randomly from urban areas. In this way 25 principals (one from each school), 150 teachers (six from each school) both from govt. & private schools were the part of the present study. Data was collected with the help of organizational climate description questionnaire (OCDQ) which consisted 64 items covering eight organizational climate namely Disengagement, Hindrance, Esprit, Intimacy, Aloofness, Production- emphasis,

Thrust and Consideration. The questionnaire was administered to teachers who were employed full time in the school because a part-time teacher may not be spending sufficient time at the school to make a reasonable judgement.

Tools Used

Mean, mode, median, standard deviation, skewness, kurtosis, split half correlations and reliability tests were used for calculating and ascertaining the nature of scores distribution in terms of their proximity with the normal distribution. For analysis of data t-values, F-ratio, ANOVA were used. For categorization of schools the raw scores were standardized and loading for each dimension (high, average, low) was obtained by comparing its standardized scores to the mean scores of that particular dimension's standard scores. These dimensional loading was compared with the Halpin's prototype to categorize the school climate. The available sample was studied according to management wise (govt. and private), designation wise (Principal and teacher), gender wise (male and female), age categories wise (all respondent were divided into 6 groups having interval of 5 years starting from age 29 years.

Schools	No of School	Principals	Gender	Teacher	Gender
Government	15	15	M-8, F-7	90	M-27, F-63
Pvt	10	10	M-3, F-7	60	M-18, F-42
Total	25	25	25	150	150

DATA ANALYSIS:-

The raw data collected was organized into tables to carryout analysis and is present in the following tables:

Table 1: F-ratios for Govt. and Pvt. Schools on each dimensions of organization climate

S. No.	Dimension	Govt. Schools			Private Schools		
		F-ratio	P-variance	Results	F-ratio	P-variance	Results
1.	Disengagement	1.703	.053	S	10.202	.000	S
2.	Hindrance	0.912	.549	NS	1.196	.314	NS
3.	Esprit	2.329	.009	S	7.718	.000	S
4.	Intimacy	3.557	.000	S	4.910	.000	S
5.	Aloofness	3.813	.000	S	2.285	.028	S
6.	Production	5.631	.000	S	2.054	.048	S

7.	Thrust	1.923	.034	S	2.467	.018	S
8.	Consideration	1.696	.076	NS	4.796	.000	S

S = Significant, NS = Non Significant

Table 1 revealed that: In govt. as well pvt. schools there is significant 1difference in each dimension except hindrance which is non significant. This means that each category of the school differ significantly in organizational climate.

Table 2: Mean, SD and t-value of school principals (designation wise) (govt.=15, pvt. =10) on all dimensions of OC

Dimension	Mean		SD		t-value	p-value	Results
	Govt.	Pvt.	Govt.	Pvt.			
DIS	20.33	19.44	2.05	1.43	1.24	.226	NS
HIN	17.33	20.60	1.71	1.89	3.93	.001	S
ESP	17.87	19.00	1.40	1.41	1.97	.051	S
INT	20.47	18.60	2.41	1.89	2.05	.052	S
AIO	19.67	21.00	2.09	1.70	1.67	.107	NS
PRO	19.80	18.90	4.22	1.91	0.63	.536	NS
THR	20.93	18.10	2.28	1.37	3.51	.002	S
CON	19.27	18.90	3.75	1.37	.298	.773	NS

From the study of table 2, it is observed that t-values in dimensions of hindrance, esprit, intimacy and thrust are significant at .05 level, means in the perception of principals of both types of school for hindrance, esprit, intimacy and thrust dimensions of organizational climate differ significantly.

Table 3: Mean, SD and t-value of school teachers designation wise (govt.=90, pvt. =60) on all dimensions of OC

Dimension	Mean		SD		t-value	p-value	Results
	Govt.	Pvt.	Govt.	Pvt.			
DIS	21.19	19.13	4.40	3.97	2.91	.004	S
HIN	15.83	16.47	2.90	2.56	1.37	.173	NS
ESP	20.99	19.52	3.56	2.99	2.63	.009	S
INT	15.23	16.32	3.60	3.07	1.91	.051	S
AIO	18.24	16.60	2.52	3.11	3.54	.001	S
PRO	16.16	15.95	2.97	3.35	0.39	.694	NS
THR	18.02	18.67	2.82	2.58	1.41	.159	NS
CON	14.03	13.33	3.26	3.54	1.24	.216	NS

From the table 3 it is found that t-values for dimensions of disengagement, esprit, intimacy, aloofness are significant at .05 level as perceived by teachers. This reveals that perception of teachers of both type of schools differ in disengagement esprit, intimacy and aloofness.

Table 4: Gender wise mean and SD of all dimension of OCDQ
(Govt. schools male = 35, female = 70), (Private schools male=21, female=49)

Dimension	Mean				SD			
	Govt.		Private		Govt.		Private	
	Male	Female	Male	Female	Male	Female	Male	Female
Disengagement	20.57	21.31	19.14	19.18	4.60	3.92	3.66	3.76
Hindrance	16.40	15.96	17.14	17.02	2.69	2.91	2.70	2.95
Esprit	19.89	20.87	18.81	19.71	4.47	3.53	2.42	2.95
Intimacy	15.17	16.39	16.52	16.69	4.39	3.60	3.41	2.89
Aloofness	17.89	18.73	16.95	17.35	2.37	2.58	4.28	2.86
Production	16.60	16.71	15.57	16.71	3.15	3.55	3.50	3.24
Thrust	18.60	18.36	18.43	18.65	2.60	3.98	2.93	3.01
Consideration	14.91	14.71	13.76	14.29	4.30	3.55	4.07	3.78

The table 4, throws lights on the facts that: Highest means were found in all the dimensions except hindrance in both categories of schools. The significance of this trend was confirmed by interactional effect technique, the results of which are presented in Table 5.

Table 5: F ratio between two types of school and age categories wise for all dimension of OCDQ.

	Dimension	Sum of Squares	df.	Mean square	F ratio	F variance
School Category	Disengagement	180.06	1	180.06	11.67	.001
	Hindrance	30.23	1	30.23	4.38	.038
	Esprit	45.42	1	45.42	4.33	.039
	Intimacy	0.63	1	0.63	.069	.808
	Aloofness	35.89	1	35.89	4.39	.038
	Production	13.48	1	13.48	1.30	.255
	Thrust	0.76	1	0.76	0.10	.743
	Consideration	18.96	1	18.96	1.49	.223
	Total	827.06	1	827.06	6.38	.012
Age Category	Disengagement	98.31	5	19.66	1.27	.277
	Hindrance	196.75	5	39.35	5.70	.000
	Esprit	68.75	5	13.75	1.31	.262
	Intimacy	363.16	5	72.63	6.80	.000
	Aloofness	51.10	5	10.22	1.25	.288
	Production	108.38	5	21.67	2.096	.069
	Thrust	76.39	5	15.28	2.15	.062
	Consideration	367.51	5	73.50	5.79	.000
	Total	481.93	5	936.38	7.22	.000

The table 5 shows that, in school category the significant differences occurs in DIS, HIN, ESP and ALO dimensions. Total difference among govt. and pvt. schools was significant. In age category wise the difference in dimension hindrance, intimacy, production emphasis, thrust and consideration was food significant . This shows that perception of different age groups of teacher were entirely different in both types of schools.

Table 6 : Summary of teachers behaviour and principals behaviour in both types of schools.

Loading	Teachers behaviour				Principals behaviour			
	Govt. (N=15)		Pvt. (N=10)		Govt. (N=15)		Pvt. (N=10)	
High	5	(33.3%)	3	(30%)	4	(26.6%)	5	(50%)
Average	7	(46.6%)	5	(50%)	6	(40%)	3	(30%)
Low	3	(29.9%)	2	(20%)	5	(33.3%)	2	(20%)

Teachers behaviour

High = 8 schools (32%)

Average = 12 schools (48%)

Low = 5 schools (20%)

Principals behaviour

High = 9 schools (36%)

Average = 9 schools (36%)

Low = 7 schools (28%)

Table 6 shows that the in 50% pvt. schools, principals behaviour is dominating as compared to govt. schools which is. In pvt. schools teachers behaviour is dominating as compared to govt. schools which is. The data also reveals that principals behaviour is dominating in pvt. schools whereas teachers behaviour is same dominating in both types of schools. The data also projects the principals behaviour as average in all schools. This means that the dimensions of principals behaviour are more dominant than the dimensions of teachers behaviour for determining organizational climate of schools. From this analysis, it is concluded that the administrative and institutional set up may be the same but the organizational climate still differed from school to school on all the dimensions. The finding of study shows that there are many variables which interact in the climate of each school.

Table 7: Climate wise % of govt. and pvt. schools

Sr. No.	Climate Type	Total School	Govt. Schools	Pvt. Schools
1.	Open	5(20%)	3 (20%)	2 (20%)
2.	Autonomous	4 (16%)	3 (20%)	1 (10%)
3.	Controlled	7 (28%)	2 (13.3%)	5 (50%)
4.	Familiar	5 (20%)	4 (26.6%)	1 (10%)
5.	Paternal	--	--	--
6	Closed	4 (16%)	3 (20%)	1 (10%)
	TOTAL	25 (100%)	15 (100%)	10 (100%)

From the table 7, it is observed that out of 25 senior secondary schools, 5 schools have open climate and among them 3 schools are govt. schools and 2 schools are pvt schools, 4 school have autonomous climate and among them 3 schools are govt. and 1 school is pvt. School, 7 schools have controlled climate and among them 2 schools are govt. and 5 schools are private schools, 5 schools have familiar climate and among them 4 schools are govt. and 1 school is private school, No school, neither govt. nor pvt. has paternal climate, 4 schools have closed climate and among them 3 schools are govt and 1 school is pvt. School, Govt. schools generally have all types of climates (except paternal climate), Pvt. schools mostly have controlled climate.

Table 8 : Summary of significant dimensions in various climates

Sr No.	Climate Type	Significant	%age	Name of Dimension
1.	Open v/s Autonomous	3	37.5%	ESP, ALO, THR
2.	Open v/s Controlled	1	12.5%	HIN,
3.	Open v/s Familiar	5	62.5%	DIS, ESP, INT, ALO CON
4.	Open v/s Closed	1	12.5%	THR
5.	Autonomous v/s Controlled	3	37.5%	ESP, INT, CON
6.	Autonomous v/s Familiar	2	25%	DIS, INT
7.	Autonomous v/s Closed	2	25%	ALO, THR
8.	Controlled v/s Familiar	4	50%	DIS, ESP, INT, CON
9.	Controlled V/s Closed	5	62.5%	DIS, ESP, ALO, THR, CON
10.	Familiar v/s Closed	3	37.5%	INT, ALO, THR

DIS = Disengagement, HIN = Hindrance, ESP = Esprit, INT = Intimacy, ALO = Aloofness, PRO = Production, THR= Thrust, CON = Consideration

From the table 8, it is observed that maximum (5) significant dimension occur in open v/s familiar, controlled v/s closed climates followed by controlled v/s familiar climate. If we observe the summary table, we will find that differences in the climate are mainly due to disengagement, esprit, intimacy, aloofness and consideration dimensions of OCDQ. To test the above results ANOVA was applied on all types of climates. The result are presented in the results of ANOVA Table which confirms the above finding for the differences in climates. The F ratio values of different climates found significant at .05 level for the dimensions, disengagement, esprit, intimacy, aloofness, thrust and consideration and for dimensions, hindrance, production emphasis are non-significant.

Table 9 : ANOVA for different types of climates with each dimension of Organizational Climate

Dimensions	Source of variance	Sum of squares	Df	Mean square	F-ratio	P-value
DIS	Between Groups	260.051	4	65.013	4.230	.002

	Within Groups	4918.059	320	15.369		
HIN	Between Groups	53.145	4	13.286	1.617	.170
	Within Groups	2629.975	320	8.219		
ESP	Between Groups	210.866	4	52.717	5.189	.000
	Within Groups	3250.783	320	10.159		
INT	Between Groups	306.813	4	76.703	6.428	.000
	Within Groups	3818.615	320	11.933		
ALO	Between Groups	142.482	4	35.621	4.333	.002
	Within Groups	2630.514	320	8.220		
PRO	Between Groups	12.096	4	3.024	.262	.902
	Within Groups	3690.593	320	11.533		
THR	Between Groups	187.278	4	46.820	6.737	.000
	Within Groups	2223.842	320	6.950		
CON	Between Groups	304.266	4	76.066	5.398	.000
	Within Groups	4509.685	320	14.093		
TOTSC	Between Groups	2963.939	4	740.985	5.059	.001
	Within Groups	46871.981	320	146.475		

Table 9, indicated that the relation of various types of climate with each dimension of climate found significant except the dimension hindrance and production emphasis where it is non significant. This means there is significant difference between the teachers respondents from different climate institutions in the perception of all climate dimensions.

EMPIRICAL ANALYSIS

Findings in organizational climate reveals that dimension hindrance shows non significant difference in both types of schools. Regarding the organizational climate the high %age of significant values were for pvt. Schools.

In gender category wise and age category wise total difference among govt. and pvt. schools was significant. In school category the significant difference occurs in disengagement, hindrance, esprit and aloofness dimensions, whereas in age category wise the significant difference occurs in hindrance, intimacy and consideration dimensions. Principal and Teacher behaviour wise: in 50% pvt. schools, principals behaviour is dominating as compared to govt. schools which is 27%. In 30% pvt. schools teachers behaviour is dominating as compared to govt. schools which is 33.3%.

In Categorization of schools, 5 schools have open climate and among them 3 schools (60%) are govt. schools and 2 schools (40%) are pvt schools. 4 school (16%) have autonomous climate and among them 3 schools (75%) are govt. and 1 school (25%) is pvt. school. 7 schools

(28%) have controlled climate and among them 2 schools (28.6%) are govt. and 5 schools (71.4%) are private schools. 5 schools (20%) have familiar climate and among them 4 schools (80%) are govt. and 1 school (20%) is private school. No school, neither govt. nor pvt. has paternal climate. 4 schools (16%) have closed climate and among them 3 schools (75%) are govt and 1 school (25%) is pvt. school. Govt. schools generally have all types of climates (except paternal climate). Pvt. schools mostly have controlled climate. Controlled climate (7) is more than the other climates. However there exists mixed climates in the sample. Among the fifteen govt. institutions, familiar (4), open (3), autonomous (3), closed (3) and controlled (3). Among the ten pvt. institutions, most of them (5) are of controlled climate, open (2), autonomous (1), familiar (1) and closed (1). The relation of various types of climate with each dimension of organizational climate found significant accept the dimension hindrance and production emphasis where it is non significant.

CONCLUSIONS AND POLICY IMPLICATIONS

Although Halpin and Croft suggested six climates (eight dimensions), the present study revealed only five climates as prevalent in senior secondary of Chandigarh. The prevalent climates are Autonomous, Controlled, Open, Familiar and Closed. In other words the one climate which is conspicuous by its absence is paternal. It is pertinent to ask the question why is absent? Among the five climates controlled climate is very common in pvt. senior secondary school of Chandigarh.

Characteristics of paternal climate like, High production emphasis, High disengagement, Low hindrance, Low intimacy, Low esprit, Average thrust, Low aloofness and High consideration are absent in the Educational Intuitions of Chandigarh. Similarly the characteristics of controlled climate High esprit, Low disengagement, High production emphasis, Low consideration, High thrust, Average aloofness, High hindrance and Low intimacy are present in the pvt. senior secondary schools of Chandigarh. All types of climates occurs in govt. schools. Both teachers and Heads should discuss and make appropriate changes in their climates which will result in congenial environment for effective and healthy functioning of the institute as a whole. The perception and attitude possessed by the principals and teachers of both type of senior secondary schools vary from school to school. Even though the respondent may feel that the present educational systems are much far better than the old, there are some differences which can be regularized through some changes. The state should provide educational be conductive to all and

to develop there levels of cardre and to have porosperity of life in the society. Educational should be democratic and accessible for all in the society to equalize the livelihood. Though the educational organizations are now increased but there are few differences in production emphasis and thrust which is less in the behavior of the heads and disengagement and hindrance in the behavior of teachers which causes fewer results in the examinations.

BIBLIOGRAPHY

Bryant. R.L. (1997). *"The relationship between leadership styles of public schools principal and the motivation levels of their teachers"*. Diss.Abs. Int. – A 57/12, p.4993, June, 1997.

Dezomon, Barbara (1997). *"Perceptions of school climate a perceptions of high achieving and low achieving middle school students"*. DAI-57/07, Jan, 1997, p. 2759.

Eshbach, E.C. (2008). *"The symbiotic relationship between new principals and the climate of the schools in which they lead"*. DAI – A 69/02, Aug. 2008.

Farr Dorthy (1999). *"School climate and students achievement during a school improvement effort.*" DAI-59/10, April 1999, p.3701.

Goodrum Angela D. (2001). *"Perceived influence on school climate and academic achievement for African-American males in sixth grade"*, Diss. Abs. Int. – A,61/09, p.3452, 2001.

Halpin, A.W. and Croft, (1966). *"Organizational Climate of Schools"*, Macmillan, New York.

Hirase, Stevan Kay (2000). *"School climate"*. Diss. Abs. Int-A, 61/02, p.439, Aug. 2000.

Krishan D. (1997). *"Organizational climate of schools – A study"*. The progress of Educations Vol. LXXI, No.6.

Stemler, S.E. (2001). *"Examining school effectiveness at the fourth grade"*, Diss. Abs. Int- A62/03, P.919, Sep.2001.

Steven, M.L. (2001). *"Improving the life science (biology) laboratory education experience from an instructor centered to a learner-centered educational environment"*. Diss.Abs. Int.- A 62/11, p.121.

Williamson, J.S. (2007). *"Defining the relationship between principal's leadership style and school climate as perceived by Title I elementary teachers"*. DAI-A 69/01, July 2008.

Zhao C.M. (2007). *"How advisor choice and Advisor behaviour effect Doctoral students satisfaction"*. Journal of Further and High Education 31 (3) pp.263-81.

POVERTY & EDUCATION

***Mrs. Bharti**

"Education is not a wayto escape poverty – it is a way figbting it."

The concept of poverty, when applied both developing and developed country context, needs to be broadened beyond a uni-dimensional concentration on a Person's lack of financial resources.

It is widely agreed that the relationship between Poverty and Education operates in two directions. Poor people are often unable to obtain access to an adequate education and without an adequate education people are often constrained to a life of poverty. However, before addressing the interrelationships between poverty and education, it is important to discuss to concept of poverty.

Poverty has many dimesions and does not merely entail how levels of income or expenditure. The work of Amartya Sen (1992, 2001) has broadened our understanding of poverty by defining as a conditioned that result in an absence of the freedom to door arising from a lack of what he refers to as the capability to function effectively in society.

Poverty is much more complex than simply income deprivation. Poverty entails lack of empowerment, lack of knowledge and lack of opportunity as wel as lack of income and capital. Despite increased access to education, the poor-disproportionately women, socially disadvatngeous groups, the physically disabled, persons in remote regions – are often depreived of basic education. And when basic education is available, the poorest are unable to avail of it because the direct and opportunity costs attached to it are quite high for them.

Poverty is thus both a cause and an effect of insufficient access to or completion of quality education. Children of poor families are less likely to enroll in and complete schooling because of the associated costs of attending school even when it is provided "free". The cost of uniforms, supplies and transportation may well be beyond the means of poor family, especially when the family has several children of school age. This means that choices have o be made, and the choice is often to drop out os school or, worse yet, to deny schooling to girls while enrolling the boys thereby contributing directly to maintaining the inferior status of women. And as poor children

** Assistant Professor, Sohan Lal DAV College of Education, Ambala City*

who are enrolled grow older, the opportunity cost (their lost labout and the forgone income it may entail) becomes greater,thus increasing the likelihood of abandoning school.

The relationship between education and poverty reduction is thus quite straight and linear as education is emprovering; it enables the person to participate in the development process; it inculcates the knowledge and skills needed to improve the income earning potential and in turn the quality of life. Moreover, education of girls and women helps in improving the number of other indicators of human development.

Eduction is a powerful tool for introducing members of a society to the system of government and the concept of governance. The school curriculum always includes considerable attending to the essential ideas of nationhood and government and to the operation the structure of government. Participation by children in classroom committees and school government lays the foundation for participation as adult in local government. Educated persons are more likely to vote and participate in local and national government. They are more lieky to demand better and more accountable government, thus creating demand for improved governance. Education is linked to empowerment, and a major manifestation of empowerment is the demand for better governance.

The continuing challenge for education is to ensure that all people have the knowledge and skill necessary for countinuing human and economic development and for breaking the poverty cycle. The linear relationship between education, poverty and empowerment is, however, governed by the circumstances of a county and within a country in a particular region.

Poverty is not simly the absence of financial resources. According to Amartya Sen, poverty is lack of capability to function effectively in society. Inadequate education can thus be considered a form of poverty, Absolute poverty- the absence of adequate resources – hampers learning in developing countries thorugh poor nutrition, health, home circumstances (lack of books, lighting or place to do homework) and parental education. It discourages enrolment and survival to higher grades, and also reduces learning in schools. The relative poverty perspective emphasizes form the mainstream in rich countries, which can reduce the motivation of the relatively poor and their ability to gain full benefits from education.

Education can reduce poverty in a number of ways. Firstly, more educated people are more likely to get jobs, are more productive, and earn more. Secondly, though international literature finds no simple causal relationship between educational attainment and the economic growth of

county, recent research shows the quality-adjusted education is important for economic growth. More and better education improves a poor country's education (particularly of girls) brings social benefits that improve the situationof the poor, such as lower fertility, improved helath care of children, and greater participation of women in labour market. Education, thus, influences and is influences by the context in which it is developed. This synergistic relationship implies that education must be in a constant state of change as it repond to changing social and economic needs and that education in itself is a force for social and economic change as people become more empowered and more productive.

उपसंहार

*** डॉ. रमा खन्ना**

साहित्य और पत्रकारिता दोनों ही जीवन और जगत् को समसामयिक सन्दर्भों के आलोक में प्रस्तुत करते है। साहित्यिक पत्रिका साहित्य की विभिन्न विधाओं के माध्यम से साहित्य के विकास, परिष्कार और परिमार्जन में महत्वपूर्ण सहयोग देती है। साहित्यिक पत्रिका साहित्य की प्रत्येक विधा–कविता, कहानी, उपन्यास, नाटक, एकांकी, निबन्धए रेखाचित्र, समीक्षा आदि को पाठकों के सामने प्रस्तुत कर साहित्य की नव प्रकाशित विषय–वस्तु को पाठकों तक पहुंचाती है। नये शिल्प और नयी शैली की ओर पाठकों का ध्यान आकर्षित करती है।

साहित्य पत्रिका साहित्य के विविध रूपों, आन्तरिक विवादोंए नए आन्दोलनों, नई विचारधाराओं, आलोचना के नए मानदण्डों, लेखकीय और रचनात्मक समस्याओं से सम्बन्धित पत्रिका होती है। भारतेन्दु के युग से लेकर आज तक अनेक शुद्ध साहित्यिक पत्रिकाएं प्रकाशित हुई हैं– कविवचन सुधा, हरिश्चन्द्र मैगजीन, भारत–मित्र, नागरी प्रचारिणी पत्रिका, सरस्वती, इन्दु, मतवाला, हंस, लहर, कहानी आजकल आदि। इन पत्रिकाओं में साहित्य काव्यशाश्त्र, समीक्षा–आदि साहित्यिक विधाओं का विवेचन–विश्लेषण किया गया है। साहित्यिक पत्रिकाओं के सम्पादकीय लेखों में धर्म, संस्कृति, दर्शन, राजनीति, सामाजिक विसंगतियां, युग–बोध, मूल्य–बोध, परम्परा, आधुनिकता, वैश्वीकरण, प्रौद्योगिकीकरण, भूमण्डलीय, उत्तर–आधुनिकतावाद आदि प्रमुख विचारधाराओं और चिन्तन–दृष्टियों का विवेचन–विश्लेषण पाठकों के सामने प्रस्तुत किया गया है।

सम्पादकीय लेख किसी भी साहित्यिक पत्रिका का दर्पण होता है। जिस से उस की नीतियों का अवलोकन किया जाता है। यह सदैव साहित्य और समाज के हित को ध्यान में रख कर लिखा जाता है। इस में सम्पादक के विचार और उसकी चिन्तन–दृष्टि व्यक्त होती है और इसी के माध्यम से पाठक पत्रिका से जुड़ता और प्रभावित होता है। सम्पादकीय लेख में जो कुछ भी छपता है उसका दायित्व सम्पादक पर होता है। यद्यति इनका क्षेत्र साहित्य तक ही सीमित होता है फिर भी जीवन का कोई भी पक्ष इन से अछूता नहीं रहता । सम्पादकीय किसी भी पत्रिका का प्राण होता है। इस में तथ्यों की पक्षपात रहित, सही और यथार्थ जानकारी होती है।

साहित्यिक पत्रिकाओं के सम्पादकीय लेखों में साहित्यिक चिन्तन–दृष्टि के अन्तर्गत वैचारिकता के अनेक पक्ष समय–समय पर व्यक्त हुए है। कहीं काव्य–शास्त्रीय विचार–धारा है तो कहीं साहितय के मानदण्डों पर विचार किया गया है। धर्म, दर्शन, संस्कृति, नारी–विमर्श, लोक–जीवन, शिक्षा सम्बन्धी,

Assistant Professor, Sohan Lal DAV College of Education, Ambala City

भौतिकवाद सम्बन्धी अनेक विचारों की अभिव्यक्ति सम्पादकीय लेखों में हुई है। सम्पादकीय लेख में वर्तमान विसंगतियों के सन्दर्भ में लोक–चेतना, दलित–चेतना आदि पर भी प्रकाश डाला गया है। इन लेखों में कहीं सामयिक घटनाएं हैं: कहीं किसी मिथ्या प्रतिष्ठा का विरोध है, तो कहीं वर्तमान सन्दर्भों में व्यवसाय और उद्योग सम्बन्धी विचारधाराओं की अभिव्यक्ति है। वैश्वीकरण, भूमण्डलीकरण, शिविरवद्धता, वैचारिक कट्टरता आदि पर भी सम्पादकीय लेखों में लिखा गया है। इन सम्पादकीय लेखों में यदि सौन्दर्य सम्बन्धी दृष्टिकोणों की अभिव्यक्ति हुई है तो व्यक्ति के अन्तर्द्वन्द्वों पर भी प्रकाश डाला गया है।

साहित्यिक पत्रिकाओं का वर्गीकरण–विशेषांक, अभिनन्दन ग्रन्थ, सम्भावनाएँ, विधात्मक रूप, विशेष विचारधारा से सम्बन्धित, प्रकाशन सूची सम्बन्धी, साहित्यिक समाचार सम्बन्धी, कोश सम्बन्धी आदि विषयों को आधार बना कर किया गया है।

विशेषांक को परिभाषित करते हुए डॉ. याकूब अली खां अपनी पुस्तक पत्रकारिता सन्दर्भ ज्ञान कोश में लिखते हैं कि पत्र–पत्रिका के किसी विशेष अंक में किसी विशेष अवसर, विशेष दिन और विशेष विषय पर दी गई सामग्री विशेषांक कहलाती है। मुंशी प्रेमचन्द ने हंस पत्रिका का आत्मविशेषांक प्रकाशित किया। यह जनवरी–फरवरी सन् 1932 ई. में प्रकाशित हुआ और इस की चर्चा उस समय के प्रत्येक प्रतिष्ठित पत्र में हुई।

चिन्तन का अर्थ विचार करना अथवा विवेचन–विश्लेषण करना होता है। दृष्टि शब्द जुड़ जाने से चिन्तन–दृष्टि से अभिप्राय होता है– कृत्ति अथवा रचना के गुण–दोषों का गहन अध्ययन।

स्वच्छन्दतावादी चिन्तन–दृष्टि से अभिप्राय है– आन्तरिक अनुभूतियों की काल्पनिक अभिव्यक्ति। इसमें वैयक्तिकता तथा आत्म–स्वतन्त्रता की प्रवृति अधिक रहती है। मार्क्सवादी चिन्तन–दृष्टि पूंजीवादी व्यवस्था का विरोध करती है क्योंकि यह सर्वहारा का शोषण करती है। सर्वहारा शारीरिक श्रम से उत्पादन करता है जबकि उस का लाभ पूजीपतियों के हाथों में जाता है। अस्तित्ववादी चिन्तन–दृष्टि धर्म निरपेक्ष स्तर पर मानव जीवन के लिए चिंतित है, यह जीवन जो निरूपाय, आवश्यक और निरर्थक है। यह चिन्तन–दृष्टि क्षण को महत्व देती है और एक–एक क्षण का उपयोग और उपभोग करने की पक्षधर है। मनोवैज्ञानिक चिन्तन–दृष्टि मनुष्य की मानसिक क्रियाओं से सम्बन्धित है और मनुष्य की आन्तरिक प्रेरणाओं को समझने का प्रयास करती है। यथार्थवाद साहित्य की एक विशिष्ट चिन्तन–दृष्टि है जो जीवन की वास्तविक परिस्थितियों के प्रति ईमानदारी का दावा करती है और मनुष्य की हीनताओं और कुरूपताओं का यथार्थ चित्रण करती है। समाजवादी चिन्तन–दृष्टि देश की सम्पति तथा उत्पादन के साधनों पर व्यक्तिगत स्वामित्व को समाप्त करके उस पर सम्पूर्ण समाज का नियन्त्रण

चाहती है ताकि सामाजिक व आर्थिक शोषण को समाप्त किया जाए और सभी को समान अधिकार प्राप्त हो। प्रयोगवादी चिन्तन–दृष्टि के मूल में सतत् नये–नये अन्वेषण की जागरूकता विद्यमान होती है। संरचनावादी चिन्तन–दृष्टि साहित्य के अन्तर्गत रचना के निर्माण में प्रयुक्त होने वाले साधनों पर विचार करती है। यह रचना के भावपक्ष और कलापक्ष दोनों पर विचार करती है। संरचनावाद को एकाधुनिक समीक्षा पद्धति भी कहा जाता है। साहित्य की वैज्ञानिक आलोचना के लिए भी संरचनावाद का प्रयोग किया जाता है। साहित्य, कला और संस्कृति तीनों के केन्द्र में मानव और मानवीय कल्याण की भावना विद्यमान है। यह तीनों दृष्टियाँ रचना औश्र समाज का परिस्थितियों और परिवेश के साथ सामंजस्य स्थापित कर निरन्तर उन्हें विकास की ओर अग्रसर करती है।

व्यक्तिवादी चिन्तन–दृष्टि व्यक्ति के अधिकारों की पक्षधर है। इसके अनुसार व्यक्ति अपने हितों और स्वार्थों को स्वयं अच्छी तरह समझ सकता है, इसलिए उस पर सामाजिक परम्पराओं और बन्धनों को लादना सही नहीं है। समकालीन चिन्तन–दृष्टि को क्षण विशेष की अनुभूति कहना उचित नहीं है क्योंकि समकालीन प्रवृति कालातीत है। समकालीन परिस्थितियाँ मूल्यहीनता और विघटन की देन है। यह प्रवृति साहित्य में दृष्टिगोचर हुई है। जनवाद जन सामान्य को महत्व देता है, यह व्यक्ति और व्यक्ति का हित चिन्तन करता है। इस का मानना है कि कलाकार को अपने सुख–दुःख की अभिव्यक्ति करने की अपेक्षा समाज को अधिक महत्व देना चाहिए। उत्तर–आधुनिकतावादी चिन्तन–दृष्टि साहित्य, कला, आलोचना आदि की नये ढंग से देखने का नज़रिया है। उत्तर आधुनिकतावादी साहित्य को पढ़ कर वर्तमान काल का बोध होता है क्योंकि इस में जीते, संघर्ष करते, लड़ते, बौखलाते, तड़फते और ठोकर खाते हुए वास्तविक आदमी का वर्णन है। उत्तर–आधुनिकतावाद एक ऐसे समाज की कल्पना करता है जहां सभी के लिए एक जैसी सामाजिक व्यवस्था हो। विखण्डन का अर्थ है–टूटना अथवा टुकड़े–टुकड़े होना, किसी विचारधारा का छोटे–छोटे भागों में बंट जाना जैसे–आधुनिक शब्द नयी कहानी में आ कर विभिन्न दृष्टियों के रूप में बंट गया है। साहित्य में जब कोई विचारधारा भिन्न–भिन्न दृष्टियों का आधार ले कर अनेक विचारधाराओं में बंट जाती है या फैल जाती है तो उसे विखाण्डनवादी चिन्तन–दृष्टि के अन्तर्गत लिया गया है। साहित्यिक पत्रिकाओं के सम्पादकीय लेखों में निहित इन सभी चिन्तन–दृष्टियों का बहुत ही सशक्त और सारगर्भित विवेचन–विश्लेषण हुआ है।

मार्क्सवाद शब्द अंग्रेजी के 'मार्किसम' शब्द का हिन्दी पर्याय है। चिन्तन के इतिहास में इसका उद्भव कार्ल–मार्क्स (1818–1883) ई. के विचारों से होता है। मार्क्स की इस चिन्तन–दृष्टि को द्वन्द्वनात्मक भौतिकवाद कहते है। जिसके अनुसार सृष्टि का मूल सत्य पदार्थ है किन्तु जो निरन्तर

पर्व परिवर्तनशील अवस्था में होने के नाते द्धन्द्धात्मक प्रणाली से ही जाना जा सकता है। भौतिकवादी प्रत्यय और पदार्थों को प्रथम स्थान देते है।

यर्थाथवादी प्रवृतियाँ सभी देशों के साहित्य मे विभिन्न कालों में मिलती है। वस्तुतः यथार्थवादी सुधारक साहित्य है। किसी भी सामाजिक स्थिति के प्रति विद्रोह करते समय साहित्यकार उसका यर्थावादी चित्र उपस्थित करता है। इस प्रकार वह अपने पाठक के मन में उस आक्रोश को जन्म देना चाहता है, जिसके बिना किसी भी सुधार, परिवर्तन अथवा क्रान्ति की कल्पना नहीं की जा सकती।

समाजवादी चिन्तन–दृष्टि एक ऐसी विचार धारा है जिसका उद्धेश्य सभी प्राकृतिक साधनों व बड़े पैमाने पर उत्पन्न की गई वस्तुओं के ऊपर स्वामित्व व नियन्त्रण व्यक्तियों की बजाए सम्पूर्ण समाज को सौंपना है।

नये काव्य–चिन्तन में काव्य की निवैयक्तिकता, व्यक्तित्व के अलगाव की बात करती है। सांस्कृतिक दृष्टि में संस्कृति मनुष्य के रहन–सहन और आचार–विचार से सम्बन्धित है एवं उसकी विधि विषयक रूचियों एवम् शारीरिक, मानसिक तथा आध्यात्मिक शक्तियों के विकास में सहायक होती है।

भारतीय काव्यशास्त्र में काव्य के सारतत्व पर सर्जक, ग्राहक और आलोचक–तीनों दृष्टियों से विचार हुआ है। सर्जक की दृष्टि से वह अलंकार, रीति और वक्रोक्ति है, ग्राहक कीदृष्टि से 'रस' और आलोचक की दृष्टि से 'औचित्य'। उचित–अनुचित की पहचान धर्म द्वार होती है। धर्म को जीवन में धारण करने से अर्थ, काम और मोक्ष की प्राप्ति सहज हो जाती है।

साहित्य जीवन और जगत् के गत्यात्मक सौन्दर्य की भावमयी झांकी है। यह नित्य नवीन आनन्द और कल्याण का विधान करता है। दार्शनिक चिन्तन–दृष्टि में आत्मा–परमात्मा, जीव–जगत्, मुक्ति–मोक्ष आदि का विवेचन–विश्लेषण किया गया है। अन्तर्द्धन्द्ध पात्र के विचारों का टकराव है, किसी बात का विवेचन–विश्लेषण करना विचार–विमर्श कहलाता है जबकि नारी–विमर्श में नारी के परम्परागत और आधुनिक सन्दर्भों का विवेचन विश्लेषण किया गया है। लोक–चेतना में सामाजिक, पारिवारिक, धार्मिक तथा आर्थिक विचारों पर चिन्तन–मनन किया गया है जबकि दलित–चेतना में शोषित व दुःखी व्यक्ति के अधिकारों की चर्चा की गयी है।

वैश्वीकरण और भूमण्डलीकरण ने संसार को छोटा सा परिवार बना दिया है। जीवन का कोई भी क्षेत्र अब व्यवसाय व उद्योग से अछूता नहीं है। भौतिकवादी चिन्तन–दृष्टि ने सत्य, सौन्यर्द और परहित भावना को भुला कर व्यक्ति को आत्मकेन्द्रित और स्वार्थी बना दिया है। वह परिवेश में चारों ओर घटित होने वाली स्थितियों का मात्र दर्शक है। समसामिक घटनाएँ उसे उद्धेलित नहीं करती। आज मानव दूसरे की प्रतिष्ठा से केवल जलता ही नहीं है अपितु उसका विरोध भी करता है। मानव

की तरह साहित्यिक पत्रिकाओं की दिशा–दृष्टि भी उसकी विषय वस्तु से जुड़ कर संकीर्ण और संकुचित हो गयी है। जैसे–जैसे जीवन बदल रहा है वैसे ही साहित्यिक पत्रिकाओं में और पत्रिकाओं के सम्पादकीय लेखों मे भी बदलाव की सजीवता और जीवन्तता दृष्टिगोचर हुई है। पत्रिकाएँ और पत्रिकाओं के सम्पादकीय लेखों ने परिवेश के अनुकूल नया रूप धारण किया है।

वर्तमान युग संक्रमणशील युग है, स्थितियों मूल्यों और सन्दर्भों के बदलाव आया है। वर्तमान सन्दर्भों में धन और शक्ति का प्रभाव बढ़ गया है। चारों ओर विघटनकारी स्थितियां नजर आ रही है। व्यक्तिगत स्वार्थों का बोलबाला है। राष्ट्रीय चरित्र गिरा है। नैतिकता के मूल्य खण्डित हुए है। सता व पद के पीछे भागता हुदा आदमी अपना ईनाम और धर्म खो बैठा है। राष्ट्र और धर्म के नेताओं ने ऐसे भ्रष्ट मूल्यों की स्थापना की है कि व्यक्ति परिवार, समाज और राष्ट्र पतन के कगार पर आ खड़ा हुआ है।

वैचारिक आग्रह ने हमें यांत्रिक बना दिया है। हमारी बुद्धि किसी एक विचार के चारों ओर घूमती रहती है। हम अपने ही वैचारिक आग्रह को अधिमान दे रहे हैं, इसलिए स्थितियां और मूल्य परिवर्तित हो रहे है। पुनाने नैतिक मूल्य दफन हो रहे हैं। नये मूल्यों की स्थापना की जरूरत है। युग की बदलती हुई परिस्थितियों और प्रवृतियों ने हमारी परम्परा पर प्रश्न चिह्न लगा दिया है। वह साहित्य जो युग की गतिविधियों और घटनाओं की उपेक्षा करता है, वह धीरे–धीरे लुप्त हो रहा है। परम्परा और आधुनिकता का टकराव दृष्टि गोचर होता है जबकि हम जानते है कि आधुनिकता का उन्मेंष परम्परा से होता है और परम्परा आधुनिकता बन जाती है और आधुनिकता कालान्तर में परम्परा बन जाती है।

सूचना प्रोद्यौगिकी के विकास ने जीवन और साहित्य को गति प्रदान की है। इसने मनुष्य को अपने परिवेश के प्रति सचेत किया है। इससे सूचनाओं के आदान–प्रदान में तेजी आयी है। पूरे विश्व को एक परिवार के रूप में इस ने सीमित कर दिया है। लेकिन इसी के साथ–साथ इसने साहित्य के सामने वैचारिक संकट पैदा कर दिया है। जहां इस ने साहित्य को सुरक्षित किया है, समय और धन में बचत की है, वही इसने शिक्षा और साहित्य को एक व्यवसाय मे पतिवर्तित कर दिया है। साहित्य को केन्द्र में रखकर जब हम वैचारिक संकट की बात करते है तो पाते हैं कि आज साहित्य, व्यक्ति और समाज में कही भी सामंजस्य नहीं है, परस्पर टकराहट, एक–दूसरे पर आरोप–प्रतिरोप और एक दूसरे को नीचा दिखाने की कोशिश हो रही है।

मानवीय–दृष्टिकोण सभी मनुष्यों को गौरव, अधिकार, स्वतन्त्रता और समानता देने का पक्षधर है लेकित आज यह भावना कपोल कल्पित लगती है। मानवीय दृष्टिकोण का अभाव नजर आता है। आज यह मान्यता परी लोक की कथाओं जैसी लगती है। सहस्राब्दी ने लेखक, लेखकीय अस्तित्व,

रचनाधर्मिता, साहित्य, भाषा, लेखक का दायित्व और सामाजिक संरचना तथा ज्ञान वर्धन पर प्रश्न उठाया है। यह प्रश्न एक ओर रचनाकारको प्रेरित करते है तेा दूसरी ओर आने वाले भावी साहित्य के प्रति उभरने वाले संकटों को रेखांकित करते हैं और फिर प्रश्न पैदा करते है कि क्या भावी साहित्य मानव कल्याण और मानवतावादी चिन्तन की कसौटी पर खरा उतर पायेगा या नहीं? यह प्रश्न भी अपने आप में बहुत व्यापक एवं जटिल है और इसके उत्तर की तलाश भी साहित्यिक चिन्तन–दृष्टियों द्वारा ही सम्भव है।

PROSPECTIVE PRIMARY SCHOOL TEACHERS' PERCEPTIONS ON BOILING AND FREEZING

***Mr. Sushil Kumar**

ABSTRACT

The aim of this study was to investigate the perceptions of prospective primary school teachers on the physical state of water during the process of boiling and freezing. There were three stages in the investigation: First, open-ended questions concerning the boiling and freezing of watser were given to two groups of prospectve primary school teachers (Group-A had science background; Group-B had non-science background). Second, the particpants' answers wwre examined and analyzed. Finally, those participants who had misunderstanding were given semistructured interviews to have a deeper insight into their peceptions. The results showed that the participants in Group-B held more misunderstandings about boiling and freezing than Group-A. A further examination of the participants' perceptions showed that the misunderstandings were based on participants' daily life experiences related to an inadequate Knowledge of science. This paper discusses the answeres received to the questions and interviews and makes, implications for equipping primary school teachers with scientific knowledge.

INTRODUCTION

Scieties agree that all students should understand and be able to do science; therefore, they believe that students urgently need better science education. Consequently, many reforms have been taking, especially in the primary school curriuculum. The aim of these reforms is not only to make students familiar with the scientific therories, concepts, and processes but also to help them become more aware of the complex relationships between science and its social context. In this context, the teaching of science at the primary school level has been an area of concern for many years and the issue of primary school teachers' content knowledge in science has been perceived as a persistent problem. The key role that primary school teachers play in science education shows the importance of primary school teacher education. It is true that students ultimately construct their own learning but it is teachers who are expected to help their students understand concepts and the reasoning behind scientific theories. Osborne and Simon (1996) commented that primary

Lecturer, Aastha College of Education,VPO Damla (Yamuna Nagar)

school teachers who lack ability, confidence and enthusiasm for a particular subject then to be useless in stimulating didactic methods and there by do not respond effectively to children's questions. They are more likely to have students with poor attitudes towards science and a poor understanding of scientific concepts. Unfortunately, many primary school teachers have been found to have poor understanding of the basic scientific concepts, resulting in low confidence and expectations in their students.

Simpson and Oliver (1990) suggested that if primary school teachers are not interested in teaching science, their students may not be able to construct an adequate background in science during the critical stages of learning, which may lead the majority of children to receive a minimal amount of scientific knowledge in subsequent levels of education. Consequently, only a small proportion of children leave secondary school with strong backgournd in and a commitment to further steps of science education (i.e. secondary school). Therefore, it is important to explore and intepret primary school teachers' understanding of scientific concepts in order to equip children with a sufficient knowledge of science, scientific attitudes, and skills, Although, researchers in many countries have tried to answer a number of important questions related to students' perceptions, there is still limited research on teachers' perceptions. For this reason, an investigation of prospective primary school teachers' perceptions on fundamental concepts of science would be worthwhile.

This study aims to explore the perceptions of prospective primary school teachers on one of the dominant topics of primary school science education, the changes in state of matter. There are many studies which report students' alternative conceptions about science A large number of research studies in science education have focused students' understandings of changes of state however, there are only a limited number of studies that focus on the perceptions of teachrs Osborne and Cosgrove (1983) conducted interviews and a written test to study the conceptual development of students from New Zealand aged 8-17 years about the changes of ice, water, and vapor. They revealed that students only have cursory understanding of the terms like condensation, evaporation, melting, and so on, and have virtually no real scientific understanding of the terms like condensation, evaporation, melting, and so on, and have virtually no real scientific understanding. They found that only eight students describe the melting of ice in particle terms. They also found that students did not regard freezing as taking place at a specific temperature. Bar and Travis (1991) used three different ways (an oral, a written, and a multiple-choice test) to

explore that conceptual development of 6-14 year-old students in Isreael about the phase changes. Although it is a scientific fact that the evaporation of water can occur.

Before boiling, the researches found that students' understanding of boiling precedes that of the evaporation of water.

Further, some children said that when a solid object such as a wet saucer dries, water disappears or penetrates the solid object. Students observing the phenomenon of evaporation supposed that water simply disappears or sinks into the floor. Bar and Galilleo (1994) conducted a clinical interview, an open-ended investigation, andmultiple-choice written tests to explore the conceptual development of students from Israel aged 5-14 years about the concept of evaporation. Their main findings showed that the development of the concept of evaporation by students involved the following four interpretations: (1) water disappeared; (2) water was absorbed by the floor or soil; (3) water evaporated, meaning water was unseen and being transferred to another location or medium; (i.e., in the sky, in the air, in the clouds,etc.); and (4) water changed to water vapor, and it was speared out into the air as invisible tiny water droplets, or it was transformed to air. Paik et al. (2004) investigated the various conceptions held by 28 K-8th grade Korean students regarding the 'changes of state' and the 'conditions for changes of state'. Several activities that involve a change in the state of water were chosen and attempted by the students. Interviews were then conducted with them, and it was found that most kindergarteners and second-grade students were unable to explain concepts related to the changes of state and the conditions under which the state the changes, and that most upper grade was also determined that kindergartenere and second grades generally perceive the phenomena related to state change based on their sensory experience. Chang (1999) studied the conceptions of prospective teachers from Taiwan regarding evaporation, condensation, and boiling. He found that the performance of participants on tasks relating to the concept of boiling was not impressive.

Most students thought that bubbles generated when water boiled contained air. Examining the studnets' perceptions carefully, the researcher concluded that learning difficulties regarding the aforementioned concepts could be a result of a poor conceptual understating of changes of state. Goodwin (2003) examined 52 trainee science teachers' understandings of evaporation and boliling. To provide a consistent stimulus for the explanations from the participants, the researcher presented six short scenarios as video sequences. The five out of six scenarios involved bubbles in some form, together with evaporation, and these served to focus on the more specific notion of 'boiling'. After the participants viewed the video, they conpeleted a short questionnaire which asked them to answer questions and to explain their answers as far as possible. The findings

showed that majority of of participants had given correct answers, but there were many instances where ideas expressed deviated from the accepted 'answer'. For example 23% of the participants stated that the substance inside the bubbles of boiling watser was air or heat. Some resrach studies showed that teachers frequesntly use terms such as "substance", students held comceptions about boiling watser's change of state from liquid to gas. It "solid", "liquid" or "gas" in science courses. They assume that students understand these and other fundamental concepts when they beging the course and very little time is generally spent in reviewing these terms. However, the findings of these studies also showed that naïve concept;ions held by children about matter during their primary and middle school years persist at the high school and even to college level (Osborne & Simon, 1996; Stay, 1990a, 1990b, 1991). As the study was conducted with Turkish prospective primary school teachers, it would be useful to describe primary school teacher education alongwith the basic education system.

STRUCTURE OF PRIMARY SCHOOL TEACHER EDUCATION

In primary school teachers follow a 4-year course of teacher education, which prepares them to teach students aged 6-10 years. During a typical four-year program, prospective primary school teachers are required to take a certain number of courses in each of the primary branches of science. These include physics, chemistry and biology courses which are compulsory as they relate to teaching professional in the first year, students are intoruduced to the nature of primary science. During the second year, they complete a science practicum course that includes laboratory experiments in science education. This course endeavors to improve and develop skills relating to setting up and conducting experiments that demonstrate scientific principles to students. The third year focuses on methods that help students to develop their knowledge and understanding of science and how to plan a sequence of activities to help students learn. Finally, students are introduced to practical teaching in the fourt year of the program and this in-class practicum component has to be completed successfully.

THE BASIC EDUCATION SYSTEM

Basic compulsory education has two stages: first five years (primary) and last three years (middle). Primary school teachers are employed in the first stage and usually teach the same group of students throughout the initial five year programme. Science courses in primary school are taught in the 4^{th} and 5^{th} grades as four contact hours a week and are called "Science and Technology". Matter and Changes of State" is one of the four learning strands in this course and

comprises one fourth of the total course time. In this learning strabd, the concepts of boiling and freezing are explained using water as an example. Primary school teachers' responsibility in te Turkish basic education system is to plan and evaluate the learning process so that students reach an understanding of science concepts.

In spite of a large number of studies related to students' conceptions of changes of state, there are few studies related to students' conceptions of boiling and freezing. In addition, it is difficult to find data that demonstrate prospective primary teachers' conceptions related to boiling and freezing. Therefore, the aim of this study was to explore the perceptions of prospective primary school teachsers in Turkey with regard to two crucial concepts in the Primary Science Curriculum: the concepts of boiling and freezing with water used as example. As a teacher's knowledge of science will affect a student's learning of scientific concepts, the findings and educational implications obtained from the is research are expressed to provide useful references for primary school teacher education and curriculum planning. The research was undertaken to answer the following question: What are the perceptions of prospective primary school teachers about boiling and freezing? What beliefs underlie these perceptions?

CONCLUSION AND IMPLICATIONS FOR TEACHING

McMillan J.H. & Schumacher S. (2006). Research in Education: Evidence-Based Imquiry (6th Ed.) (London, Person). Ministry of National Education of Republic of Turkey, (2005). The elemnatry school science the Scientific understanding of prospective primary school teachers with regards to boiling and freezing were investigated in this study. The results showed that a considerable number of prospective primary school teachers held misunderstandings. Some of the misunderstandings detected were similar to those reported by other studies investigating primary school teachers (e.g, Lorenz, 1986; Kruger & Summers, 1988; Kruger, 1990; Kruger, Summers & place in the universe. Research Papers in Education 8, 1, 101-129. Curriculum guide- 4th, 5th grade (The Office of Government Books: Ankara) acio, 1990; Mant & Summers, 1993). Findings obtained from the interviews showed that students tended to use their daily life experiences to explain questions especially related to boiling. For example, when asked to explain the statement, "When water boils, it turns into pure water", the response was "I think this way because my mother used to boil our drinking water when I was a child". Paik et al. (2004) supported this finding by suggesting that these types of answers were formed by aprticipants' sensory experiences. Ball and macDiarmid (1990) also suggested that, in general, the knowledge of subject matter among primary school teachers was grounded in daily life and educational experiences. As

for participants' perceptions of freezing both group-A and Group-B participants hold misunderstandings, particularly about why the volume of water increases. In current scientific content, freezing is defined as a change of state from liquid to solid. As a result of freezing the volume of a liquid generally decreases and its density increases. However, these phenomena are incorredct for water, because water is anomalous. In spite of this anomaly, watser is mostly used by teachers as an example of freezing when teacher change of state. This contradiction may have caused confusion for students, thus leading them to develop misunderstandings. As can be seen from the findings of this study, while students expected decrease in the volume of water as a result of freezing, they found an increase instead. They subsequently tried to attribute this to an increase in the number, volume, or mass of water molecules. Ross and Law (2003) asked students what mass of ice would be obtained if 10 g of water were frozen. Some of the participants provided the 'correct' answer, but the only reason given was 'our teacher told us that the mass stays the same', they could not provide reason why. Water is a crucial part of our daily lives and living organism are mostly mater.

Therefore, it si critical that we understand the nature of phase change with water and understand the anomaly. However, the findings of this study makes one wonder whether it is a mistake to use water as an example when teaching the phenomenon of freezing because of suggest some clues about this contradiction, more detailed research is needed to examine the effects of water as an example on students' understanding of freezing. Although the study found that the participants of Group-A were better able to complete the questions and had fewer misunderstandings about boiling and freezing than the participants of Group-B, their learning of these concepts still needs to be enhanced. This also indicates that participants with a science background are more able to learn these concepts.

This is supported by the observation that the participants of Group-A had a higher level of achievement than the participants of Group-B in the introductory chemistry course, Studies on primary school teachers' knolwege of scientific content have demonstrated that teachers have an inadequate scientific background and are unable to draw on their own understanding of these concepts to help facilities understanding in their students described prospective primary teacherss' knowledge in science as limited in amount, narrow in perspective and characterized by lack of understanding. Other studies about primary school teachers and the teaching of science found that teaches' knowledge of science was a significant factor that influenced their teaching of science, and teachser quality was particularly critical in the development of students' attitude towards science. The results of the present study areimportant because they demonstrate the effect of

background knowledge on prospective primary school teachers' learning of science, and suggest important implications for an effective teaching of changes of state.

It is clear that both teachers and students have misunderstandings about the processes of boiling and freezing. Some researchers suggest that such misunderstandings may be result of poor presentation in textbooks, over-laden syllabi that allw inadequate time for conceptual reflection, teachers who do not adequately take into account students' previous learning experiences (Calik & Ayas, 2005), or chemistry lessons that include assessment teachniques based merely on quantitative problem-solving (Ozkaya, 2002). It is important to reveal these msunderstaings; develop teaching strategies that have been effective in dispelling of them; and bridge the gap between such misunderstandings and the scientific thoughts. In the light of the findings of this study, four general conclusions can be made.

First, teachsers should acquire a better and deeper understanding of changes of state in matter so that they are able to teach properly without passing on their own misunderstandings to students. Second, prospective primary school teachers should be selected among candidates with a better background in science as they have acquired an adequate level of science knowledge. Third, as prospective primary school teachers will play a key role in educating the net generation, there should be a comprehensive discussion regarding their misunderstandings of scientific concepts such as boiling and freezing. Finally, the perceptions that prospective primary school teachers have about boiling and freezing obtained in this study can be used by instructors in teacher preparation colleges.

REFERENCES

Anderson, B. (1980). Some aspects of childern's understanding of boiling point. In Archenhold, W.F., Driver, R., Orton, A. & Wood-Robinson, C. (Eds), Cognitive

Research in Science and Mathematics, Proceeding of an International Seminar, 17-21 September 1979, University of Leeds.

Anderson, R.D. & Mitchener, C.P. (1994). Research on science teacher education, in: Gabel, D.L. (Ed.) Handbook of Research on Science Teaching and Learning, (New York, Macmullan). Some over generalizations or incro Appleton, K. (1995). Students teachers' confidence to teach science: Is more science

Knowledge necessary to improve self & confidence? International Journal of Science Education 17, 357-369

Appleton, K. & Kindt, I. (1999). Why teach primary science? Influences on beginning teachers' practice. International Journal of Science Education 21, no. 2: 155-168. Balci, T. (2005). The elementary teacher's guide-5th grade science and technology textbook (Ankara, Under Printing & Publishing).

Ball, D.L. & Macdiarmid, G.W. (1990). The subject matter preparation of teachers, in: W.R. Houston (Ed.) Handbook of Research on Teacher Education, (New York, Macmillan).

Bar, V & Travis, A.S. (1991). Chidren's views concerning phase changes. Journal of Research in Science Teaching 28, 4, 363-382.

Bar, V. & Galili, I. (1994). Stages of Children's Views about Evaporation. International Journal of Science Education, 16,2, 157-174.

Calik, M. & Ayas, A. (2005). A comparison of level of understanding of eighth-gradestudents and science student teachers related to selected chemistry concepts. Journal of Research in Science Teaching 42, 6, 638-667.

Chang, J. (1999). Teachers college students' conceptions about evaporation, condensation, and boiling. Science Education 83, 511-526.

Haladyna, T. Olsen, R. & Shughnessy, J. (1982). Relations of students, teacher and learning environment variables to attitudes towards science, Science Education 66, 5, 671-687.

Harlen, W. & Holroyd, C. (1997). Primary teachers' understanding of concepts of science: impact on confidence and teaching. International Journal of Science Education 19, 1, 93-105.

Johnson, P. (1998a). Children's understanding of changes of state involving the gas state, Part2: Evaporation and condensation below boiling point. International Journal of Science Education 20, 6, 695.709.

Johnson, P. (1998b). Childern's understanding of changes of state involving the gas state. Part1: Boiling water and the particle theory. International Journal of Science Education 20,5, 567-583.

Kruger, C. & Summers, M. (1988). Primary School Teachers' understanding of science concepts. Journal of Education for Teaching 14, 3, 259-265.

Kruger, C. & Summers, M. (1989). An investigation of some primary teachers' understandings of changes in materials. School Science Review 71, 17-27.

QUALITY TEACHER EDUCATION IN 21ST CENTURY

***Mr. Rajender Kumar**

21st century is going on. A lot of technological, social psychological changes are taking place. It is an age of information technology, age of science and age of development. Due to all these changes education system is also changing. The whole system of education is overhauling.

Success of any education system depends on the qualities and abilities of the teacher. This paper will reflect upon the fact that the teacher is pivot on which any educational system revolves in the context of Globalisation there are changes and challenges in every dimensions of life including education. The challenges are face as teacher are not only in updating the context of knowledge but also how we disseminate those to the students and how we promote the total development of the young students. Due to innovation in science and technology, the students are highly informative in fact they also have become a challenge to the teacher. Every student with unique requirement, potentiality, desire, skill will make not only a classroom situation a challenge but even the life outside, as a teacher cannot be just a knowledge provider teacher's role in shaping the personality of the students and preparing for a challenging future will be greater outside the classroom. Teaching learning processes aims at transmission of knowledge imparting skills and information of attitudes and values and brings about behaviour modification both in teacher and taught.

SEVERAL CAUSES MAY BE INDICATED FOR THE FALL IN QUALITY O TEACHER EDUCATION

1. **Pressure of number:** Pressure of number is a great hindrance in the path of main taining quality.
1. **Lack of suitable admission policy:** In the profession of teaching, we need devoted, talented and intelligent people but till recently it was noticed that brilliant students did not like to join the teaching profession and many of them joined this profession as a last resort. So there is an urgent need of university accepted and suitable admission policy.
2. **Low seriocomic status:** The quality of teacher education has gone down to some extent due to the low socio-economic status of our teacher educators in the social set-up present.

**Assistant Professor, Lincoln College of Education, (Sirhind) Pb.*

3. **Lack of balanced personality and academic leadership :** Lack of balanced personality and academic leadership on the part of teacher educators in general and principals of T.E.Is in the particular is also a factor responsible for the lowering the quality. It is common to find atmosphere of groupism, nepotism and favoritism in a majority of the T.E.Is. If such a situation continues, then the teachers coming out of these T.E.Is will be ill-staffed and ill-equipped which are bound to dilute the quality in education.
4. **Isolation of teacher education institutions :** Isolation of teacher education institutions from university life, from practicing schools and also isolation of teachers educations institutions at various levels from one another is again a cause of deteriorating the quality.
5. **Existing pattern of evaluation system :** The existing pattern of evaluation system is not at all reliable and valid the provision of internal assessment in the system of evaluation has developed a tendency on the part of teacher educators to boost the marks of student teachers. Moreover very little attention is paid to develop the physical, social and emotional aspects of personality of students.
6. **Teaching practice :** Teaching practice is the weakest link in our programme of teacher training. It varies in nature and organization from institution to institution and is mechanical to some extent. It has been noticed that may T.E.Is. do not have any attached practicing schools for experimentation, research and innovation. Demonstration, observation and criticism lessons are arranged hurriedly and haphazardly in these intuitions. In other teacher education institutions which have associated practicing school, they do not take teaching are practice seriously. Truly speaking, the energies of the staff members are directed only to fulfill the condition prescribed by the university for the minimum number of teaching lessons.
7. **More stress on theory:** It is well known fact that in teacher training there is more stress on theory and less on content-cum-methodology, teaching practice and related practical work.

SOME BURNING ISSUES WHICH ARE HURDLE IN QUALITY TEACHER EDUCATION

1. There is mushroom growth of teacher education institutes. But job opportunities are not increasing in the same proportion. Thus an imbalance between demand and supply.
2. There are many ineligible candidates, who are not really fit for the profession, get admission due to political pressure, bribery, or linkage to certain group of religion etc. thus there is a production of substandard teachers and no admission to deserving candidates.

3. Sometimes many persons have good academic career and are not interest in teaching, get admission in teacher education institutions. Therefore, testing of teaching aptitude is essential before giving admission.
4. The test items are framed for testing general abilities only. The affective domain is given no importance at the time of construction of tests and interviews. It should be both competence and commitment based.
5. The eligibility criterion is also not clear. The candidates produce false domicile certificates and other relevant documents and get admission. By the time they are proved guilty, they are on a verge of completing the course.
6. Even after the admissions of candidates, the academic session do not start because the process of scrutiny of application forms and other formalities is very slow. Due to this the academic session shortened.
7. The examination system is not good. It has lack of management and conduct of the test. The examination system lacks objectivity. The tests are not usually standardized.

QUALITY CONTROL IN TEACHER EDUCATION PROGRAMME

Teacher education programme based on national concerns and priorities and frame-work developed by National Council for teacher education (NCTE) is expected to prepare effective teachers. To ensure quality in teacher education institutions, the following action plan may be considered.

The action plan for quality control may include different steps like :

- Policy framing and planning
- Capacity building
- Training and networking
- Monitoring and feedback
- Research and advisory
- Documentation and dissemination of information.

1. **Policy framing and planning:** The guidelines frame work, planning and policy of National council for teacher education should be accepted throughout the country in order to have uniform structure of teacher education so that national concerns and priorities can be realized.

But for flexible and micro-level planning for states, districts blocks and institutions (considering the local culture, values, needs and aspirations) the national council for teacher education along with evolving its own strategies should also guide micro-level planning.

2. **Capacity Building :** The NCTE should create orientation of capacity building at every level and impart training to the concerned persons to develop capacity at state/district/block, institution level. Developing capacity at different levels will help NCTE in sustaining and monitoring its efforts in right direction.

   Identification of resources groups/persons and organizing regular workshops with them at national, regional, state and district levels, to develop an understanding of the commonalities as well as diversities of the problems of teacher education and chalking out more effective programmes to further the process of building national system of teacher education.

   The target group for training with central assistance may include members from :

- Teacher educator from state, district, institution level training centres,
- State and district level administrators from education as well as welfare departments, and
- Non-Government organizations (NGO)/Association/Village education committees etc.

The NCTE can have a national level NGO/teacher education Association forum for preparing local area/region specific training modules, especially, for creating :

- Community awareness, and
- Alternative teacher training programmes (with major focus on in service training.)

Training and Networking : A pedagogy unit needs to be constituted under national council especially for rendering expert services or training to state/district level resource persons is developing and executing the orientation programme both for teacher educators and teacher trainees, based on local needs.

The NCTE can facilitate networking between NCTE efforts, and the efforts made by institutions such as RIEs, colleges of teacher education (CTEs), district institutes of education and training (DIETs), state institute of education and training (SIETs), state council of educational research and training (SCERTs), university departments Non-Government organizations (NGOs), associations and individuals to further the efforts made by NCTE.

3. **Monitoring and feedback :** Besides general monitoring, regular feedback from the state/district and institution should be sought by NCTE for monitoring the process of

special programmes of teacher education. The tools and strategies for evaluation of these special programmes should be developed taking into account the common and diverse problems of colleges of teacher education. The NCTE should seek periodical reports and review meeting from and with the state/district/institution. In this regard the experts associated with monitoring should be oriented to the special aspects of teacher education now under NCTE.

4. **Research and Advisory :** The NCTE should facilitate networking through inventories of institutions, NGOs, associations and individuals who can help. An effort to link NCTE efforts with universities and research institutions can be undertaken different types of researches as a feed back to plan programmes and policies to suit national and local needs and help in mid-term corrections of programmes. Teacher educators may also be encouraged to undertake research work, leading to the effectiveness of their roles. The research findings can be exchanged and shared among different states/intuitions in order to gain from each other's experiences.

   Another support from NCTE would be advisory role of providing guidance and assistance for planning, implementation, monitoring and training related to different aspects of teacher education programmes.

5. **Documentation and dissemination information :** The NCTE has to play the role of clearing house of information at national level. This refers to documentation, collection and dissemination of research finding's innovations and information on various aspects of teachers education from different district/state, national and international agencies.

LATEST FEATURES/SUGGESTIONS/GUIDELINE OF QUALITY TEACHER EDUCATION IN 21ST CENTENARY

The new features of education and present status of teacher education forms a partial but significant basis for working out some new guidelines for the next centuries. These guidelines are general and detail on different levels. In 21st century the features of teacher education will be as listed below :

1. **Aptitude Test:** For admission to teacher education institution the candidate is required to clear an Aptitude test. This may replace the existing set of question in the entrance test paper. Through this we will come to know the aptitude of teaching.

2. **Associated School:** Teacher Training Institute have to develop special relation with one or more schools to ensure effective teaching program. So a small group of pupil teachers should be associated with the teaching of some subject in teaching of some class normally taught by professional teacher. A teacher can undertake :
    - Assisting Class Teacher
    - Developing Teaching Aids
    - Helping gifted and weak students.
    - To supervise the activities of children which can be best done in small groups or
    - Associating with co-curricular activities in schools.
    - Teach some lessons
3. **Role of associated schools in teacher Education:** There is need of effective association between Teacher Training Institute and Associated Schools, for work experience the trainees can use most of their time for formal contact, interaction with the students, with their parents and other associated activities in school.
4. **Communication and Language:** The teacher education in 21st century should develop good communication skills through Hindi, English, Regional language. Otherwise the effectiveness of teacher education cannot be gained. Some knowledge of mass communication and appreciation of audience, media and mode of presentation should be given due to importance. Video presentation, audio presentation, writing scripts should be a part of program.
5. **Computers and Information:** 21st century is characterized by advancement in science and technology. This development of competence of use of computer, information technology will be more important.
6. **Knowledge of Subject:** Priority should be given to knowledge of subject of specialization, its application and relevance. This may best be done by carefully; designed homework, tutorial sessions, problem sessions, formulation new questions, project, filed work, and experiments may be part of training.
7. **Rejection of absolute part of syllabus :** To make room for emerging areas of importance and to provide adequate time for teaching practice and to make teaching more interactive and to enhance professionalism, those items of syllabus which have little effect on making an effective teacher, should be dropped.
8. **Relevance :** to make teaching program relevant in the situation of changing pattern of society, education and technology a few topics have to be emphasized which are :

a) Educational technology (Hardware, Software)

b) New Programs (self learning, distance learning, program learning)

c) Organizing anti-pedagogy of literary, to enable a teacher to provide leadership to students in the literary drive.

d) Formulation of Project: The pupil teachers should have knowledge of formulate project for research work, community and students. They should also have the knowledge of their implementation, documentation and evaluation.

e) Different Modes of Evaluation: The pupil teacher should have knowledge of different modes of evaluation such as grading etc and their use in teaching learning process.

f) Programs for weak, gifted and problem students.

g) Social and pedagogical problems associated with a class having students with wide range of preparation and ability.

h) Elements of management i.e. let a teacher make best use of existing resources.

i) Co-curricular activities with specialization in one activity.

9. Choice: The Teacher Education Program should not be rigidly structured but it must have enough scope for trainee to undertake studies in the area of their own particular interest. This will help to develop the most important aspect of Teacher Education i.e. habit of life long learning and ability to look for needed information.

CONCLUSION

Education is life long process of growth and activity which brings about changes in social environment. The process of development is also said to change for the betterment of human society.

Teachers should grow continuously in their academic and professional life involve themselves in research activities, participate in seminar, workshop conference, orientation programmes, participate in extra and co-curricular activities and accept membership in professional organizations, communities to update their knowledge and skill.

The essence of programme of teacher education is 'quality'. If this is lacking, the programme is not only to become a financial waste but also a source of deterioration is not educational standards. This has to be avoided at all costs. Thus maintenance of academic standards is our prime concern now a day.

REFERENCES

Khan Mohd. Sharif : Models of Teaching Theory and Research, Ashish Publication House, 8/81 Punjabi Bagh, New Delhi-110002

Ashok Kumar : Current Trends in Indian Education Ashish Publication House, 8/81 Punjabi Bagh, New Delhi-110002

Bhatia K.K. : Modern Indian Education & Its Problems Tondon Publication Books Market, Ludhiana-141008

Reddy R.S. : Primary Education, Rajat Publication, New Delhi-110002

Yayak A.K. & Rao V.K. : A.P. Publication Corporation 5, Ansari Road, Dariyaganj New Delhi-110002

Rao V.K. : Teacher Education 5, Ansari Road, Dariyaganj New Delhi-110002

Singh Dr. M.S. : Quality Impact in Teacher Education Adhyanan Publishers & Distributors, Delhi

Reddy R.S. : Principles & Practices of Teacher Education Rajat Publication, New Delhi-110002

Singh Surjit : A Text Book of School Education Dominant Publication, Delhi.

Jain Kavita : Future of Teacher Education Sumit Enterprises.

Gupta Ritu & Kajal : A Text Book of Teacher Education Kalyani Publishers, Ludhiana

ENVIRONMENTAL EDUCATION: CHARACTERISTICS, NEED, GOAL OBJECTIVE AND GUIDING PRINCIPLES

***Dr Bala Rani**

The human beings are the top-most of the entire organism on this planet. He started modifying the environment according to his own needs and ways. He has converted wild forest into parks, gardens, orchard and cities, and deserve all praise for that. Urbanization, industrialization and commercialization have deteriorated the environment. The competition in the villages for increase in production by use of fertilizers and pesticides has spoiled the environment. Therefore, environment can simply be defined as that all those things and set of conditions, which influence the organisms at a particular place, i.e. non-living and living environment.

During last millennia, human population has increased considerably causing serious damages on destruction of natural resources. Different species of animals and plants have already extinct from the face of earth and many more are on the urge of removal. Our ancestors used natural resources to satisfy their basic needs of air, water, food and shelter. The resources in natural conditions were readily available in the biosphere. When the use of fire became very common, the smoke generated were easily and quickly dispersed and assimilated by the atmosphere. Mahatma Gandhi has rightly stated that " The earth provides enough to satisfy every man's needs, but not for any body's greed's". By the start of industrial revolution; humans were better able then ever to satisfy their needs for air, water, food and shelter. Their acquired needs are usually met by meets that must be processed or manufactured or are fined; and the production distribution and use of such items usually results mere complex residuals or wastes, many of which are not compatible with or readily assimilated by the environment. Soil pollution is due to the addition of solid wastes and chemicals. In the large cities the major pollution problem has been of the disposal of solid waste material, farm and animal manure, crop residues, industrial waste such as chemicals, fly ash and cinders which have been residues of combustion of solid fuels, garbage, paper, cardboard, plastic, rubber, cloth, leather, sand brick metal and glass resulting from demolition of buildings, dead animals. Large quantities of unwanted material bring about serious disposal problems.

**Assistant Professor, Sohan Lal DAV College of Education, Ambala City*

We should be very attentive in this mechanical world. The pollution problems results largely from ignorance and indifferent trends of continued misuse of the environment can, however, is altered by creating awareness among people of how men's activities effect the environment for good or bad. The ultimate need of today is knowledgeable citizens, should be conscious about their surroundings and must have great urge to take necessary social, economic and political steps to ensure better environment for all. To fulfill the needs of each and every citizen on earth and for balance and harmony between humanity and environment, world economists, educationists and ecologists devised a new approach to education, namely environmental education.

Environmental education is the bond between the environmental crisis and the educational crisis. Environment education makes one conscious about the need to understand the consequence of the exploiting conditions of existing environment and the manner in which the degree of humanizing, therefore, can be reduced. Main aim of environmental education is to succeed in making each individual and different communities to understand the complexity of the natural environments resulting from the interaction of their living and non-living components and require the knowledge, values, attitude and practical skills for solving environment problems. At this time everyone should know about environment.

ENVIRONMENTAL EDUCATION

Environmental education is a kind of education, which will seek to make pupils fully aware of the problems connected with their environment so that they will be able to tackle these problems with a sense of responsibility and the technical skill, will enable them to contribute to their solutions along with the other members of their community. This awareness of environmental problems is social awareness. The environmental education aims at developing in the child awareness and understanding of the physical and social environment in its totality. Environmental studies involve a child's investigation and systematic exploration of his own natural and social environment and prepare to solve the problems for improving his life.

Environmental education means education for making people conscious of environment, causes of environmental pollution and need of environmental balance for human survival. Environmental education is a process of learning experiences to obtain Knowledge, Understanding, Skill, and Awareness with desirable attitudinal changes about man's relationship with his natural and man made surroundings which includes the relation of population, pollution,

resources allocation, transportation technology and urban and rural planning to the total human development.

Environmental education must utilize diverse learning environment and a broad array of educational approaches to teaching learning about and form the environment with due stress on practical activities and first hand experience. It should help learner to discover the symptoms and real causes of environmental problems and thus to develop critical thinking and problem solving skills. Environmental education should be life long process, beginning at the pre-school stage level and continuous through all formal and non- formal stages and should be interdisciplinary discipline in making possible a holistic and balanced perspective.

ENVIRONMENTAL EDUCATION AND ENVIRONMENTAL AWARENESS

The term environmental education and environmental awareness are used interchangeably for the same meanings but there is significance difference in these two terms. The study of physical sciences, social sciences, biosciences, geography, and agricultural sciences provide the environmental awareness. But the awareness does not help in developing skills and attitudes for improving environment. Similarly the study of psychology provides the awareness about learning but education psychology provides the learning as well as practice, the method and techniques for improvement learning. The environmental awareness is limited to the understanding aspect while environmental education has the productive role in improving life and values.

By the above discussion it is clear that environmental awareness may be defined as to help the social group and individuals to gain a variety of experiences in and acquire a basic understanding of environment and its associated problems. World Educators and Environmental Specialists have repeatedly pointed out that any solution to the environmental crisis will require environmental awareness and understanding be deeply rooted in the educational system at all level.

EMERGENCE OF THE CONCEPT OF ENVIRONMENTAL EDUCATION

A survey of literature reveals that environmental education as an independent field of study arrived on the world since in the early seventies. But the roots of the environmental education can be traced back to the school system of various countries under the various names-nature studies, conservation education, out door education etc. Formal programmes of outdoor education originated in U. S. A. in 1823. Conservation education gained established status in 1905 with the formation of forest service in U. S. A. then came the natural settings and environment.

First inter-governmental conference on environmental education at world level as organized by U.N.E.S.C.O. in cooperation with U.N.E.P. at Tiblisi in 1977, which unanimously agreed on the important role of environmental education in the preservation and improvement of the world's environment.

In India the environmental education movement has started only in the later part of present century. However, this awareness and knowledge about the environment is not completely new to us. The Indo-Aryans of Pre-Vedic and Vedic considered nature as a personified being and probably found meaning in the complexity and importance of ecological balance.

NCERT did pioneering work in environmental education by not only developing a modern curriculum for formal school system, which incorporates environmental education concept, but also prepared textbook and other instructional materials, teaching aid and audio-visual materials.

The first time, an international conference on environmental education held at New Delhi, in 1980. The late Mrs. Indira Gandhi observed that environmental education is to help arouse social consciousness and make community aware of the fact that good of the individual and community are harmed by ecological disruption. In 1985, there was the second international conference held at New Delhi; several important points could emerge from the deliberations of the international, regional, national and even local conference of environment 'education'.

CHARACTERISTICS OF ENVIRONMENTAL EDUCATION

The review of above discussion, the environmental education indicate following characteristics-

(1) Environmental education is a process of recognizing the inter relatedness among man, his culture and biological surroundings.

(2) It develops skills, attitudes, feelings, and values needed to play a productive role in improving life and values.

(3) It refers to the knowledge and understanding of physical, biological, cultural and psychological environment and to perceive its relevance for real life situation.

(4) Environmental education identifies the imbalances of environment and tries to improve it in view of sustainable development.

(5) It involves child's investigation and systematic exploration of his own natural and social environment and prepares himself to solve problems for improving his life.

(6) It entails practice in decision-making and self-formulations of a code of behavior about problems and issues concerning environmental quality.

(7) Environmental education provides the basis for construction and creative skills for the practice of healthy living and improvement.

(8) Environmental education utilizes educational approaches, methods and techniques of teaching to identify the real causes of environmental problems and practice problems solving skills in formal and non-formal situations.

NEED OF ENVIRONMENTAL EDUCATION

Man and environment are considered interrelated and interdependence to each other from the very beginning. But in the era of industrialization, the nature and environment becomes a source of sorrow, because the dust of earth, light and air of the sky have the adverse effect on human beings. Therefore, it is widely recognizes the need of introduction of 'environmental education'

India has accepted the need for environmental education with the recommendation of Tiwari Committee (1980). Many people recognize an urgent need for environmental education, besides the introduction of 'environmental science' at all level of education, we must give much emphasize on the new approaches and programmes of environmental education, thus the idea is to bring environmental concern in all subjects. It will bring environmental concern to all facets of life.

Most of the people recognize the urgent need for environmental education, but only some have clear ideas about what need to be done and very few have either the actual experience or the knowledge about the course that need to be taught. The chief objective of environmental education is that, "individual and social groups should acquire awareness and knowledge, develop attitude, skills and abilities and participate in solving real-life environmental problems". The perspective should be integrated, inter-disciplinary and holistic in character. The lay public in rural, tribal, slum and urban areas, women and students and teachers in schools, colleges and universities as well as planners, decision and policy makers, programme implementators and workers need to be educated about environment. The areas of 'environmental education' are very wide as compared to environmental science. It can be illustrated with the help of following statement: -

"If you want to grow a crop, you have to plan for a year". It is the job of agriculture scientist.

"If you want to grow a plant, you have to plan for ten years". It is the job of plant scientist.

"If you want to grow or educate a man, you have to plan for one hundred years". It is the responsibility of educationist. [9]

Various national and international conferences and seminars, which are conducted in different parts of the world has thoroughly discussed the need of environmental education at all the stages of life from childhood to old age.

Goal, Objectives and Guiding Principles of Environmental Education:

The goals of environmental education are to develop a world population who is aware of and concerned about, total environment and its associated problems, and commitment to work individually and collectively towards solution of current problems and the prevention of new ones (UNESCO, 1975).

A number of objectives and guiding principles for developing environmental education at all levels in both formal and non-formal levels were formulated at the Tbilisi Conference (UNESCO, 1977). These are follows.[10]

OBJECTIVES

To help social groups and individuals towards

(1) **Awareness** i.e. acquire an awareness of and sensitivity to the total environment and its allied problems.

(2) **Knowledge** i.e. gain a variety of experiences and acquire a basic understanding of the environment and its associated problems.

(3) **Attitude** i.e. acquire a set of values and feelings of concern for the environment and the motivation for active participation improvement and protection.

(4) **Skill** i.e. acquire skills for identifying and solving environmental problems.

(5) **Evaluation abil**ity i.e. evaluate environmental measures and education programmes in terms of ecological, economic, social, aesthetic and educational.

(6) **Participation** i.e. to provide an opportunity to be actively involved at all levels in working towards the resolution of environmental problems.

GUIDING PRINCIPLES-

- To consider the environment in its totality (natural, artificial, social, economic, political, moral, cultural, historical, and aesthetic.
- To consider a continuous life process (from pre-school to all higher level formal as well as non-formal).
- To be interdisciplinary in approach.
- To emphasize active participation in prevention and solution to environmental problems.

- To examine major environmental issues from local, national, regional and international point of view.
- To focus on current, potential environmental situations.
- To consider environmental aspects in plans for growth and development.
- To aware the public, about the environmental related problems and need to develop a critical thinking and problem- solving skills into all members of the society.
- To promote the value and necessity of local, national and international cooperation in the prevention and solution of environmental problems.
- To utilize diverse learning about environment and different approaches to teaching and learning about environment.
- To help learners to discovers the symptoms and the real causes of environmental problems.
- To relate environmental sensitivity, knowledge, problems-solving and values clarification at every grade level.
- To enable learners to have a role in planning their learning experiencies and provide an opportunity for making decisions and accepting their consequences.

CURRENT ENVIRONMENTAL EDUCATION SCENARIO IN INDIA

The environmental education scenario in India is very wide indeed. Our country is a highly diverged climatically, geologically, geographically, ethnically, socially and economically. Therefore, environmental education has to be essentially location- specific. At the first level, special attention must be paid to school going children and women (about 50% of the total population). They are to be made aware of health, family planning, nutrition, rural development, slim improvement, sanitation, hygiene, water and food contamination etc. Non-governmental organizations have to play a significant role.

In the directory of the department of environment, there are more than 200 non-governmental organizations of which nearly 150 work in the area of environmental education and awareness. Thee are two types environmental education in India (A) Formal environmental education and (B) Non-Formal environmental education.[11]

(A) FORMAL ENVIRONMENTAL EDUCATION INDIA

The chief goal of environment education in India must be, to improve the quality of environment, to create awareness among the people on environment problems and conservation,

and to create an atmosphere so that people participate in decision-making and develop the capabilities to evaluate the developmental programmes.

The spectrum of environmental education has three major, integrating and interrelated components:

(1) Awareness- it includes making the individual conscious about the physical, social, and aesthetic aspects of environment.

(2) Real life situations- that link environment to life, these conditions are location specific, thus problems and priorities of each area may be different.

(3) Sustainable development- it aims at utilization of resources for development.

(4) Therefore resources should be used in a wise manner. All resources are finite and there is also a limit to the growth of living system. Thus, the efforts are to be made to utilize the resources wisely and intelligently.

SCHEME OF EDUCATION IN INDIA:

1. **Primary school stage-** here the emphasis should be mostly (75%) on building up awareness, followed by real-life situations (20%) and conservation (5%). Thus attempt should be to only sensitize the child about environment.
2. **Lower secondary stage-** from the lower secondary stage onward, the quantum of awareness must decrease and there should be increased knowledge of real- life situations, conservation and sustainable development
3. **Higher secondary school stage-** Here the emphasis must be conservation, assimilation of knowledge, problem identification and action oriented work. There should be proper teaching, practical and fieldwork.
4. **Tertiary (college) stage**- At this level the picture would be almost reverse of primary level, as maximum emphasis would be here on knowledge regarding sustainable development base on experience with conservation followed, in a descending order, by conservation, real- life situation and awareness.
5. **University education**- the university grants commission is looking after university education- Environmental education at this level. There is a high-powered committee to suggest areas of environmental education at postgraduate level.

NON-FORMAL ENVIRONMENTAL EDUCATION IN INDIA:

1. **Adult education**- adult may influence other member for better ways of life. In local language, posters, slides, audio-visuals etc. may be generated.
2. **Rural youth and non-student youth**- they may organize into groups. Their community leaders, women and youth can take up the programmes of environmental education.
3. **Eco-friendly groups** – they help in sound rural development involving youth. A set of guidelines has been prepared by (1984) department of environment. They main objective are: to create awareness in student and non-student youth about ecological principles; to identify root cause of ecological problems; and to develop a spirit of national integration and emotional integration.
4. **Non governmental organization**- There are over 200 NGO's, of which most are involved in EE and awareness like pollution control, forest conservation, rural development, wildlife conservation, social forestry, waste utilization and eco-development.
5. **Public Representatives**- India has environmental forums for M.P. and M.L.A. to discuss environmental problems facing the country. They may build up sound public opinion and stimulate public interest.
6. **Foundation –** There must be a foundation courses on environment or relevant area for newly selected I.A.S., I.F.S., I.P.S. and cadets of three wings of Armed Forces.
7. **World Environment Day-** All government in states, U.T's, academic institution's, college's, universities, school's and voluntary organization's must organize suitable activities on this day (June 5). Department of environment must supports this financially.

REFERENCES

1. Ahluwalia, S.P. and Dr. Bais, H.S., "Environmental Education: Issues and Challenges" Ashish Publishing House, New Delhi, 2002, page-27.
2. Ibid, page 28.
3. Sharma, R.A., "Environmental Education", Surya Publication, Meerut, 1998, pages, 46-47.
4. Nayak, B.K., "Environmental education in Emerging Indian Society", Traantarini Pustakalaya, Berhampur, Orissa, 1997, page-36.
5. Ibid, page-37.
6. Ibid, pages 38-39.
7. Sharma, R.K., "Environmental Education", Ibid, page-55.
8. Ibid, page-54.
9. Ibid, page-56.
10. Ibid, pages 57-58.
11. Ibid, pages 60-61.

STRESS MANAGEMENT: SOME ALTERNATIVES

***Saroj Sobti Farwaha** ****Baljit Singh**

PRESENT SCENARIO

Healthy body is one which is free from any disease and healthy mind is one which is happy and relaxed. One cannot have a healthy body without a healthy mind. A mind indulging in negative and uncontrolled activities creates stress and badly effect the health of body. Mental disturbances are caused by our improper attitudes towards life. In the race of money and power everybody is living a hectic life. Present time is the time of competition, which results into tensions and mental illness. The number of mentally ill persons is increasing day by day. Many of us are inflicted with the problem of stress. We may hide the facts related to stress and mental health because of the social stigma attached to these problems. But now people have become alert about this problem and they are motivated to fight with the problems related to stress. They start following the ways and techniques suggested by many Yoga Guru and psychologists to control their mind and life activities.

CONCEPT OF STRESS

Health in a broader-context includes physical, social and stress free mind. Stress is a common human phenomenon and it is with us all the time. It influences individual's behaviours, activities and performances in every field of life. Stress was firstly studied in 1896 by Walter B. Cannon and applied to human behavior by Hans Selye. It is very difficult to define precisely the term stress because it has been differently used by every psychologist. However stress according to Dr. Hans Selye is 'the rate of wear and tear on the body.' When stress was first studied, it was used to denote both the causes and the experienced effects of the pressures. In the recent past, however, the word stressor has been used for the stimulus that provokes a stress response. Stress can be caused by psychological or physiological complaints. Sometimes stress has been used to describe a variety of negative feelings and reactions that accompany threatening challenging situations. Seley calls this type of unpleasant and harmful stress as distress. However, not all stress reaction are negative, there are positive stresses too. Seley calls the positive form of stress as eustress. Stressors

**Lecturer, Ganesh Dass DAV College of Education, Karnal (Haryana)*
***Lecturer, S.N. College of Education, Jagadhari (Haryana)*

that produce eustress can enhance quality of work and give us satisfaction. Therefore, stress is an essential evil in our life but in a balanced amount. How stress effects the individual depends upon how the individual perceives the stressful situations and his tolerance for stress. It is not important to consider what kind of stress or how much stress one has experienced. The important thing is how one tries manages a stressful situation.

FORMS OF PSYCHOLOGICAL STRESS

The human response to stress is complex and multidimensional stress effects the individuals at several levels. It effects human being physiologically, emotionally and psychologically. We can distinguish but cannot separate the various forms of stress. Our physiological health effects our psychological and emotional stabilities. Here we are giving emphasis on psychological stress. The main psychological stresses are as under:

FRUSTRATION

Frustration is the emotional state resulting when the goal is block, thwarted or defeated. Frustration occurs only when the human beings meet hindrances which are difficult to overcome and are not able to attain the goals they have set for themselves.

CONFLICTS

Conflict is the problem that is faced by everybody in the life. Human beings have to achieve several motives in their lives. Sometimes a person has two or more motives of equal importance and he or she has to select one. It becomes difficult for the individual to choose one of the motives when each motive is of same value. This confusing situation creates stress and strain.

ANXIETY

A lot of people suffer from this problem. Anxiety is a state of uneasiness or worry. It is difficult to trace its specific cause. In anxiety, we find meaningless frenzy with rigid or distorted expression accompanied by withdrawal from the world and world appears irrelevant.

PHOBIA

Another main cause of stress is phobia. A phobia is an irrational and unwarranted fear of some object or situation where the actual possible of harm to the individual is very low than imagined.

FEELING OF GUILTY

Worry and feeling of guilt both are closely linked to anxiety which is the main cause of stress. Worry may be defined as anxiety felt by anybody, thinking about difficult personal problems that have no immediate solutions. This worry creates tension and reflects in psychological changes in behaviour in form of anger. This worry may be because of feeling of shame and guilt aroused by violating social or cultural norms.

CAUSES OF STRESS

- Urge for possession and Egoism.
- Greed for power and money.
- Selfishness and Self-Centeredness.
- Feeling of Lust
- Lack of Emotional stability.
- Violent Nature and Anger.
- Deterioration of values in life.
- Failures in life.
- High expectations of society
- Rash and unhealthy criticism.
- Inferiority complex
- Lack of self-confidence
- Discriminating treatment
- Feeling of depression and frustration due to continuous failure
- Professional Manipulation.
- Unfavourable working conditions
- Restriction in personal and social life
- Too much competition
- Unsympathetic and harsh attitude of fellow beings
- Feeling of insecurity.

HOW TO MANAGE STRESS IN LIFE ?

Stress is common in every one's life. It refers to any adjective demand that requires an adaptive response from us. In the modern complex society with its rapidly changing values, stress is an inevitable event in the life. Therefore one should learn to work in all kind of stressful situations. Management means 'to get the work done'. Dictionary meaning of management is an act of managing. It means to run, to direct, to handle or to control. Management has five aspects:- planning, organizing directing & motivating, co-ordination and Evaluation. Stress management means the ways and methods that are helpful in reducing stress. With the help of the following techniques stress can be reduced:

PLANNING OF EVERY WORK

Unplanned work creates a lot of confusion, tension and stress in mind. Proper planning of the work at its preliminary stage helps in the smooth functioning of the task and brings success in every field of life. Completion of the task further motivates us to fight with other hurdles and minimize stress of mind.

TIME MANAGEMENT

Time management is the key to success. Sometime we take decisions at later movements. Shortage of time creates anxiety and tension. If one does his work in time and plan according to the available time then there will be no stress on one's mind.

POSITIVE ATTITUDE

To attain success in life and to reach the desired goal one must have a positive attitude. Faith in oneself and in God, courage, strength and fearlessness are the characteristics of positive intellect. One should have positive attitude towards the problems concerning every day life to defeat stress. He has ability to see things in proper perspective, neither to under-estimate not to over-estimate things or people including oneself. No super ego and no self-pity.

HARD WORK

Hard work is the key to success. When there are hopes without efforts then failure gives worry and tension. But to avoid tension and stress one should follow the under given procedure:

- First of all prepare yourself to fight with problem confidently.
- Divide the work in small steps.
- Arrange each step of work into simple to complex order according to the priorities.

- Do simple work first it will motivate to do further actions.
- Select one part of work and after completion take second part of the work.
- Concentrate on one task at a time.

AVOID DRUGS

The remedy does not lie in drugs or fantasy, but in the process of catharsis and development of the inherent powers. Due to work pressure, illness and mental stress some human being starts taking drugs for relief. But earlier taken for stress relief later on non availability of these drugs creates a lot of tension and stress. . Whenever the excess

SELF - EVALUATION

To avoid stress evaluate yourself in the context of your capability. Sometime human being evaluates himself beyond his capacities and potentialities. This feeling of over-confidence creates frustration and conflicts in mind. Therefore, one should not compare himself with the achievements of others. He should judge his performance according to his qualities and capabilities.

GUIDANCE AND COUNSELLING

Guidance and counselling can be helpful to fight with the stressful situations. When a person experience conflict he should be guided not to approach any goal hurriedly. Simply speaking clearly about the problem to the guide and the counselor, thinking of various possible solutions to the problem before acting on a solution, sharing one's problem with other person and seeking support from others, and joining the action- group to take appropriate action to solve the problem are helpful techniques. Stress is also reduced by compromise, conformity to the demands, adopting substitute goals and by negotiation.

YOGA FOR STRESS FREE MIND

Yoga is a means by which the body and mind are kept healthy and are allowed to perform at their best. Yoga is not a part activity to be practiced at a prescribed time at a prescribed place. It is a way of life.

Yoga is one of the most appropriate techniques for a healthier and stress free life. Yogis declared that "Yoga is the complete control of mind or Yoga is equilibrium of body-mind complex"

Most of our inner life is dominated by our emotions. Emotions are the alterations that occur inside us. Fear, like and dislikes, egoistic tendencies, and ignorance of our real nature are the

causative factors of emotions. Emotions are our natural tendency but when these emotions come out as uncontrolled forces in a man then they are like a indent storm which can destroy anything that comes in its way. Therefore it is importance to identify our emotions, know their causes, reflect on methods or reducing their intensity and direct their energy in work or creative activity. Whenever the energy of these emotions is not well directed it recoils on the mind and psyche and destabilizes it.

STEPS FOR YOGIC LIFE AND STRESS FREE MENTAL HEALTH

It is certain that today's life style is mainly responsible for increased number of stress disorders and related health complaints. The main reason however, is our own bad habits and wrongly adopted life style. Therefore to combat the same the following yogic life style is suggested to maintain positive mental health.

AASANAS

Practice of Aasana helps in overcoming physical deformities and ailments.

The practice of yoga prevents psychosomatic disorders/diseases and improves individual's resistance and ability to endure stressful situations. As a primary prevention, yogic exercises should be advised to drive the benefits of prevention of diseases, promotion of health and for therapeutic purposes.

YAMA AND NIYAMA FOR PHYSICAL HEALTH

Sound mind lives in a sound body. For the sound body practice of Yama and Niyamas is must. Yama is based on the principle that above all religions, human religion is the best. Yama consists of Non-injury (Ahimsa), truthfilness in thought and speech (Satya), Non-stealing (Asteya), Sexual restraint (Brahmacharya) and Non-acceptance of unnecessary gifts (Aparigraha).

Niyama are the observations viz., Shoucha (Purity), Santosha (Contentment), Tapas (Austerity), swadyaya (self study), Eswara Pranidhana (Total surrender to the supreme).

PRANAYAMA

Pranayama is the process of rhythmic regulation of breath. It purges the mind of impurities and generates illumination of knowledge. It produces stability in the body and equanimity in the mind of an individual. The suitable physiology of an individual gets purified through regular

practice of Pranayama. The body of an individual becomes free from obesity, crookedness etc. through regular practice of pranayama.

MEDITATION

Meditation and Japa of Mantaras are the natural ways of resting and filling the mind with new freshness. Through them the mind and the body are refilled by new energy. All strength, all power, all poise come from the Divine.

RELAXATION

Most of the criteria for mental health are fulfilled by practice of habitual relaxation ability to love to judge accurately, emotional stability, ability to live in the present, ability to avoid hypocrisy in life. All these abilities are possible only by relaxing the body and mind through Shavasana. Relaxation truly is the Mantra for Parma Swasthya. Mental Health is the prime necessity for a happy and efficient life. We should accept happiness as the criterion of stress free mind. Mental poise, peace and well being are experienced through yogic relaxation. This improves our sleep pattern, our adjusting ability with situation and also builds a strong resistance power against all the invading diseases.

CONCLU SION

Stress is caused by lack of control over mind. Mind is quickly influenced by selfish motives and lust for worldly pleasures. Whewn there is no control over mind, the individual is engulfed by lust, greed, anger, attachments and manipulations. The result of all these is stress and strains. Proper management of stress through proper planned activities, positive attitude, hardwork and above all yogic style can be helpful to fight with stress and strain. Yoga is a means by which the body and mind are kept healthy and are allowed to perform at their best. Yoga is not apart activity to be practiced at a prescribed time at a prescribed place, It is a way of life.

REFERENCES

Chaturvedi, M.K. (1983), *Human Stress and Stressors. A Sociological Study, Cosmo Publication, New Delhi*

Dhondiya, M. and Auradha, B.S. (1999). Challenges of Working Women in the Next Millenium, National Institute of Public Cooperation and Child Development, Southern Regional Centre.

Haynes, S. and Feinleib, M. (1980). Women, Work and Coronary Heart Disease*, American Journal of Public Health*, 70:133-141

Loonker, N. (1996). *Influence of work environment, family environment and service tenure on working females*, Department of Psychology, J.N. University.

Misra, G. (1999), *Psychological Perspectives on Stress and Health,* Department of Psychology, University of Delhi.

AN ANALYTICAL STUDY OF PRESIDENT SMT. PRATIBHA PATIL'S CONTRIBUTION TO EDUCATION

*** Dr. Vivek Kohli** ****Sarita Ahalawat**

RATIONALE

The researcher herself is great admirer of President Smt. Pratibha Patil. The researcher has a view that Smt. Pratibha Patil has set a real and concrete example in the society that women also has power in herself. She is the great example of women empowerment. The present study will also emphasize the important role of thinking process. Thinking leads to the vision for the nation. Our journey as a nation has never been an automatic march to freedom and opportunity. To study the role of great Personality President Smt. Pratibha Patil as a staunch nationalist, a great dreamer and visionary of value based education investigator decided to take up the study, which reads as: An Analytical Study of President Smt. Pratibha Patil's Contribution to Education.

OBJECTIVES

The objectives of the study are following:

1. To study the life and works of President Smt. Pratibha Patil
2. To study the effect of President Smt. Pratibha Patil's ideas on the development of education
3. To study the relevance of President Smt. Pratibha Patil's ideas in modern Indian scenario

FINDINGS

- Investigator found that the life and works of President Smt. Pratibha Patil makes her a versatile personality and a good human being in real sense. She is an efficient President and a real model of the women empowerment. She has presented an inspiration for the women community of India and also for the world.
- Investigator found that Philosophical - Educational ideas of President Smt. Pratibha Patil makes her outstanding thinker of the modern age. Her philosophy is very practical. She is a philosopher who has the zest of an explorer. Her philosophy stresses that happiness, freedom and development of India is man's highest goals. President Patil aims is the fullest

Principal, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

possible development of individual of the country, so that he become an intellectually and socially conscious and a morally responsible person in his own right and assert to society. President Patil considers that values are the most important for life. Values are right direction to man. Everyone should be given the spiritual and value based education from early life. Spiritual strength is very important for all. And along with this, if we have financial strength, we will not remain poor. India has a high values in its culture, which are perfect for the development of India. The progress of the country should be based on spiritual and financial strength. And to achieve both there is only one thing, sweat and hard work. "Human effort and God's grace". Even failures are for good, they probe one to make things better. Hard work brings success and good which ultimately gives success. She prays to God "May India prosper both spiritually and economically". She says in reality, we really provide what is really needed. We provide everything to man clothes, food, drinks..... economic freedom but with all these we should provide spiritual wealth.

- President Smt. Pratibha Patil Ideas in morden Indian scenario and her vision for the future of India is strongly rooted in her faith in the power of scientific and technological knowledge and their beneficial applications. She believes in science and experiments. Her educational ideas are relevant to modern time. Her ideas on the university education, on adults education, on spiritual education have very much importance in making India a developed country. She believes that moral education is also equally important in developing the nation. She believes in the blend of technology and values.

CONCLUSIONS

We can conclude by saying in the views of President Smt. Pratibha Patil, young people are our unique strength. They can change the society by their hard work. Secondly, she thinks that their is no greater power in heaven or earth than the commitment to our dream. Study of different subjects in curriculum should lay emphasis on moral character, India's wealth of spirituality should be synthesized with western technology to remove the poverty of Indian masses. Thus, we can see that the vision of developing our nation gave by President Smt. Pratibha Patil is relevant to the present context.

A STUDY OF DAYANAND'S IDEAS ON WOMEN EMANCIPATION AND THEIR EDUCATIONAL IMPLICATIONS

*** Dr. Vivek Kohli** ****Rajni Khurana**

RATIONALE

Though we are in the 21st century, still women are not from exploitation. If we unfold the history we can find women inside the four walls. Swami Dayanand Saraswati tried for the emancipation of women. He involved himself directly or indirectly in the upliftment of women. He wanted equal rights for women. His attempts to free the women from many evil social customs are admirable. His efforts on women education and emancipation were unexplainable. The investigator is very much inspired by **SWAMI DAYANAND'S** life, teaching and works.

His works for upliftment of women have provided inspiration to further social reformers also. They tried a lot to uplift the status of women in the society and due to these efforts the status of women has improved very much. They got the rights equal to the men. They are being provided facilities to improve their positions. Swami Dayanand did a lot of work in this field. The investigator wants to study his efforts for the emancipation of women. In this context the Present Study a humble endeavor **:** ***A Study of Dayanand's Ideas on Women Emancipation and their Educational Implications.***

OBJECTIVES

The objectives of the study are stated below:

1. To examine the influence of the prevalent trends of thoughts, educational tradition as well as social norms on the position of women prior to Swami Dayanand's period (1824-83)
2. To elucidate the contribution of Swami Dayanand for women's emancipation
3. To draw out the educational implications of Swami Dayanand's ideas

Principal, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

FINDINGS

1. Women's condition prior to Swami Dayanand's period

(a) The condition of women prior to the Swami Dayanand's period was poor. Sati, child marriages and ban on widow remarriages became part of social life in India. The Muslim coquest in the Indian subcontinent brought the purdah practice in Indian society. Among the Rajputs of Rajasthan, the Jauhar was practiced. In some parts of India, the Devadasis or the temple women were sexually exploited. Polygamy was widely practiced. In many Muslim families, women were secluded to Zenana.

(b) In the whole world in order to improve the status of women, education has been considered as an important source.

But in India women were not allowed to get educated. They were only meant for doing household works and deliver children. Women were the slaves of men. They work according to the wish of their husbands. They could not take their own decisions. It was their main duty to keep their husbands happy. They were not considered capable for being educated. So, educational status of women of that time was also not good.

(c) Prior to Swami Dayanand's period, Hindu religious traditions deprive women from worshiping and reciting Vedas, direct her to remain under the man's authority, accept her role as mother and wife only in the form of ideal role, give more importance to son by backing the patrilineal social structure and consider the women inferior to men. In the Hindu religion itself, as a result of protest movements, some branches of it, such as Boudh, Jain, Vaisnav, Vir Shiv and Sikh religion, emerged which tried to improve the status activities. But in spite of this, in these religions also woman was being accepted mainly as mother and wife and she got positioned in the category lower to men. Later on religions like Islam, Christianity and Parsi brought along with them a particular attitude regarding women but in due course of time they also got themselves colored in the Indian color of practical customs and traditions.

(d) In the traditional Indian family, the oldest male member used to be the head of the family and all the important decisions were taken by him only. Wife of the head of the family used to get right of taking small decisions inside the house, especially regarding the women, automatically.

2. Efforts of Swami Dayanand for Women Emancipation:

One of the greatest achievements of Dayanand was to uplifit the status of Indian women. He was a champion of women's cause. As the founder of Arya Samaj in 1875 Dayanand worked for reforms of traditional caste system and the improvement of the social status of women and children. He played a key role in advocating women's rights, including education, property and widow remarriage. He wrote extensively on women's rights and once again incurred the wrath of the orthodox society. His plea for the rights of females shows that he was a strong supporter of women's uplift. He fought for their legal rights. He took up the cause of destitute women. He raised his voice against the sale of daughters to prospective husbands due to pecuniary interests and he condemned the system of polygamy.

3. Educational Implications of Swami Dayanand's Ideas:

The name of DAYNAND is linked with the greatest and most extensive educational enterprise of India. He was a great lover of masses and correlated their betterment with the betterment of the country. He could feel the pulse of the people. He had solution for each and every problem that faced the country at that time. The solutions that he suggested are still relevant for the simple reason that the problems that existed in time still exist today, thought in different proportions.

(a) Dayanand was an advocate of educational reforms. Equating education with practical knowledge, which would be essential to an individual's life. Dayanand convinced that education would widen the outlook of his countrymen.

(b) Swami DAYANAND has not given scheme of education to be implemented in our schools yet it is a reality that Swami DAYANAND set the Indian youth on the right lines and inspired millions of people to receive and provide right kind of education fitted to their needs, their cultural background and their national traditions. He is the inspiration of all the thousands of D.A.V. and other Arya Samaj institutions.

(c) There is full-fledged university, Maharishi Dayanand Unversity (MDU) Rohtak and Dayanand Chairs for Vedic studies and research have been established in some universities to commemorate the name of Swami DAYANAND.

(d) In the 19th century, he pleaded for free and compulsory elementary education not only for boys but also for girls. Today we need to educate each and every citizen of the country. It is possible only when there is a provision of free and compulsory education.

(e) DAYANAND wanted that the schooling of boys to begin at the age of 5 and that of the girls at the age of 8. The boy was to stay at Gurukual till the age of 25 and the girl till she was 16.

(f) He advocated equality of the sexes.

(g) Swami Dayanand laid great stress on study of the Vedas and allied literature was to stop the youth from being Anglicized into Christianity by hating every Indian. The purpose of education, apart from training for a profession, should be to make the world a better, happier and safer place to live in. DAYANAND's educational system seeks to do that.

(h) Swami DAYANAND placed great emphasis on educational reforms. The greatest speciality of this system was the adoption of mother tongue and it was made the medium of instructions. To develop children's mental facilities properly, the medium of instructions should be the children's mother tongue. This slogan of education in mother tongue was first raised by Swami DAYANAND.

(i) It is true that details of DAYANAND's school syllabus might have become out dated with the passage of time, but his philosophy of education and general approach is as fresh as ever.

CONCLUSIONS

For that reason, DAYANAND should be ranked among the greatest educational thinkers of the world and the grand success of the DAV movement proclaims the glory of his educational pioneer ship and guidance. **Dr. Annie Besant** once said, "DAYANAND was the first proclaim India for Indians". According to Dr. Radhakrishanana, "Many provisions about social welfare in construction of India owe their inspiration to the teachings of Swami DAYANAND".

EDUCATIONAL IMPLICATIONS OF EDUCATIONAL PHILOSOPHY OF SWAMI DAYANAND AND SRI AUROBINDO

Education is a synthetic and comprehensive process which addresses itself to the development of the body, the nourishment of the mind, the sublimation of the emotions and the regeneration of the spirit and its fulfilment lies in the unfolding of an integrated personality. Education achieve this comprehensive process with the help of philosophy.

Regarding building of character and intelligence in the youth today, both stressed upon inculcation of physical education in curriculum of the schools and colleges. Both Philosphers stressed that to imbibe good qualities in students, the best way is to present your own self as a example before them.

Sri Aurobindo has also debunked the idea of modern utilization approach to education. Students today run after degrees or diplomas which help them in getting job. Therefore what is more important to them is to pass an exam and not to aspire for the knowledge or the qualities of character. The aim of education is not just to enable the student to pass an exam. No amount of factual knowledge is going to help them. What the pupils should acquire through self effort, as far as possible, the sort of confidence and competence that will train them to improvise the necessary skills to meet further contingencies.

In the recent years, there has been proliferation of subject and a corresponding increase in the factual information to be mastered in each subject. Students in our schools are today over burdened with subject matter to be learnt. It is believed that in order to meet the challenge of the exploitation of knowledge in the modern world, the only way out is enriched curriculum which is emphasized by both the thinkers as it includes the balance development of the child-Physically, morally, spiritually, socially and emotionally.

Present curriculum also lacks the creative activities to be shown and developed on child due to rigid curriculum and vast syllabus. Both Swami Dayanand and Sri Aurobindo laid stress in inculcation of creative abilities in the child. Swami Dayanand and Sri Aurobindo offered solution to the many of the problems of their times i.e. social religious and moral.

The spiritual and ethical values (Yama and Nirama, Vidya and Avidia) presented by Swami Dayanand and Sri Aurobindo can serve as a beacon of light to the present troubled and tormented situation. Swami Dayanand and Sri Aurobindo laid stress on the necessity of a true living Guru. All true seekers whatever their religious creed may be need to develop devotion to a prefect Guru; for without such devotion, the inner chambers of spiritual realms cannot be opened.

IDEAS OF SWAMI DAYANAND AND SRI AUROBINDO WITH RESPECT TO THE PRESENT EDUCATION SYSTEM:

In the present society, where corruption is prevailing all over, Swami Dayanand and Sri Aurobindo gave importance to honestly earned money. They said that while working for our livelihood and supporting our families, we have to follow the path of devotion.

Both disapprove of casteism which has been a characteristic of the Hindu Society. Only those who watch their actions carefully are acceptable to God; those who take pride in their caste and religion can't approach and enter his court. Their view on international understanding were based on the ideology of the brotherhood of man and fatherhood of God, service of humanity, welfare of all, sacrifice for the benefit of others and distribution of part of one's income for the welfare of the needy. They spread this message to different countries of the world. They made a passionate plea for international understanding and world Brotherhood.

In the end we can say that world has varied cultures, different languages, many religions and is facing a number of big or small problems. The list of these may go long. The solutions of these problems, like poverty, population explosion, moral crisis, overburdened students, problems of young democracy, communalism and religionism etc are not given any due attention by thinkers of modern age. But if a close scrutiny is made of Swami Dayanand and Sri Aurobindo ideas, we find solution to many of the above problems. In their speeches and writings we can search for and find very appropriate solution to the problems that we are facing today in academic, social, political or spiritual sphere. All that we have to do is to have the will to do so.

Though no longer in physical body, both Swami Dayanand and Sri Aurobindo continues to live in the hearts of millions of their devotees all over the world.

IMPACT OF AUDIO-VISUAL AIDS ON ACHIEVEMENT OF MATHEMATICS AMONG THE STUDENTS OF CLASS IX

*** Dr. Vivek Kohli** ****Meenu**

RATIONALE

In spite of having all the benefits of teaching mathematics, it has been experienced that generally the students are afraid of studying mathematics. There are various reasons for this, method being one of them. Therefore, the teacher has to adopt the right approach of teaching.

Teaching aids have the direct application and utility in making the teaching process more effective. The teacher, learner and the subject matter are the three main elements which interact with one another in the process. The teaching process has to aim for helping the learners to acquire the power in learning the concept at the understanding and application level rather than mere memorization of concepts and facts.

Through the mastery of using the teaching aids, the teacher can make class-teaching more flexible and centre on the student's need and characteristics. It also breaks the monotony of the conventional teaching methods, with the continuing of which, we cannot say that we have moved towards the goal of making mathematics education to the needs of the people because most of the teaching is done verbally either through books or teacher or by a Black-Board. Today, when we ask from the students that what is their least favourite Subject then most of the students will say mathematics and the teacher of mathematics are also facing today many problems in their efforts to create interest among the students and in assimilating mathematics knowledge. The present study grew out of this felt need by the investigator In this background investigator undertook the present Study entitled: ***Impact of Audio-Visual Aids on achievement of Mathematics Among the Students of class IX.***

OBJECTIVES

- To study the difference between the scores of pre-test of experimental group and controlled group

Principal, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

- To study the impact of audio visual aids on achievement of mathematics among the students of class IX
- To study the difference between the scores of pre-test and post-test of controlled group
- To study the difference between the scores of pre-test and post-test of experimental group
- To study the difference between the scores of post-test of experimental group and controlled group

HYPOTHESIS

1. There is no significant difference between the pre-test score of experimental group and controlled group.
2. There is no significant difference between the scores of pre-test and post test of controlled group.
3. There is no significant difference between the scores of pre-test and post test of experimental group.
4. There is no significant difference between the scores of post-test of experimental group and controlled group.

FINDINGS

1. There is no significant difference between the Pre-test score of experimental and controlled group.
2. There is significant difference between the scores of pre-test and post test of controlled group.
3. There is significant difference between the score of pre test in experimental group.
4. There is a significant difference between the scores of post-test of experimental group and controlled group.

IMPLICATIONS

IMPLICATIONS FOR STUDENTS:

It is the pupil who occupies the central place in teaching-learning process in the present educational scenario. Experimental method helps to develop thinking abilities in the pupil which further makes him capable of solving problems which come in his way, thus he becomes self

confident. In this method, teacher only creates the problematic situation and the pupil comes out with new concepts with its complete understanding. He also develops the ability to apply those concepts in new situations. These are the main objectives which are to be achieved at high school level and hence inductive thinking strategies are very much effective than the conventional method of teaching from the point of view of pupil.

IMPLICATIONS FOR TEACHERS:

This study is very much significant for the teachers, administrators and principals. They can integrate various audio- visual aids in the teaching-learning process in an effective manner so as to formulate new teaching strategies.

IMPLICATION FOR CURRICULUM DEVELOPMENT:

In the present changing scenario knowledge is growing very fastly and it becomes a need to critically evaluate the Curriculum at short intervals, so that pupil can meet the challenges of the future. Use of audio-visual aids in teaching helps to achieve this objective. These teaching aids make the pupil able to solve the problems independently. So in the curriculum subject matter of that type should be added where teacher can use these audio-visual aids to keep pace with changing society.

CONCLUSION

Integration of audio-visual aids into education is a radical innovation. Innovations require building a solid base of knowledge and commitment, generating testing different options, experimentation, planning for large scale implementation and a mind open to modification and adjustment. Effectiv application of audio-visual aids requires creativity in exploiting the technologies of today and imaging the potential of the technologies of tomorrow.

A COMPARATIVE STUDY OF EDUCATIONAL PHILOSOPHY OF SWAMI DAYANAND AND SRI AUROBINDO

*** Dr. Vivek Kohli** ****Deepli Sharma**

RATIONALE

Education is the strongest instrument for achievement of ideals of the life and is civilized attempt to bring about the balanced and proper development of human personality. A thorough analysis of the past events and problems help us in overcoming present problems and establishing stability for the future. In this age of moral and spiritual crisis, there is need of a Divine Educator who could show the path of spirituality and divinity to his students. Present day man faces crisis in every field of his life due to one sided growth of rational scientific civilization. Education is not utilized for the balanced development. So a new philosophical approach based on human consciousness and spirituality is very much needed today. Looking in to its significance in the present era, the investigator was been to undertake study entitled : A Comparative Study of Educational Philosophy of Swami Dayanand and Sri Aurobindo.

OBJECTIVES

1. To study the educational philosophy of Swami Dayanand
2. To study the educational philosophy of Sri Aurobindo
3. To analyze the similarities and differences in the education philosophies of Swami Dayanand and Sri Aurobindo
4. To evaluate the idea of swami Dayanand and Sri Aurobindo with respect to the present day education system

FINDINGS

Educational Philosophy of Swami Dayanand

The main **characteristics** of education according to Swami Dayanand are

- There should be strict discipline.

Principal, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

- Moral and spiritual education should be considered as the foundation of education structure.
- Swami Dayanand wanted the students to practice five yamas-namely ahinsa (non-violance), satya (truth), brahmacharya (Self control), asteya (non-stealing or not taking other's share) and aparigrigraha (no greed for wealth).
- Students should also practice five niyamas- namely shaucha (cleanliness of body, purity of mind and soul), tapa (penance), swadhyaya (self-study), santosha (contentment) and ishwara pranidhana (love and devotion for God).

CURRICULUM

According to Swami Dayanand, Sanskrit was the most important part of education, Dayanand's first priority was grammar. He wanted the pupils to start with Panini's Asthadhyayi and Patanjai's Mahabhasya. He favoured Arsha granthas or great works by rishis or sages. The student was ready to study the four Vedas-Rigveda, Sama Veda, Yajurvda and Atharvavda. Swamiji wanted people to study English also, since it was the state language and internationally useful. Education should be such that it should made man able to adjust to the changes in society. He wanted the students to study different branches of mathematics, geography, geology, astronomy, space science etc.

TEACHER STUDENT RELATIONSHIP

The relationship should be father-son like. The guru arranged everything needed by the son and the son obeyed the guru and rendered him personal service. At all times, the guru was thinking of the good and future welfare of the child; that was his prime concern.

METHODS OF TEACHING

Swami Dayanand supported methods of teaching in Vogue in Gurukulas in Vedic times. Swami Dayanand recommended the following methods:

Concentration method

Self study method

Advising and Lecture method

Reasoning method

DISCIPLINE

Swami Dayanand was a strict disciplinarian. He advocated the use of punishment for maintaining discipline. Both parents and teacher should make use of punishment for producing disciplined children. The aim of punishment was to keep people steadfast in the path of virtue. Secondly, punishment deters others from committing similar crimes.

EDUCATION PHILOSOPHY OF SRI AUROBINDO

The philosophy of Sri Aurobindo about education was very wide, which is given as under:

Education can draw out the inner potentialities of the individual. Individuals should prepare themselves for higher quality of life and attain divine experiences through the process of spiritual evolution. Sri Aurobindo while describing the aims of education said that education is meant not only for an individual but for the whole nation and world for their uplift and prosperity.

His main aims of education were:

- To disseminate the concepts and ideas of science and spirituality among children.
- To make students aware about the integral yoga and its relevance in human life.
- To evolve and realize a scientific system of integral education and make it a dynamic ideal for modern society.
- To lay emphasis on integral education for exercise and development of the five essential aspects of personality: the physical, the vital, the mental, the psychic and spiritual.
- To develop the sense of oneness of mankind and international collaboration for international peace and harmony.
- To develop the senses including sixth sense.

DISCIPLINE

Discipline is a controlled life. It is obedience of inner sense. Child needs to be made conscious about his inner self through self-discipline. At the same time, his freedom should become an integral part of his spirit. The vibrations between the teacher and the taught should be favourable; there should be no use of forced discipline. There can be no definite rules for guidance of students in the process of discipline.

CURRICULUM

Students should be free to choose the subjects according to their mental level, interest and capability. Curriculum should be multi sided. The purpose of curriculum should not only be mental development but physical, social, moral and spiritual also. Further he suggests the curriculum should be flexible and integrated for all round development of the child.

METHODS OF TEACHING

Sri Aurobindo was of the opinion that every child has a teacher within him and nothing can be taught to him by external force. His methods of teaching are as:

- Education through mother tongue
- Learning by doing
- Co-operation instead of autocratic methods.
- Educate child by example, and not by rigid doctrine and standardized instruction.
- Observation method
- No strain and cramming
- Education through cooperation
- Teaching in an interesting way.
- Include Yoga, meditation and Divine music for teaching children.

THE TEACHER

Sri Aurobindo had given a very important place to the teacher. First task of teacher is to maintain the class environment. Second task is to organize and maintain goodwill of the students. In fact, the real teacher is within the educand. He is the God. He is the ultimate guide and yet the teacher plays an important role in arousing the educand towards God. The teacher should be an integral Yogi.

THE CHILD

According to Aurobindo child is the centre of educational process. Therefore child's place is pivotal in the educational system. Sri Aurobindo holds that every child is born with certain innate power that may be expressed in general and some in specific traits.

LEADERSHIP BEHAVIOUR AND EMOTIONAL MATURITY OF PROSPECTIVE TEACHERS IN RELATION TO THEIR TEACHING COMPETENCIES

*** Dr. Sushma Gupta** **** Ms. Anupamjit Kaur** *****Shweta Raina**

RATIONALE

Education is a very powerful instrument, for the social, political and economic development of a country. To gear up education towards the desired end, teaching as a profession assumes great importance. It is also important that educational programmes emphasize not only the rights but also the responsibilities inherent in each of them.

In a true sense, the teacher is a leader who directs the journey of those whom he teaches. And the efficient and effective working of an institution depends on the potential of the leader. In the era of globalization and privatization, the future of any organization is held in the capable hands of a dynamic leader. A leader is mature, competent, efficient, diligent, skilled and a motivator. The teaching-learning environment involves a harmonious group of people working towards a common goal, where leadership is essential.

Another requisite which goes to pronounce one's mark as a competent teacher is emotional maturity. Keeping calm and composed even under the stressful circumstances, is a mark of maturity and all prospective teachers are desired to develop these qualities. Emotional maturity and sound leadership are significant qualities of competent teachers. Educational institutions provide a conducive environment for developing sound emotions and leadership behaviour among the prospective teachers. It is justified to know how far these traits are related to the teaching competencies of prospective teachers. The title of Study reads as: ***Leadership Behaviour and Emotional Maturity of Prospective Teachers in Relation to their "Teacher Competencies"***

OBJECTIVES

- The study the leadership behaviour, emotional maturity and teaching competencies of prospective teachers

Associate Professor, Sohan Lal DAV College of Education, Ambala City
Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

- To study the effect of leadership behaviour on teaching competencies of prospective teachers
- To study the effect of emotional maturity and teaching competencies of prospective teachers
- To study the interactional effects of leadership behaviour and emotional maturity and teaching competencies of prospective teachers

HYPOTHESES

- The prospective teachers having high leadership behaviour are significantly more competent in teaching than prospective teachers low leadership behaviour.
- The prospective teachers having high emotional maturity are significantly more competent in teaching than prospective teachers having low emotional maturity.
- The interaction of different levels of leadership behaviour and emotional maturity of prospective teachers yields significant result on their teacher competencies.

FINDINGS

- The prospective teachers having high leadership behaviour are significantly more competent in teaching than prospective teachers having low leadership behaviour.
- The prospective teachers having high emotional maturity are significantly more competent in teaching than prospective teachers having low emotional maturity.
- The interaction of different levels of leadership behaviour and emotional maturity of prospective teachers yields significant result on their teaching competencies.

CONCLUSIONS

Leadership behaviour and Emotional Maturity of prospective teachers is the skill of moulding their self according to the situations to get the desired work done effectively and efficiently with help of other resulted individuals & to control their emotions for the successful attainment of objectives of the concerned institutions.

A STUDY OF ENVIRONMENTAL AWARENESS AND ATTITUDE OF TEACHERS TEACHING IN SECONDARY SCHOOLS

*** Dr. Sushma Gupta** **** Nivedita Rai**

RATIONALE

Today the eco system of our planet is facing danger of destruction. In the mad rat race of money and growth, man has made environment worse than before. However with the advancement in technology and industrialization such undesirable materials are being added into the environment that disturbs the ecological balance.

Environment pollution affects human being, animals, plants. as well as materials. It does not only slow down growth of plants or being illness to human beings, but cause havoc.

Environmental problems are not the problems of developing countries like India but it is concerned with the whole globe. Now the time has come where everyone have to be careful otherwise it will be bound to reach in an irreversible predicament, in an ecological catastrophe which will bring an end of the HOMOSAPIENS on this lovely planet. **How to avert such a catastrophe? Environment Education is the answer.**

So, it is the need of hour to make the whole society conscious about the ecosystem and ecological balance and this can be achieved by providing environmental education, by introducing actual hands on experiences in order to make them aware and sensitive to environmental problems and their solutions. Awareness among masses and environmental education is to coming generation is essential as per the need of time. It is all the more essential that teacher should have knowledge of environmental issues, sensitivity towards the environment, & have proper attitude towards the environment. It was for this reason that the investigator felt prompted to take up the present problem entitled: ***A Study of Environmental Awareness and Attitude of Teachers Teaching In Secondary Schools.***

Associate Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

OBJECTIVES

1. To study the environmental awareness among the Secondary School Teachers
2. To study the environmental attitude among the Secondary School Teachers
3. To compare the environmental awareness of male and female Secondary School Teachers
4. To compare the environmental attitude of male and female Secondary School Teachers
5. To compare the environmental awareness of Science and Arts Secondary School Teachers
6. To compare the environmental attitude of Science and Arts Secondary School Teachers
7. To study the relationship between environmental awareness and environmental attitude of Secondary School Teachers

HYPOTHESIS

1. There exists no significant difference between environmental awareness of male and female Secondary School Teachers.
2. There exists no significant difference between environmental attitude of male and female Secondary School Teachers.
3. There exists no significant difference between environmental awareness of Science and Arts Secondary School Teachers.
4. There exists no significant difference between environmental attitude of Science and Arts Secondary School Teachers.

FINDINGS

1. There is significant difference between Environmental awareness of male and female Secondary School Teachers. Female Secondary School Teacher have better Environmental awareness than male Secondary School Teachers.
2. There is no significant difference between Environmental Attitude of male and female Secondary School Teachers.
3. There is no significant difference between Environmental Awareness of Science and Arts Secondary School Teachers.
4. There is no significant difference between Environmental attitude of male and female Secondary School Teachers.
5. There is high degree positive significant relationship between Environmental Awareness and Attitude of teachers teaching in Secondary School.

CONCLUSIONS

This Study will help the teachers to enhance awareness & sensitivity regarding environment issues So, environmental education should be maximum used in our teaching-learning process. Environmental Education is the subject for everyone. The earlier one starts the better are results. Interaction with natural environment during early life is important in developing attitude for the environment. It is the moral duty of government, society, parents and teachers to save our "MOTHER EARTH".

A STUDY OF ENVIRONMENTAL AWARENESS AND ATTITUDE OF PROSPECTIVE TEACHERS

*** Dr. Sushma Gupta** **** Beena**

RATIONALE

The world scenario has undergone great upheaval during the last century due to technological advancement, ever increasing industrialization and the tendency of masses to settle down in urban area. This has resulted in environmental degradation. The repercussion of deteriorating environment conditions has been casting negative impact on the ecological condition on the globe. In the present age of technological revolution, the needs of human being are destroying the nature brutally. Insensitive and irrational exploitation of natural resources can be seen in the form of global warming, ozone depletion, increased amount of CFC, acid rain, green house effect etc. Environmental problems have reached up to a level where every one should be aware of them. Thus there is an urgent need to make the people aware about the effects of pollution, industrialization on our environment.

Now environmental problems are the problems of whole world and it is a crucial time to spread that environment awareness and cultivate environment friendly attitude and behaviour among masses particularly among youth. Therefore, the rearcher has decided to undertake the study entitled: A Study of Environmental Awareness and Attitude of Prospective Teachers

OBJECTIVES

1. To study the environmental awareness among the prospective teachers
2. To compare the environmental awareness of male and female prospective teachers
3. To compare the environmental awareness of Science and Arts prospective teachers
4. To study the environmental attitude among the prospective teachers
5. To compare the environmental attitude of male and female prospective teachers
6. To compare the environmental attitude of Science and Arts prospective teachers
7. To study the relationship between environmental awareness attitude of prospective teachers

Associate Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

HYPOTHESES

1. There is no significant difference between environmental awareness of male and female prospective teacher.
2. There is no significant difference between environmental awareness of Science and Arts prospective teacher.
3. There is no significant difference between environmental attitude of male and female prospective teacher.
4. There is no significant difference between environmental attitude of Science and Arts prospective teacher.
5. There is no significant relationship between environmental awareness and attitude of prospective teacher.

FINDINGS

- There is no significance difference between environmental awareness of **male and female prospective teacher**. Male Prospective Teachers were having better understanding and Awareness regarding Environment than Female Prospective Teachers.
- There is no significance difference between environmental awareness of **Science and Arts prospective teacher**. Science Prospective Teachers were having better understanding and Awareness regarding Environment than Arts Prospective Teachers.
- There is no significant difference between Environmental Attitude of **male and female prospective teacher**. Male Prospective Teachers were having more Environment Attitude than Female Prospective Teachers.
- There is no significance difference between Environmental awareness of **Science and Arts prospective teacher**. Science Prospective Teachers were having more Environment Attitude than Arts Prospective Teachers.
- There is significance relationship between Environmental awareness and Environment Attitude of Prospective Teachers. Environment Awareness is **high degree positively correlated** to the Environment Attitude of Prospective Teachers.
- There is significance relationship between Environmental Awareness and Environment Attitude of Male Prospective Teachers. Environmental Awareness is **low degree positively correlated** to the Environment Attitude of Male Prospective Teachers.

- There is significance relationship between environmental Awareness and Environment Attitude of Female Prospective Teachers. Environmental Awareness is **high degree positively correlated** to the Environment Attitude of Female Prospective Teachers.
- There is significance relationship between environmental Awareness and Environment Attitude of Science Prospective Teachers. Environmental Awareness is **high degree positively correlated** to the Environment Attitude of Science Prospective Teachers.
- There is significance relationship between environmental Awareness and Environment Attitude of Arts Prospective Teachers. Environmental Awareness is **high degree positively correlated** to the Environment Attitude of Arts Prospective Teachers.

CONCLUSIONS

There are about three million chemical substances known and we are adding a thousand new ones every year. In producing those we are not only consuming the raw material on earth at the accelerated rate, but also generally huge amount of Non-recyclable, non-degradable wastes, which are accumulating in land, water and the atmosphere. The uncontrolled actives of human beings are damaging the healthy environment and cause air, water, and land pollution, deforestation, wildlife depletion, acid rains, ozone depletion, desertification, global warming, loss of biodiversity, tropical rain forests, biosphere management and green-house effect. To save the mother earth and shred Environment Awareness and attitude there is need to join the hands for teachers, Parents, students, Government & Community also.

ROLE OF TEACHERS:

Teacher should create the awareness among students by giving them knowledge about Environment, and its degradation that can lead to a scarcity of resource, such as water and farmable. For developing Environmental Attitude related subject activities should be organized. These actives create awareness that help to inculcate proper attitude towards Environment.

ROLE OF COMMUNITY:

Community can play an important role in saving Environment by reducing pollution and other activities that are harmful for the Environment. Responsible actions leading to pollution reduction could save money, protect resources, improve health, and lead to an overall higher quality of life.

EFFECTIVENESS OF INTEGRATING ICT IN TEACHING MATHEMATICS TO SECONDARY SCHOOL STUDENTS IN RELATION TO THEIR INTELLIGENCE

***Dr. Sushma Gupta** ****Geeta Pali**

RATIONALE

Tremendous flow of information has affected each and every sphere of life globally. Therefore, expansion of knowledge has evolved new and innovative methods of teaching. At the same time, education system around the world are under increasing pressure to use information and technologies (ICT) to teach student the knowledge and skills they need in the 21st century. With the infusion of ICT in teacher education, the role and responsibilities of both teachers and learners take new shapes. Technology acts as a catalystto support the change in teacher pedagogy. Teacher has now become a guide or facilitator who supports student learning. Students in their new role become empowered as the creators of new things. It introduces students to real world equiry approach rather than relying on teachers and text-books. In nutshell, the utility of ICT as a teaching tool in effective classroom teaching has motovated the investigator to undertake the present study. The title of study reads as : ***Effectiveness of Integrating ICT in Teaching Mathematics to Secondary School Students in Relation to their Intelligence.***

OBJECTIVES

1. To study the intelligence level among the secondary school students
2. To study the difference in the performance of students taught mathematical concepts through ICT method and traditional method
3. (a) To study the difference in the performance of highly intelligent students taught mathematical concepts through ICT method and traditional method
4. To study the difference in the performance of low intelligent students taught mathematical concepts through ICT method and traditional method
5. To study the interaction among the difference methods of teaching and intelligence

Associate Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

HYPOTHESES

1. There exists a significant difference in the performance of students taught mathematical concepts through ICT method and traditional method.
2. There exists a significant difference in the performance of highly intelligent students taught mathematical concepts thoughts ICT method and traditional method.
3. There exists a significant difference in the performance of low intelligent students taught mathematical concepts thoughts ICT method and traditional method.
4. There exists a significant interaction among the different methods of teaching and intelligence.

FINDINGS

- There is a significant difference in the performance of students taught Mathematical concepts through ICT method and Traditional method.
- There is a significant difference in the performance of students with High Intelligence taught Mathematical concepts through ICT method and Traditional method.
- There is a significant difference in the performance of students with Low Intelligence taught Mathematical concepts through ICT method and Traditional method.
- There is a significant interaction between the different methods of teaching and intelligence.

CONCLUSIONS

Integration of ICT into education is a radial innovation. Innovations require a said base of knowledge and commitment, generating, testing different options, experimentation planning for large scale implementation and a mind open to modification and adjustment. This study is very much significant for the teachers, administrators and principal.

AN EVALUATIVE STUDY OF MID-DAY MEAL PROGRAMME IN THE RURAL AREAS OF THE STATE OF HARYANA

*** Dr. Narender Kaushik** ****Kiran Deep Gill**

RATIONALE

India being one of the most populated countries of the world is facing the problem of hunger especially in rural and slum areas. Approximately fifty percent of the world's hungry people live in India and most of them are children. The children getting education especially in Government Schools are from the poor sections of the society who are not able to manage two meals a day. Yet the meal they eat is even not nutritious and quite unbalanced. This scarcity of food hinders them to take interest in studies. Their parents prefer to engage them in labouring instead of sending them to school which directly affects the target of universalization of primary education. That is why Government felt that different new schemes should be operation list so that students can be motivated to attend the school. Mid-day Meal programme is one of that schemes which is the most widely practiced. To study the effectiveness of the Mid-day Meal Programme in the State Haryana, the investigator decided to take up the study, which reads as: An Evaluative Study of Mid-Day Meal Programme in the Rural Areas of the State of Haryana.

OBJECTIVES

The objectives of the present study were as follows:

1. To study the views of the teachers regarding the Mid-day Meal Programme
2. To study the views of the parents regarding the Mid-day Meal Programme
3. To study the views of the students regarding the Mid-day Meal Programme
4. To suggest certain improvements in the Mid-day Meal Programme

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

FINDINGS

Most of the teachers, parents and students were of this opinion that Mid-day meal scheme should continue for the well being and future of children due to many reasons such as Mid-Day Meal has made positive intervention in universalization of primary education by increasing enrolment, seeking attention of children, affected the academic achievements, concentration and learning abilities of the students positively, completely successful in cutting down the social distance because all the students were agreed to eat mid-day meal under the same roof and positively affected. The Positive effect on the health of students and they fell less ill now. Most of teachers said that Mid Day Meal Scheme was being inspected time to time by Government officers and they had an ear if there was any complaints regarding MD MS.

A STUDY OF RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND JOB SATISFACTION OF SECONDARY SCHOOL TEACHERS

*** Dr. Narender Kaushik** ****Pooja Gupta**

RATIONALE

The significant of the teaching profession in any society cannot be ignored. The luster with our ancestors were interested in the 'teacher' may be gallaned from the hierarchy of three Gods - 'Matrudeve Bhawa, Pitudevo Bhawa, Acharyadeve Bhawa'. First mother is God, second father is God and third 'Acharya' or 'Guru' or the 'Teacher' is God. It is teacher who moulds the most precious material of the land i.e. the boys and girls in their most impressionable period of development in the required shapes. A good teacher is the need of an hour. A good teacher is one who is co-operative, sympathetic, intelligent, emotionally intelligent and satisfied with his job. A teacher can teach truly only when he is able to understand his emotions and emotions of his students. Similarly, if teacher is not satisfied with his job and is not happy then how can he make his students satisfied. Thus both Emotional Intelligence and Job Satisfaction are essential for a teacher to teach effectively.

The scanning of the previous researches reveals that the studies on Emotional Intelligent with regard to variable like Intelligence and Leadership are available. However, scanty researches are available on Emotional Intelligence and Job Satisfaction with regard to Secondary School teachers. Hence it is investigator keen desire to probe these aspects in the present study. The title of the study: A Study of Relationship Between Emotional Intelligence and Job Satisfaction of Secondary School Teachers.

OBJECTIVES

- To study the Emotional Intelligence of Secondary School Teachers
- To study the Job Satisfaction of Secondary School Teachers
- To compare the Emotional Intelligence of male and female Secondary School Teachers
- To compare the Job Satisfaction of male and female Secondary School Teachers
- To compare the Job Satisfaction of high and low Emotionally Intelligent Secondary School Teachers

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

- To study the Job Relationship between Emotional Intellegence and Job, Satisfaction of Secondary School Teachers

HYPOTHESES

1. There exists no significant difference in the mean scores of Emotional Intelligence of male and female Secondary School Teachers.
2. There exists no significant difference in the mean scores of Job Satisfaction of male and female Secondary School Teachers.
3. There exists no significant difference in the mean scores of Job satisfaction of high & low Emotionally Intelligence Secondary School Teachers.
4. There exists no significant relationship between Emotional Intelligence and Job Satisfaction of Secondary School Teachers.

FINDINGS

1. There exists no significant difference in the emotional Intelligence of male and female secondary school teachers. The difference between the mean scores of male and female secondary school teachers is very less. This means that emotional intelligence scores are independent of sex.
2. There exists no significant difference in the emotional Intelligence of male and female secondary school teachers. The difference between the mean scores of male and female secondary school teachers is very less. Thus job satisfaction scores are independent of sex.
3. There exists no significant difference in the job satisfaction of highly emotional Intelligent teachers and low emotional Intelligent teachers. This means satisfaction of highly emotionally intelligent teachers is better than job satisfaction of less emotionally intelligent teachers. As highly emotionally intelligent teachers can understand the feelings of their colleagues as well their students. So, they are more happier, adjusted and satisfied as compared to less emotionally intelligent teachers.
4. There exist significant relationship between emotional Intelligent and job satisfaction of secondary school teachers. It means that increase in emotional intelligence scores leads to increase in job satisfaction scores.

CONCLUSIONS

It is universally accepted that teacher is a hologram of whole education System and personality of a teacher is bound to have a great effect on his/her students. If teachers are emotionally intelligent, than they will be able to drew out the emotional intelligence of their students. An effective teacher is sensitive to cues in teaching-learning situations. The teacher can be effective when he is satisfied both professionally and Psychologically.

EFFECT OF SOCIO-EMOTIONAL SCHOOL CLIMATE ON MENTAL HEALTH OF STUDENTS STUDYING IN GOVERNMENT AND PUBLIC SCHOOL OF AMBALA DISTRICT

*** Dr. Narender Kaushik** ****Amrita Sahney**

RATIONALE

Mental health in relation to socio emotional climate in schools is one of the most crucial but controversial issue. It is based upon many factors. So, there is need of healthy climate in school for qualitative improvement of education. A healthy school climate gives satisfaction to its members of teaching and non-teaching staff. Only a mentally healthy teacher or person can make the school a challenging and interesting learning center for the pupils. The school climate is related to the efficiency of a school and mental health is related to efficiency of the teacher. These are the socio-emotional change in educational institution as which bring changes in teaching, learning and nurturance of social and emotional competencies essential for fostering. These changes in teaching, learning and nurturance of social and emotional competencies are essential for fostering healthy social and emotional development. Hence, it is very important to know the mental health in relation to socio-emotional school climate. The present study presents a framework of an educational institution, which directly or indirectly affects the individual thus, contributing to his overall development. The title of the study: Effect of Socio- Emotional School Climate on Mental Health of Students Studying in Government and Public Schools of Ambala District.

OBJECTIVES

1. To study the difference between the mental health of male students of favourable and unfavourable social-school climate
2. To study the difference between the mental health of male students of favourable and unfavourable emotional-school climate
3. To study the difference between the mental health of male students belonging to government and public schools

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

4. To study the difference between the mental health of female students of favourable and unfavourable social-school climate
5. To study the difference between the mental health of female students of favourable and unfavourable emotional-school climate
6. To study the difference between the mental health of female students belonging to government and public school
7. To study the difference between the mental health of students of favourable and unfavourable social-school climate
8. To study the difference between the mental health of students of favourable and unfavourable emotional school climate
9. To study the difference between the mental health of students belonging to government and public schools

HYPOTHESES

1. There exists no significant difference between the mental health of male students of favourable and unfavourable social-school climate.
2. There exists no significant difference between the mental health of male students of favourable and unfavourable emotional-school climate.
3. There exists no significant difference between the mental health of male students belonging to government and public schools.
4. There exists no significant difference between the mental health of female students of favourable and unfavourable social-school climate.
5. There exists no significant difference between the mental health of male students of favourable and unfavourable emotional-school climate.
6. There exists no significant difference between the mental health of female students belonging to government and public schools.
7. There exists no significant difference between the mental health of students of favourable and unfavourable social-school climate.
8. There exists no significant difference between the mental health of students of favourable and unfavourable emotional-school climate.
9. There exists no significant difference between the mental health of students belonging to government and public schools.

MAIN FINDINGS

1. It was found that there exists significant difference between the mental health of male students of favourable and unfavourable social-school climate. Which reveals that male students with favourable social school climate have better mental health than the male students with unfavourable social climate.
2. It was found that there exists significant difference between the mental health of male students of favourable and unfavourable emotional-school climate, it reveals that male students with favourable emotional- school climate have better mental health than the male students with unfavourable emotional climate.
3. It was found that there exists significant difference between the mental health of male students belonging to government and public schools. Which reveals that male students of public schools have better mental health than the male students of government schools.
4. It was found that there exists significant difference between the mental health of female students of favourable and unfavourable social-school climate. Which further reveals that female students with favourable social school climate have better mental health than female students with unfavourable social-school climate.
5. It was found that there exists significant difference between the mental health of female students of favourable and unfavourable emotional-school climate, which reveals that female students with favourable emotional- school climate have better mental health than the female students with unfavourable emotional climate.
6. It was found that there exists significant difference between the mental health of female students belonging to government school and female students belonging to public schools. Which further reveals that female students of public schools have better mental health than the female students of government schools.
7. It was found that there exists significant difference between the mental health of students of favourable and unfavourable social-school climate. Which reveals that male students with favorable social school climate have better mental health than the male students with unfavorable social climate.
8. It was found that there exists significant difference between the mental health of students of favourable and unfavourable emotional-school climate. Which reveals that students with favourable emotional-school climate have better mental health than students with unfavorable emotional-school climate.

9. It was found there exists significant difference between the mental health of students belonging to government and public schools, which further reveals that students of public schools have better mental health than the students of government schools.

CONCLUSION

The socio-emotional climate of an educational institution is a bridging concept between pupils and the school in which they Study and is the perfection of the structure; the Process and the value by the Students and the faculty members. A school climate influences the educational attainment and develops abilities in the pupils. Hence, the social & emotional interaction is integral to mental health.

LEADERSHIP AND COOPERATION SKILLS OF SECONDARY SCHOOL STUDENTS IN RELATION TO THEIR SEX, LOCALITY AND TYPES OF SCHOOL

*** Dr. Narender Kaushik** ****Sushil Kumar**

RATIONALE

Among the creatures of the Almighty, human being is the top in all aspects due to his super brain and creative mind. A newly born baby comes to the world with certain inborn qualities. Although he has no knowledge about different aspects of his life yet with the passage of time he comes out from his family environment and get social environment for his further development. It is a well known fact that personalities do not exist in vacum but to a large extent depend upon social environment. It is the society that makes individuals cultured. Almost everything that he learns is acquired from society. Only the capacity of his learning is his own. The maturing and growing child develops not only in physical, mental and emotional behaviour but also correspondingly in social development. The child's range of social activities is interwoven with other features of his growth i.e. physical, mental and emotional. While living in society his physical, mental and emotional development takes place. But for this purpose he has to adjust himself well for proving himself a good member of society for achieving these objectives, he has to develop certain social skills like leadership and cooperation etc. As leadership and cooperation skills are the important aspects of socalization. One can not think of living without these skills. But now the quality of leadership and cooperation are decreasing among the children of recent generation due to the lack of suitable environment. Hence it is investigator been desire to prove these aspects in the present study. The title of the study***: Leadership and Cooperation Skills of Secondary School Students in Relation to their Sex, Locality and Types of School.***

OBJECTIVES

1. To study the leadership and cooperation skills of secondary school students.
2. To study the difference between the leadership skills of male and female secondary school students.

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

3. To study the difference between the leadership skills of secondary school students belonging to rural and urban areas.
4. To study the difference between the leadership skills of secondary school students studying in government and public schools.
5. To study the difference between the cooperation skills of male and female secondary school students.
6. To study the difference between the cooperation skills of secondary school students belonging to rural & urban areas.
7. To study the difference between the cooperation skills of secondary school students belonging to rural & urban areas.
8. To study the difference between the cooperation skills of secondary school students studying in government and public schools.

HYPOTHESES

1. There exits no significant difference between the leadership skills of male and female secondary school students.
2. There exits no significant difference between the leadership skills of secondary school students belonging to rural & urban areas.
3. There exits no significant difference between the leadership skills of secondary school students studying in govt. and public schools.
4. There exits no significant difference between the cooperation skill of male and female secondary school students.
5. There exits no significant difference between the cooperation of secondary school students belonging to rural & urban areas.
6. There exits no significant difference between the cooperation skill of secondary school students studying in govt. and public schools.

FINDINGS

a) There exits no significant difference between the leadership skill of male and female secondary school students.

b) There exits no significant difference between the leadership skill of secondary school students belonging to rural & urban areas.

c) There exits significant difference between the leadership skill of secondary school students studying in govt. and public schools.

d) There exits significant difference between the cooperation skill of male and female secondary school students.

e) There exits significant difference between the cooperation of secondary school students belonging to rural & urban areas.

f) There exits significant difference between the cooperation skill of secondary school students studying in govt. and public schools.

CONCLUSIONS

The joint effort of parents and teachers can help in developing the positive social relationship skill of the child. Ability of leadership & cooperation skills is attained through involvement with others, extracurricular activities provide fertile ground for nurturing future leaders. Group participation offers unique opportunities for young people to belong, support others, and to learn a variety of leadership styles & cooperation skills. Students learn how to encourage others, create group spirit, and resolve conflict. They begin to understand diverse attitudes, skills, and talents and how to interact effectively with a diversity of people while working toward a common goal.

EFFECT OF COMPUTER AIDED INSTRUCTION ON ACHIEVEMENT

*** Dr. Neelam Luthra** ****Garima Batra**

RATIONALE

Now a days the whole world has shrunk into a circle by eliminating all the boundaries and barriers. This is the result of globalization which have brought revolution as well as multiplicity of problems to mankind.

Two main problem area that cause ineffective learning in mathematics.

(a) Limitation of teacher to link mathematical concept with day to day life examples.

(b) Lack of AV aids for teaching various topic effectively.

Computer can not only help to overcome these problem but has the vast potential as an effective teaching aid that will cause a quantum leap in the quality of mathematics teaching and learning. Nowadays, easy to use software such as **"Microsoft power point"** can be used for preparing lesson plans. Teacher can now produce their own CAI material based on the need of their own subject and students.

On the present age of science and technology, "mathematics" holds key and pivotal position. It is one of the language of human life which has cut short the lengthy students through its symbols, free from verbosity, helps the expression of ideas in an extant and enables to understand and appreciate precision, brevity sharpness, logic and beauty of mathematics. In order to realize the educational value and instructional objectives of mathematics, the subject must be practiced in classroom by utilizing the services of traditional methods, educational innovations and technological advancements.

So, it is keen desire of the investigator to probe into this aspect. The present study merely an attempt to bring into light the existing picture of academic achievement and effectiveness of CAI. In nut shell, the utility of CAI as a teaching tool in effective classroom has motivated the investigator to undertake the present study. The title of study reads as: ***Effect of Computer Aided Instruction on Achievement in mathematics.***

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

OBJECTIVES

- To study the difference in the performance of students taught mathematical concepts through computer and conventional method
- To study the difference in the performance of male, students taught mathematical concepts through computer and conventional method
- To study the difference in the performance of female, students taught mathematical concepts through computer and conventional method
- To study the interaction between methods of teaching and sex

HYPOTHESES

- There exists a significant difference in the achievement of student's in mathematics taught through computer and conventional method.
- There exists a significant difference in the achievement of male students taught mathematical concepts through computer and conventional method.
- There exists a significant difference in the achievement of female students taught mathematical concepts through computer and conventional method.
- There exists a significant interaction between methods of teaching and sex.

FINDINGS

- There is a significant difference in the achievement of the students in mathematics when taught through computer aided instruction and traditional method.
- There exists a significant difference in the achievement of male students taught mathematical concepts through computer and conventional method.
- There exists a significant difference in the achievement of female students taught mathematical concepts through computer and conventional method.
- There does not exists any significant interaction between sex and methods of teaching.

CONCLUSIONS

This Study is very much significant for the teachers, administrators and principals. In order to bring about on enrichment of teaching process and to make students quick Learners teacher must use CAI method and must provide suitable environment to create conditions for full growth and development of there students.

EFFECTIVENESS OF EDUSAT PROGRAMME IN MATHEMATICS AT SENIOR SECONDARY SCHOOL LEVEL IN HARYANA

*** Dr. Neelam Luthra** ****Priti Kalisia**

RATIONALE

This is an information age and tremendous flow of information is emerging in all fields throughout the world. Educational system around the world has increasing pressure to use new techniques to teach students, the knowledge and skills they will use in 21th century. Therefore with infusion "EDUSAT Programme" - the role and the responsibilities of both the teacher and the learner takes new shapes. EDUSAT is a new Programme launched by government of India and a powerful tool that may help in transforming the present isolated, teacher centered and text bound classroom into rich, student focused, and interactive knowledge environments. EDUSAT has the technological capabilitier of television and radio Broadcasting, video conferencing, audio and video return Links, computer based data transfer etc. EDUSAT can enable a paradigm shift through making education interactive than a more one way transfer of information. EDUSAT makes lesson simple and easy to learn, develop interest among students, control and change the behaviour, make teaching more practical, make education process more scientific, interesting and also help in the achievement of objectives of education. Thus has insured the investigator to undertake the Present study the title of study reads: ***Effectiveness of Edusat Programme in Mathematics at Senior Secondary School Level in Haryana***.

OBJECTIVES

1. To study the EDUSAT programme in mathematics launched by government in the school of Haryana
2. To study the opinions of the teacher regarding the effectiveness of EDUSAT programme in mathematics
3. To give suggestions for improvement in the EDUSAT programme

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

FINDINGS

1. Investigator found that this is an excellent Programme launched by Government of Haryana. 100% literacy is the aim of Government of Haryana and to fulfill this aim, Haryana government has lauched the Space Technology i.e. EDUSAT Programme in each govt. school. It is the latest and wonderful technique of science and is helpful in achieveing the aim of 'education for all'.

- In Haryana EDUSAT Network has divided in five different channels:

(i) There channels are based on interactive SIT

(ii) DTH channels

(iii) ROT channels

These channels are covering the entire gamut of EDUSAT laboratory in schools with appropriate infrastructure including LCD projector and UPS with double battery. In Haryana the government has established an independent society which is UTKARSH (use of technology for knowledge advancement and reorientation of status in Haryana).

2. Investigator found that almost all teachers have positive attitude towards the effectiveness of EDUSAT Programme in educational system. There are number of reasons behind it. This Programme is a very useful & innovative in the field of education. It is helpful for the students, teachers, principals and administrators also. Teacher can integrate EDUSAT in the teaching-learning process in an effective manner to improve their own teaching and methodology of teaching in their subjects also.

- EDUSAT Programme widens the mental horizon of the teachers increase their knowledge in many other subjects.
- It supplements curriculum based teaching, provide effective teacher training, facilitates community participation, enable interaction between scholars and researches and improve the class-room result.
- It helps the teachers to become oriented.
- It is possible for the students to revisit and relive the classroom experiences. To enhance their quality of learning.
- In EDUSAT, students can ask questions during the virtual class.
- It is possible to post the queries onto web site or e-mail which the teacher can respond at his/her convenience. Thus EDUSAT provides both time synchronous and asynchronous.

- EDUSAT covers all type of learners, both within and outside the educational institutions like, women, working children and youth, etc.
- The DIET facilities linked to the state uplink stations and generate the state-level network where teaching-learning is conducted in the local language.
- EDUSAT has the technological capabilities of television and radio, broadcasting, video conferencing, audio and return links, computer based data transfer etc. motivates and makes interest of the students in learning effectively. It helps to decrease the ratio of wastage and stagnation of the students in the Government schools.

3. Investigator offer some relevant suggestions for improvement in EDUSAT Programme i.e. The Government should facilitate all the facilities to government schools to implement the EDUSAT Programme properly, government should provide the facilities of special grants to construct an EDUSAT Laboratory in the schools, there should be extra and proper training for teachers to use the EDUSAT equipments and re-orientation programmes.

CONCLUSIONS

At present there is an urgent need for modernization and adoption of new technologies in school education to meet the trim challenges of society. New technique of 21st Century "EDUSAT Programme"- the role and the responsibilities has given new shape to both students and the teachers

DEVELOPMENT AND EVALUATION OF MATHEMATICS STYLE PROGRAMME IN MATHEMATICS FOR GRADE VIII STUDENTS

*** Dr. Neelam Luthra** ****Isha Sekhri**

RATIONALE

Programmed Instruction is one of the most innovative and stimulating techniques of instruction, which teaches effectively and, of course, individually and ensures nearly cent percent mastery over the subject matter. Programmed Instruction has shown a new path towards automation and individualization of instruction. They help the teacher to play the role of guide, counsellor, motivator etc.

The problems of teaching can be solved effectively by the Programmed Learning strategy as it is based on behavioural psychology. Besides these, it stimulates the learner. It sustains motivation to learn and also provides opportunity to learner to proceed according to his own pace and abilities. Thus, it caters to the need of all students.

Keeping in view the importance and popularity of the programmed learning in academic circles in our country and the increasing necessity for programmed material in school subjects, the investigator, taking interest in dealing with Mathematical computations and having a strong will to help the school in solving the mathematical problems. The title of study reads as : Development and Evaluation of Mathematics Style Programme in Mathematics for Grade VIII Students.

OBJECTIVES

- To develop a Mathematics style programme in mensuration of cylinder
- To assist the learner to learn the concept at his own pace
- To help the students to learn without the physical presence of the teacher
- To evaluate the programme

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

PLAN AND PROCEDURE

For developing the programme on the proposed units, the researcher has passed through the following four phases:

1. Preparatory stage
2. Writing stage
3. Try-out stage
4. Evaluation stage

1. **Preparatory stage:** During the preparatory stage the researcher, has covered following steps:

   Selection of the topic, Writing assumptions about the learner, Preparation of content outlines, Defining objectives in behavioral terms, Defining pre-requiste knowledge and skills in behavioral terms, Developing a criterion test for assessing the terminal performance of the students, Writing the core material

2. **Programme writing:** This stage has following steps:
   Writing the exercise, Sequencing the exercises, Editing the exercises.

   While writing the programme, irrelevancies concerning the subject matter were cleared away so that the students could clearly concentrate on the focal informative stimuli essential to the attainment of terminal behaviour set forth in the behavioural objectives. The programme was edited by the subject matter expert, programming technique specialist and the language expert.

3. **Try out stage :** The try out stage has following step:
   Individual try out, Small group try out, Final field try out.

   The programme was first tried on an individual student then on small group and then the final try-out situations on 35 students of VIII grade of Chaman Vatika, Ambala City. After having completed each of the testing operation, modifications in faulty exercises were made. After a final field try-out a criterion test was administered on students.

4. **Evaluation of the programme:** The Evaluation of the programme includes the following : Error rate, Sequence progression, Criterion test findings.

On the basis of student response on the exercise and the score in the criterion test, the programme has been evaluated in terms of sequence progression and error rate.

FINDINGS

- Error rate of the programme was calculated on the basis of responses gathered for each exercise. Error rate of programme is 1.93% and percentage of success of the programme is 98.07%. This implies that the learners were able to computer 98.07% of exercises correctly.
- Error rate of criterion test is 2.5% and success in the criterion test is 97.5% which implies that the students were able to grasp 97.5% of the content in the programme.

CONCLUSIONS

Programme learning is a method which promotes the optimum development of the potentialities of the individuals. It is being used not only for self instructional purpose but also as mechanism of feed back and improving teaching efficiently. It saves time and energy and helps all types of Students to learn at their own pace.

A STUDY OF RESERVATION POLICY IN PANCHAYATI RAJ IN THE CONTEXT OF EMPOWERMENT OF WOMEN IN KURUKSHETRA DISTRICT

*** Dr. Neelam Luthra** **** Mrs. Renu Chander** *****Gurpreet Singh**

RATIONALE

Both Gandhi and saw education as an active and essential instrument for enabling women to upload their natural rights. Various types of blind beliefs in society are removed through women's participation in politics. Wastage and stagnation in education institutions are reduced through women's consciousness in family. Women have better knowledge about administration in various organizations. Independent judgement quality also progresses by empowering women to Panchayati Raj institution. It was for this reason that the investigator felt prompted to take up the present problem entitled: A Study of Reservation Policy in Panchayati Raj in the Context of Empowerment of Women in Kurukshetra District.

OBJECTIVES

1. To study the reservation policy regarding women
2. To study the reservation policy in Panchayati Raj
3. To study women empowerment through reservation
4. To study women empowerment through Panchayati Raj
5. To find out the impact of reservation policy in Panchayati Raj. on the empowerment of women in Kurukshetra District

CONCLUSION

From the above study, Researcher found that reservation policy of 73rd amendment is helpful in improving the status of Women in Society. Maximum women feel that they got chance to participate in Gram Panchayat Election with the help of Reservation for women in Panchayati Raj. Women feel that they cannot get opportunity to become Sarpanch without Reservation Policy.

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

They feel that due to Reservation they get chance to solve the problems of village and they feel that problems of women can be better solved by only women. All Women Sarpanches feel that women's participation in Panchayat is the first step towards strengthening the position of women. They feel that women can be powerful if they are given higher post. From the above study, Researcher found out that women on powerful position will be powerful in their personal life also. Maximum Women Sarpanches are interested to participate in next Gram Panchayat Election and also work outside the field. Women Sarpanches have more changes in their life after becoming Sarpanch. They think that Reservation helps to increase Women Empowerment.

Various Governmental and non-governmental organizations should generate awareness about proper functioning of Grampanchayat and they should organize special training programmes of Rights and Duties of Women.

From the present study the researcher found that Illiteracy is the barrier for the Empowerment of Women. It has been found by case-studies that family members of women sarpanches sometimes create problems for them. In fact their family members should encourage their daughters, daughters-in-law, sister who are elected as Panch or Sarpanch to attend public meetings frequently. The family member should support the women panches or Sarpanches at every step from their household work to official work.

COMPARATIVE STUDY OF EDUCATION SYSTEM OF INDIA AND U.S.A. IN RELATION TO MODERN NEEDS

*** Mrs Satnam Kaur** **** Rajni**

RATIONALE

Today, globalization has affected each and every sphere of our life. It has a significant effect on our thinking and ways of living. It has also affected our system of education. Earlier western education had greatly influenced our indian education system. Our aims of education, teaching methods, examination system were strongly governed by western countries but now the theoretical aspect of education, that is, the philosophical ideology, yogic perspectives have been effecting western system of education.

This has motivated the investigator to compare the educational system of developing country like India with the educational system of developed country like U.S.A. This investigation may enable to understand the impact of USA and India on each other. This comparison will also be very helpful in drawing out the conclusion to improve our own education system for human welfare. That's why it has motivated the investigator to undertake the Present Study. The title of study read as: Comparative Study of Education System of India and U.S.A in Relations to Modern Needs.

OBJECTIVES

1. To study the Education System of India
2. To study the Education System of U.S.A
3. To analyze the Education System of India and U.S.A. at secondary level
4. To compare the education system of India and U.S.A. at secondary level with special reference to –
   - Aims & Objectives
   - Curriculum
   - Instructional Material
   - Examination System

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

5. To find out the relevance of education system of U.S.A in modern Indian context

FINDINGS

Findings of the study were:

1. The aim of secondary education in India is to prepare citizens and self dependent for making Democracy a success. But these aims have not been achieved. Even today, after having received secondary education the students have following two options only.
   (i) To enter some university for further education.
   (ii) To roam about here and there in search of a job.

   In U.S.A., secondary education has been so organized that after obtaining it, the students are able to stand on their own legs in some vocational area. But in India the current secondary education is aggravating the unemployment problem.
2. In India, curriculum does not include technical and vocational subjects which are so necessary for training students to take part in the industrial and economic development of a country. The school education train pupils only for getting admission in college. But in U.S.A. secondary schools offer many vocational courses with general education very early at the age of 14+.
3. Indian curriculum is too bookish and theoretical whereas, in U.S.A., in higher secondary schools, general education is imparted with specific subjects and specialization like Technical High School, Miami, and High School of Art and Music.
4. In India, secondary education does not cater to the various needs and capacities of the school going population. In U.S.A., the need and interests are taken into consideration. Like there are Limited Schools under the category of 'Common Schools' which provide vocational knowledge and special limited subjects with general education.
5. Earning and learning go side by side in U.S.A. Such a tradition hardly exists in India.
6. Secondary Schools in U.S.A. are better equipped than those in India. In U.S.A., Authorized Federal Grants are provided for acquisition of school library resource, textbook and other instructional material for the use of children and teachers in public and private secondary schools.
7. In U.S.A., there is no public or external examination at the end of the secondary school stage. In Indian Public examination marks the end of the secondary education. The external examinations are done at the end of class X and XII.

CONCLUSIONS

Thus, through the comparative study of education system of India and USA one is able to differentiate between them. There are many other areas like aims, curriculum organization, instructional materials and examination system where India lags behind. Provision for mid-day meals on confessional rates exists in almost all school in USA. In India, such provision is an exception rather than a rule. In brief the present comparative study must fulfill the requirements of the youth in the present scenario.

A STUDY OF EFFECTIVENESS OF BILINGUAL METHOD AND DIRECT METHOD OF TEACHING ENGLISH

*** Mrs. Satnam Kaur** ****Ranjeet Singh**

RATIONALE

English is gaining importance day by day and without proficiency in this language, it would be difficult to progress in the world of globalization and technology. It can be possible only by good standards of teaching and learning English but it is a highly disturbing trend that standards of teaching and learning English have definitely fallen in the country. It is, therefore, important that the effective methods of teaching are tried out to raise the standards of teaching and learning in the country. Thus the investigators found the scope to undertake the present study entitled: A Study of Effectiveness of Bilingual Method and Direct Method of Teaching English.

OBJECTIVES

- To study the effectiveness of Bilingual Method in teaching English
- To study the effectiveness of Direct Method in teaching English
- To compare the effectiveness of Bilingual Method in teaching English with the Direct Method in teaching English
- To compare the effectiveness of teaching grammar through Bilingual Method with the effectiveness of teaching grammar through Direct Method in teaching English
- To compare the effectiveness of teaching prose through Bilingual Method with the effectiveness of teaching prose through Direct Method in teaching English
- To compare the effectiveness of teaching poetry through Bilingual Method with the effectiveness of teaching poetry through Direct Method in teaching English

HYPOTHESES

1. There is no significant difference between the effectiveness of Bilingual Method and Direct of teaching English.

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

2. There is no significant difference between the effectiveness of teaching of grammar in English through Bilingual Method and Direct Method.
3. There is no significant difference between the effectiveness of teaching of prose in English through Bilingual Method and Direct Method.
4. There is no significant difference between the effectiveness of teaching of poetry in English through Bilingual Method and Direct Method.

FINDINGS

1. Teaching English through Bilingual method is better than teaching English through Direct method.
2. Teaching prose through Bilingual method is better than teaching prose through Direct method.
3. Teaching poetry through Bilingual method is better than teaching poetry through Direct method.
4. Both the methods i.e. Bilingual method and direct method are equally effective for teaching grammar.

CONCLUSIONS

The present Study helps the educationists and primary school teachers to identify that Bilingual method is considered better than teaching English through direct method. In this way student grasp the Situation or forms the concept in mind very effectively.

श्री अरविन्द से सम्बन्धित अध्ययन सामग्री और क्रिया–कलापों का छात्र–अध्यापकों तथा छात्र–अध्यापिकाओं की सामान्य जानकारी पर प्रभाव

* श्रीमती सतनाम कौर **प्रदीप कुमार

अध्ययन की आवश्यकता

श्री अरविन्द जी महान दार्शनिकों में एक थे परन्तु फिर भी उनके विचारों को बहुत कम लोग जानते हैं। अधिकतर व्यक्ति भी अरविन्द को योग के कारण जानते हैं। श्री अरविन्द ने अपने योग के साथ–साथ दर्शन तथा शिक्षा दर्शन के बारे में भी बताया है। शोधकर्ता को इस अध्ययन की आवश्यकता इसलिए महसूस हुई क्योंकि आज के भौतिकवादी युग में आध्यात्मिक और नैतिक मूल्यों का पतन हो रहा है। इसलिए शेधकर्ता ने सोचा अगर बी.एड. के छात्रध्यापक और छात्राध्यापिकाओं को श्री अरविन्द के जीवन, दर्शन, शैक्षिक विचारों तथा शिक्षा दर्शन के बारे में बताया जाए तो उनके विचारों पर इसका क्या प्रभाव पड़ता है? इसलिए शेधकर्ता ने इस विषय पर अध्ययन करना आवश्यक समझा।

अध्ययन के उद्देश्य

1. छात्रध्यापकों तथा छात्राध्यापिकाओं को श्री अरविन्द के जीवन चरित्र की जानकारी कराना।
2. छात्रध्यापकों तथा छात्राध्यापिकाओं को श्री अरविन्द के दर्शन के ज्ञान के बारे में बताना।
3. छात्रध्यापकों तथा छात्राध्यापिकाओं को श्री अरविन्द के शिक्षा दर्शन का ज्ञान करवाना।
4. छात्रध्यापको तथा छात्राध्यापिकाओं को शिक्षा दर्शन से संबंधित मौखिक और लिखित अभिव्यक्ति के अवसर प्रदान करवाना।

परिकल्पनाएँ

1. छात्रध्यापकों तथा छात्राध्यापिकाओं के पूर्व परीक्षण टेस्ट तथा अन्तिम परीक्षण टेस्ट के प्राप्तांकों में कोई सार्थक अन्तर नहीं है।
2. छात्रध्यापकों के पूर्व परीक्षण टेस्ट तथा अन्तिम परीक्षण टेस्ट के प्राप्तांकों में कोई सार्थक अन्तर नहीं है।

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

3. छात्राध्यापिकाओं के पूर्व परीक्षण टेस्ट तथा अन्तिम परीक्षण टेस्ट के प्राप्तांकों में कोई सार्थक अन्तर नही है।

मुख्य उपलब्धियां

1. छात्रध्यापकों तथा छात्राध्यापिकाओं के पूर्व परीक्षण टेस्ट तथा अन्तिम परीक्षण टेस्ट के प्राप्तांकों में कोई सार्थक अन्तर नहीं है। छात्रध्यापकों तथा छात्राध्यापिकाओं के अन्तिम परीक्षण टेस्ट का औसत परिणाम (31.05) अधिक है जबकि पूर्व परीक्षण टेस्ट का औसत परिणाम (15.1) कम है जो यह प्रदर्शित करता है कि श्री अरविन्द की विषय सामग्री तथा शिक्षण से छात्रों की उपलब्धि या सामान्य जानकारी में वृद्धि हुई है।
2. छात्रध्यापकों के पूर्व परीक्षण टेस्ट तथा अन्तिम परीक्षण टेस्ट के प्राप्तांकों में कोई सार्थक अन्तर नहीं है। छात्रध्यापकों तथा छात्राध्यापिकाओं के अन्तिम परीक्षण टेस्ट का औसत (29.2) धिक है जबकि पूर्व परीक्षण टेस्ट का औसत परिणाम (13.93) कम है जो यह प्रदर्शित करता है कि श्री अरविन्द के बारे में शिक्षण तथा क्रिया–कलापों से छात्रध्यापकों की श्री अरविन्द से सम्बन्धित जानकारी में वृद्धि हुई है।
3. छात्राध्यापिकाओं के पूर्व परीक्षण टेस्ट तथा अन्तिम परीक्षण टेस्ट के प्राप्तांकों में कोई सार्थक अन्तर नहीं है। हम यह पाते हैं कि छात्राध्यापिकाओं के अन्तिम परीक्षण टेस्ट (33.73) अधिक है जबकि पूर्व परीक्षण टेस्ट का औसत परिणाम (16.26) कम है जो यह प्रदर्शित करता है कि श्री अरविन्द के बारे में शिक्षण प्रक्रिया से छात्रध्यापकों की श्री अरविन्द से सम्बन्धित जानकारी में वृद्धि हुई है।

शैक्षिक उपयोगिता

- श्री अरविन्द के जीवन से सम्बन्धित पहलुओं पर अच्छी तरह विचार विमर्श करने से विद्यार्थियों के ज्ञान में वृद्धि हुई।
- श्री अरविन्द के आध्यात्मिक विचारों से प्रेरित होकर विद्यार्थी उन विचारों को अपने जीवन में समाहित कर पाएंगें।
- श्री अरविन्द के दार्शनिक विचारों का आधुनिक युग में बहुत अधिक महत्त्व है।
- विद्यार्थियों के चरित्र निर्माण में श्री अरविन्द के शैक्षिक विचारों का बहुत महत्त्वपूर्ण योगदान है।
- विद्यार्थियों को श्री अरविन्द के विचारों से अवगत कराया गया जिससे उनमें आध्यात्मिक जिज्ञासा उत्पन्न हुई।

छात्रों को उनकी शैक्षिक उपलब्धियों से अवगत करवाने से छात्रों को अपने शैक्षिक **उद्देश्य** को प्राप्त करने में सहायता मिलती है।

NUMBER SENSE IN PRE-SCHOOL-AN INVESTIGATION OF CHILDREN AT RISK FOR MATHEMATICS DIFFICULTIES

*** Dr. Pooja Gupta** ****Harvinder Kaur**

RATIONALE

Education is very important in the life of any human being. Education plays an important role in modifying the behaviour of that human being and make his behaviour more beautiful.

Mathematical skills makes us a better entity in the many dimensions of our social existence. During pre-school and elementary years, the simple skills of addition and subtraction trained us to gradually gain independence from our parents. It trains our minds to handle the simplest problems we encountered from our day-to-day interaction in the society. Number Sense is often informally acquired prior to formal school and is necessary condition for learning formal arithmetic in the early elementary grades. Number sense is also facilitated by environmental circumstances, the environmental conditions that promote number sense are, to some extent, mediated by informal teaching by parents and other adults. Number Sense is an emerging construct that refers to a child's fluidity and flexibility with numbers, the sense of what numbers mean and an ability to perform mental mathematics. Therefore, Number Sense plays a very important role in the overall development of students. Thus as a subject in pre-school level, it needs a proper attention.

Keeping in mind the importance of number sense, the present study is considered for research. The title of study reads as: Number Sense in Pre-School An Investigation of Children at Risk for Mathematics Difficulties.

OBJECTIVES

- To identify Pre-school children who are at risk for mathematics difficulties
- To study the types of errors committed by children relating to number sense
- To analyze the significance of difference in errors committed by boys and girls

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

FINDINGS

- There are 52% preschool children's which are at risk for mathematical difficulties as they were
- Falling under the category of "problem sufferers".
- Only 13% students are in the category of "not clear".
- There are 35% students which are in the category of "well understood".
- In the comparison of boys and girls there are 49% boys and 52% girls who did not make any
- Kind of error in solving the questions.
- While in the category of problem sufferers 30% boys and 31% girls committed errors in achievement test. These students are considered as at risk for mathematics difficulties.
- There are only 17% girls children and 21% boys children falling under the category of "not clear".
- The mean value for boys is 16.84 and for girls is 16.98.
- Standard error of difference i.e. SED comes out to be 0.4204.
- Calculated value of t is greater than tabulated value. So, this shows that there is no significant
- Difference in mathematics achievement of boys and girls.

CONCLUSIONS

Today "Education for all" is the main aim of Education. Society makes school for its progress, people with number sense are able to understand numbers and use them effectively in everyday living.

AWARENESS ABOUT LEARNING DIFFICULTY AMONG TEACHERS AND PARENTS

*** Dr. Pooja Gupta** ****Kamini Jain**

RATIONALE

In a Large democratic country like India, it has not been possible to provide all provisions as well as facilities for all categories of children. As every child has different learning style and pace and each child is unique. There are some more cause that influence the education of children like poor teaching method, poor environment, lack of supervision of the teachers as well as administrators. Another very important factor is the mushrooming growth of educational institutions for nursery to higher education. The teacher student relation has gone up so high that proper individual attention can not be paid to all children. So some children do not get the benefit of teaching in the classroom. One of such category is learning difficulties or learning disabled children. These children are normal in vision, hearing and intelligence. These children have difficulties in one or more specific areas in language i.e. reading, writing, spelling and arithmetic. Learning difficulty is the basket term covering a variety of cause and affect factors. Learning difficulty is considered to have emerged as a separate discipline in 19th century. So through this research we strive to know awareness and understanding level of learning difficulties among teachers and parents. Because this can be the stepping stone towards the teaching and rededication of children having learning difficulties. This has motivated investigator to table up the Study: ***Awareness About Learning Difficulty Among Teachers and Parents***

OBJECTIVES

1. To study the awareness level regarding learning difficulty among teachers
2. To study the awareness level regarding learning difficulty among parents
3. To analyze the awareness level among Government school teachers and Public school teachers
4. To compare the awareness level among fathers and mothers

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

FINDINGS

1. **Teacher**

Awareness level regarding learning difficulty among govt. school teachers and public school teachers is not same. The percentage of public school teachers is 10% while govt. school teachers is less than 10% (i.e. 6%) in low category. If we compare high awareness level regarding learning difficulty than it was 34% of govt. school teachers while 20% of public school teachers. So percentage of govt. school teachers is more than public school teachers in high awareness level. Awareness regarding difficulty among teachers lie maximum in middle category i.e. 60% of govt. school teachers and 70% of public school teachers.

2. **Parents**

Awareness level regarding learning difficulty among fathers and mothers is approximately same. When researcher analyzed low category of awareness regarding learning difficulty the percentage of fathers and mothers is same i.e. 18%. But in the middle category there are more than 50% of fathers and mothers (i.e. 60% and 58% respectively). Twenty two present of fathers and 24% of mothers fall in high category which is less than percentage of parents in middle category.

3. Both govt. school teachers and Public school teachers are equally awared about Learning Difficulties.
4. Both Fathers and Mothers are equally awared about Learning Difficulties.

CONCLUSION

In a country like our, all children irrespective of their disabilities, Social, Physical, mental or Psychological have to be properly cared for, nourished and developed adequately because Learning Disabilities can affect self-esteem, education, vocation, socialization and or daily living activities. In nut shell, teachers & parents are advised to overcome learning deficiencies of students by focusing on their strengths rather than their weeknesses.

ARITHMETIC ERROR PROFILE OF DYSCALCULICS REMEDIATING ARITHMETICAL DIFFICULTIES

*** Dr. Pooja Gupta** ****Jaspreet Kaur**

RATIONALE

Dyscalculia is Psychlogical imbalance. Dyscalculia has no cure but various treatment options have been explored. Counseling can help, but not necessarily to a large degree. "Dyscalculva" means difficulty in performing math calculations and "Dyscalculic" who are suffering from the problem dyscalculia. Some anecdotal evidence suggests, however, a certain amount of mathematical proficiency can be acquired by alternative systems of mathematical calculation such as Eastern mathematics.

As a researcher, there is need to concern with the working out action plan for, higher and higher awareness and acceptance of remedial intervention teaching to address the area of dyscalculia, In this research it has been found by the researcher that most of the problems of Dyscalculcs regarding the mathematics can be solved if the teacher uses interventional teaching. Theinvestigator decided to take up the study, which reads as: ***Arithmetic Error Profile of Dyscalculics Remediating Arithmetical Difficulties.***

OBJECTIVES

1. To identify children with dyscalculia in Arithmetic and find out their prevalence rate
2. To study the types of errors committed by dyscalculics in arithmetic
3. To give remediation teaching program for improving the teaching to students having Dyscalculia

HYPOTHESIS

It is hypothesized that remediation teaching program will have a significant effect on Arithmetic achievement of Dyscalculics.

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

FINDINGS

1. Teaching through Number Worlds Math Program has been found to have a significant positive effect on Arithmetic skills on the basis of comparison between score of experimental and control group.
2. The efficiency of intervention program name Number Worlds Math Program has significant positive effect on Arithmetic Skills on the basis of comparison between pre-test and post-test of experimental group.

CONCLUSIONS

Every student with a normal I. Q can learn to communicate mathematically if taught appropriately. Parents and teachers must communicate that math competency is socially and economically essential as excellent reading and writing skills.

Early identification of learning difficulties, through program like Number World Math Program must be implemented immediately to reverse dismal achievement statistics and to secure better educational and economic outcomes for Indian students.

A STUDY OF AWARENESS OF SECONDARY SCHOOL TEACHERS ABOUT THE DISABLED COEFFICIENT

*** Dr. Pooja Gupta** **** Mr. Pawan Bhatia** *****Anil**

RATIONALE

The Disabled have some special needs and these needs cannot be met in regular classes and standard regular curriculum. So they need special educators and special schools to make them master in certain skills and to reach their full potential in school. Only the teacher can understand the problem of disabled students and he can direct them in proper way where they want to reach. The main objective of this study is to view. The awareness of secondary school teachers about the disabled coefficient.

OBJECTIVES

1. To study the awareness of secondary school teachers regarding disabled coefficient
2. To compare the awareness of teachers in Govt. and Public secondary schools
3. To compare the awareness of male and female secondary school teachers regarding the disabled coefficient

HYPOTHESIS

1. There is no significant difference in awareness of teachers of Government and Public secondary schools.
2. There is no significant difference in awareness of male and female secondary school teachers.

CONCLUSIONS

1. Their is significant difference in the awareness of teacher of Government and Public secondary schools.

There is significant difference in awareness of male and female secondary school teachers.

** Assistant Professor, Sohan Lal DAV College of Education, Ambala City*
*** Assistant Professor, Sohan Lal DAV College of Education, Ambala City*
*** M.Ed. Student*

TO STUDY EDUCATIONAL FACILITIES IN THE SECONDARY SCHOOLS OF AMBALA

*** Dr. Mukesh Ahlawat** ****Veenu Saini**

RATIONALE

After the formulation of the New Policy on Education in 1986 (revised in 1992), the need for the change in secondary education has arisen. The change has to take into account the areas of scientific development, environment education, computer education and social issues in the context of economic liberalization. With the tremedous expansion of elementary education in the country, the demand for secondary education is growing enormously. There has been no fundamental change in the structure and organisation of the secondary education system. Studies have shown that low levels of learning among secondary school children in developing countries can be partly attributed to poor and in adequate facilities. Most of the government secondary schools are ill-equipped under resources. Some educational surveys reveal that condition of high percentage of Government secondary schools is pathetic as schools do not have adequate building facilities, furniture, blackboards, mats, teaching aids, libraries, play grounds etc. In the absence of these educational inputs, education offered is inadequate, dull and monotonous. We know that secondary stage is very crucial period and in the absence of proper educational facilities at this stage, individual at the later stage of their life can not explore and expand their own potentialities to the full development of their own personalities. So, the need for improved educational facilities of secondary schools is now globally accepted. It was for this reason that the investigator felt prompted to take up the present problem entitled: ***To Study Educational Facilities in the Secondary Schools of Ambala.***

OBJECTIVES

1. To study the physical facilities provided in the secondary schools
2. To study the academic facilities provided in the secondary schools
3. To study the proper library and laboratory facilities, in the secondary schools
4. To study the recreational facilities in the secondary schools
5. To study the transportation facilities in the secondary schools

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

FINDINGS

(I) The findings of physical facilities in the schools:

- 75% of schools have sufficient number of rooms at secondary level.
- 33% of schools having desk for every class.
- 92% of schools have separate toilets for ladies and gents.
- Water supply is available in 100% of schools.
- All most all schools have sufficient number of fans and tubelights in working condition.
- 100% schools have its own boundary wall.
- 83% of the schools are having school office in their campus. It is also observed that in some of schools, single common room is partly used as staff room and party as school office.
- 67% of the schools have the provision of playground within the boundary.
- Only 17% of schools have the availability of gardens and lawns.
- 83% schools have the provision of sufficient space for parking the vehicles.
- 83% schools, books are kept in the almirahs inside teacher's common or school offices. Only 17% schools have the availability of separate library room.
- The assembley hall which is used to held morning assemble and meetings of the personnel with the students is available in 33% schools.
- No separate room is available for games and sports equipments in any of the schools.
- There is no facility of separate music and dance room in any of the government schools.
- 33% schools do not possess canteen in its compound.
- In very few schools, first aid treatment is given to the pupils.
- Telephone facility is available in school office of 50% schools.
- The facility of loudspeaker essential for making necessary announcements is present in 67% schools.
- 58% schools have availability of notice board/bulletin board.
- In case of emergency and accident, services like extinguisher etc. are present in half percentage of the total schools.
- All the schools have the provision for proper sunlight and cross ventilation in the classroom.

(II) The findings of academic facilities in the schools:

1. The percentage of schools those have 10 teachers or more than 10 of various subjects is 100%
2. In most of the schools there is not availability of particular library room.
3. 83% of schools have dictionary, syllabus and syllabus books for all classes where as reference and guide books for the teachers are provided in half of the schools.
4. In 92% schools, there is provision of a Hindi newspaper daily used by the staff members only.

(III) Following are the findings of instructional facilities in the schools:

1. It is found that the facility of basic instructional materials i.e. blackboards, chalk, charts etc. necessary for the effectiveness of teaching learning process is present in 100% of schools.
2. Globe is available in 92% schools whereas maps of district, state, country, world are available in 100% of schools.
3. The audio mode of instruction i.e. tape recorder is present only in 42% schools.
4. At senior secondary level also, very few schools i.e. only 8% schools have separate laboratories for subjects like physics, chemistry, biology etc. 67% of schools have the availability of a cumulative Science Lab used for all science subjects.

(IV) The findings of welfare facilities in the schools:

1. In government secondary schools, pupils are benefited by various scholarship and stipends. There are as discussed below:

a. Under caste benefit scheme, in classes 6th to 8th, SC (boys) are given Rs. 150 per month and SC(girls) are given Rs. 200 per month. Also in classes 9th & 10th (boys) are given Rs. 200 per month and SC (girls) are given Rs. 300 per month.

b. Under caste benefit scheme, BC (boys) are given Rs. 75 per month and BC (girls) are given Rs. 150 per month.

c. According to EEE (Education Encouragement for Excellence) scheme, one boy and one girl having marks above than 60% are encouraged by giving them incentives of Rs. 750 for classes 6th to 8th and Rs. 1000 for classes 9th & 10th.

d. Also SC students of classes 6th to 8th get Rs. 1250 and of classes 9th &10th get Rs. 1450 to buy stationary items.

2. The facility of book bank is present in all the schools.
3. 67% of the schools have the provision of extra coaching for the weak students studying in classes 6th to 8th.
4. Nationwide mid-day meal programme is carried out successfully in 100% of the schools.
5. Pupils upto 8th class are given free books in all the government schools.
6. There is a special facility for the girls. The girls residing 2 km away from the school are given cycles free of cost by the government.

V. The findings of recreational facilities in the schools:

2. 58% of schools have the availability of cricket equipment.
3. Only 50% of the schools have football.
4. The percentage of schools having hockey equipment is only 17%.
5. 75% schools have volleyball.
6. The percentage of schools that organize educational visits, trips and tours is almost negligible.
7. Co-curricular activities are not given due consideration in the government schools. Very few schools organize competitions at their own level.

(VI) The findings of transportation facilities in the schools:

1. No bus facility is available in any school.
2. 72% of students come to school by foot.
3. 28% of students have bicycles as a mode of transport to the school.

CONCLUSIONS

In nut shell, secondary Education is of vital importance in Education Ladder and Educational facilities are important in situations which help the students to develop their own competence. The right kind of facilities give the direction to the future of the students and the future of nation. Hence, the educational facilities in secondary schools is of vital importance as country's educational, economic, cultural and social development depends on the success of Secondary Education.

स्वामी विवेकानन्द एवं स्वामी दयानन्द सरस्वती के शैक्षिक विचारों का तुलनात्मक अध्ययन

***डॉ. मुकेश अहलावत** ****दीपा रानी**

भूमिका

मनुष्य के जीवन में बहुत उलझनें आती हैं जिनका निवारण करना अति आवश्यक होने के साथ–साथ कठिन होता हैं। ये उलझनें बाहरी जीवन से ज्यादा उनके आंतरिक जीवन से सम्बधित होती हैं। मनुष्य की हर समस्या का समाधान शिक्षा द्वारा ही संभव है। आज संपूर्ण विश्व विनाश की कगार पर खड़ा है। जाति, धर्म, सम्प्रदाय, क्षेत्रीय विभिन्नता, भाषा की विभिन्नता, मानव–मानव के बीच अभेद खाई को और गहरी कर रहा है। ऐसी परिस्थिति में वर्तमान में विवेकानन्द और दयानन्द जी के आदर्शों, दर्शन और मूल्यों की बहुत आवश्यकता है। दोनों ही महानुभावों ने अपने–अपने ढ़ग से सामाजिक, सांस्कृतिक चिन्तन के साथ–साथ राजनैतिक, धार्मिक, आर्थिक और शिक्षा जैसे प्रमुख विषयों पर वैचारिक निर्धारणों की नीव रखी जिसकी वर्तमान में बहुत आवश्यकता है।

आज के तर्कवादी युग में शिक्षा के क्षेत्र में मानसिक विकास पर ज्यादा बल दिया जाता है और आध्यात्मिकता को नज़र अंदाज किया जाता है चूंकि इस आवश्यकता को पूरा करने में दार्शनिक विचारधारा का महत्त्वपूर्ण योगदान है इसलिए शोधकर्ता ने विवेकानन्द और दयानन्द जैसे दार्शनिकों के शैक्षिक विचारों का अध्ययन करना अति आवश्यक समझा।

अध्ययन के उद्देश्य :

1. स्वामी विवेकानन्द एवं स्वामी दयानन्द सरस्वती जी के कार्यों का अध्ययन करना।
2. स्वामी विवेकानन्द एवं स्वामी दयानन्द सरस्वती जी के दार्शनिक विचारों का अध्ययन करना।
3. स्वामी विवेकानन्द एवं स्वामी दयानन्द सरस्वती जी के शैक्षिक विचारों का अध्ययन करना।
4. स्वामी विवेकानन्द एवं स्वामी दयानन्द सरस्वती जी के शैक्षिक विचारों का तुलनात्मक अध्ययन करना।
5. वर्तमान भारतीय शिक्षा पर स्वामी विवेकानन्द एवं दयानन्द की शिक्षा प्रभाव का अध्ययन करना।

Assistant Professor, Sohan Lal DAV College of Education, Ambala City
M.Ed. Student

(I) स्वामी विवेकानन्द जी

विवेकानन्द जी के जीवन दर्शन ने भारतीय जीवन तथा समाज में क्रान्ति को जन्म दिया। उन्होंने समाज में प्रचलित समाजिक बुराईयों को दूर करने में अपना सहयोग दिया। उन्होंने अपने अनुभवों के आधार पर अपने दार्शनिक तथा शैक्षिक विचार प्रस्तुत किए हैं। यदि उनके दार्शनिक विचारों को जीवन में अपनाया जाए तो एक स्वस्थ समाज का निर्माण सम्भव है। उनके मुख्य मूल्य थेः–

एक वेदान्ती के रूप में

स्वामी विवेकानन्द सच्चे वेदान्ती थे। वह वेदान्त को पूर्ण रूप से अवैयक्तिक मानते थे। वेदान्त शाश्वत हैं।

ईश्वर सम्बन्धी धारणा

1. एक असीम अस्तित्व
2. एक असीम ज्ञान
3. एक असीम आनन्द।

मानव में विश्वास

स्वामी विवेकानन्द को मानव में गहरा विश्वास था। उन्होंने मानव की भव्यता और विविधता को पहचाना हैं। उनके कथनानुसार– मानव शरीर में मानव–आत्मा की उपासना ही ईश्वर की उपासना हैं।

धर्म की धारणा

स्वामी विवेकानन्द के विचारानुसार कोई भी धर्म दूसरे से छोटा नहीं है। सभी धर्म एक ही लक्ष्य की ओर ले जाते हैं। इसलिए प्रत्येक व्यक्ति को अपने ही धर्म में रहना चाहिए। उनकी धर्म सम्बधी धारणा अत्यन्त उदार हैं।

विश्ववाद और अध्यात्मिक भ्रातृत्व में विश्वास

स्वामी विवेकानन्द ने विश्ववाद और अध्यात्मिक भ्रातृत्व पर बहुत बल दिया। संन्यासी अपनी आत्मा का अनुभव करने के पश्चात् समस्त प्राणियों में अपनी आत्मा के दर्शन करता हैं।

पूर्णता मनुष्य की विरासत है

स्वामी विवेकानन्द के अनुसार– 'पूर्णता प्राप्त नहीं की जाती, वह तो पहले ही हम सब में विद्यमान है। अमरता और आनन्द को प्राप्त नहीं किया जाता, वे पहले से ही हमारे पास हैं। वे हमेशा से हमारे हैं।

1. शिक्षा का अर्थ

मनुष्य में पहले से ही विद्यमान पूर्णता की स्थिरता ही शिक्षा हैं। शिक्षा आत्म विकास की प्रकिया हैं क्योंकि बच्चा अपने आपको शिक्षित करता है। स्वामी विवेकानन्द की दृष्टि में पुस्तकीय शिक्षा कोई शिक्षा नहीं। वास्तविक शिक्षा वह है जो व्यक्ति की संकल्प शक्ति को विकसित करती हैं।

2. शिक्षा के उद्देश्य

1. शारीरिक विकास
2. मानसिक विकास
3. नैतिक, आध्यात्मिक और चारित्रिक विकास
4. व्यवसायिक **उद्देश्य**
5. पूर्णता प्राप्ति का **उद्देश्य**
6. वियवात्मक भ्रातृत्व का विकास
7. अपनी आत्मा में विश्वास और श्रद्धा को विकसित करना।

3. पाठ्यक्रम

1. वेदान्त ओर विज्ञान में समन्वय
2. कलाओं में शिक्षा
3. सामान्य भाषा
4. प्रादेशिक भाषाएँ
5. संस्कृत
6. इतिहास, भूगोल, अर्थशास्त्र, गृहविज्ञान, मनोविज्ञान आदि।
7. शारीरिक और व्यावसायिक शिक्षा

4. शिक्षण विधियां

1. एकाग्रता की विधि
2. एकाग्रता के लिए ब्रह्मचर्य
3. विचार–विमर्श और चिन्तन

4. विश्वास और श्रद्धा
5. वैयक्तिक निर्देशन एवं परामर्श विधि
6. शिक्षा में स्वतन्त्रता

इसमें कोई संदेह नहीं कि अगर विवेकानन्द जी के विचारों को अपने जीवन में अपनाया जाए तो एक स्वस्थ समाज का निर्माण हो सकता हैं।

5. अध्यापक का स्थान

स्वामी विवेकानन्द जी ने अध्यापक को एक दार्शनिक, मित्र एवं निर्देशक माना हैं जो विद्यार्थी की अपने मार्ग पर आगे बढ़ने में सहायता करता है।

6. विद्यार्थी का स्थान

स्वामी विवेकानन्द जी बच्चे को शिक्षा का केन्द्र मानते है। उनके अनुसार वह ज्ञान का खज़ाना है। ज्ञान उसके भीतर होता हैं।

7. अनुशासन

स्वामी विवेकानन्द जी ने स्व अनुशासन पर बल दिया है। वे विद्यार्थी को अनुशासन में रखने के लिए किसी प्रकार के दण्ड का सहारा नहीं लेते थे।

विवेकानन्द जी के शैक्षिक विचार वास्तव में भारत की परिस्थितियां उसकी आर्थिक, सामाजिक, धार्मिक, राजनैतिक आदि के अनुकूल और सच्ची शिक्षा की ज्योति का अक्षय प्रकाश फैलाने वाले हैं। आत्मा और शरीर दोनों ही उस शिक्षा को पाकर प्रसन्न और सुखी है। जो शिक्षा मनुष्य को सच्चे सुख एवं आनन्द की ओर ले जाती है वही वास्तव में सही शिक्षा है।

स्वामी दयानन्द जी

आर्य समाज के संस्थापक स्वामी दयानन्द सरस्वती जी वेदों के प्रकाण्ड पंडित असधारण धर्मोपदेशक तथा महान समाज–सुधारक थे। उनके युग में ब्राह्मणों ने अन्य वर्गो के लोगों को अपने स्वार्थी फन्दों में फसाने के लिए असत्य तथा मिथ्या का प्रसार करना आरम्भ कर दिया था। परिणाम स्वरूप वे पाश्चात्य संस्कृति तथा सभ्यता के रंग में रंग कर धीरे–धीरे ईसाई धर्म को स्वीकार करते जा रहे थे। ऐसे धार्मिक, सामाजिक तथा सांस्कृतिक संकट के समय में स्वामी दयानन्द ने वैदिक धर्म एवं संस्कृति का प्रचार किया। संक्षेप में स्वामी दयानन्द वैदिक शिक्षा–पद्धति, शिक्षा प्रसार तथा जीवनोन्नति के महान् प्रवर्तक एवं मार्ग–दर्शक थे।

(1) **शिक्षा** :– स्वामी दयानन्द के अनुसार शिक्षा का अर्थ पदार्थं का यथावत् ज्ञान, आत्म–कल्याण तथा पर कल्याण में प्रकृत करने वाला ज्ञान है।

(2) **उद्देश्य** :– दयानन्द जी की शिक्षा के मुख्य उद्देश्य निम्न दिए है:–

1. आत्मानुभूति
2. वैदिक धर्म तथा संस्कृति का उत्थान
3. शरीरिक विकास
4. मानसिक विकास
5. नैतिक विकास
6. आदर्श चरित्र का निर्माण

(3) पाठ्यक्रम :– स्वामी दयानन्द ने व्यापकता पर आधारित पाठ्यक्रम का सुझाव दिया है। उन्होंने वेदों, संस्कृत, साहित्य तथा धार्मिक शिक्षा पर बल दिया है। उन्होंने ज्योतिष–शास्त्र के अध्ययन पर बल दिया जिनके अन्तर्गत गणित, बीजगणित, रेखागणित, भूगोल, भूगर्भविद्या, खगोल विद्या आदि विषय सम्मिलित होने चाहिए।

(4) शिक्षण विधियां :– स्वामी दयानन्द ने शिक्षण विधियों का समर्थन किया है जोवैदिक काल के गुरूकुलों में प्रचलित थीं।

1 परामर्श एवं भाषण विधि
2 स्वाध्याय विधि
3 तर्क विधि
4 क्रियात्मक विधि

(5) अध्यापक की भूमिका :– स्वामी दयानन्द जी ने स्वामी विवेकानन्द की तुलना में अध्यापक को अधिक महत्व दिया है। उनके अनुसार अध्यापक को ज्ञान की प्रतिभा तथा सद्गुणों एवं सशक्त चरित्र का स्वामी होना चाहिए। उसे विद्यार्थी में अध्यात्मिक सत्ता का प्रसार करना चाहिए।

(6) विद्यार्थी की भूमिका :– दयानन्द जी विद्यार्थी को एक आध्यात्मिक जीव मानते है। उनके अनुसार विद्यार्थी एक असीम आत्मा है और शिक्षा के द्वारा वह असीम आत्मत्व को प्राप्त कर सकता है। विद्यार्थी को अपने गुरू की आज्ञा का पालन करना चाहिए। अध्यापक को भी विद्यार्थी को केन्द्र मान कर ही उसे शिक्षा देनी चाहिए।

(7) अनुशासन :– स्वामी दयानन्द ने शिक्षा के क्षेत्र में अनुशासन को अत्यधिक महत्त्व दिया है। उन्होंने कठोर अनुशासन का समर्थन किया। उन्होंने अनुशासन स्थापित करने के लिए दण्ड का समर्थन किया है।

''मनुष्यों को यही निश्चय करना चाहिए कि मैं अब जैसा कर्म करता हूँ वैसा ही परमेश्वर की व्यवस्था में फल भोगता हूं और भोगूगां। सब प्राणी अपने कर्म से विरूद्ध फल को कभी नहीं प्राप्त होते, इसलिए सुख भोगने के लिए धर्मयुक्त कर्म ही करना चाहिए कि जिससे कभी दुख न हो''

महर्षि दयानन्द

निष्कर्ष :

वर्तमान समाज में इस बात को महसूस किया जा रहा है कि मूल्यों का पतन हो रहा है और स्वार्थीपन बढ़ता जा रहा है। यदि हम प्राचीन समय की स्थिति से तुलना करे तो हम आज के समय को दुखदायक एवं पीड़ादायक करार देगें। समय के साथ–साथ मूल्यों का पतन हो रहा है। आज का समाजिक वातावरण दिन –प्रतिदिन गिरता जा रहा है। विज्ञान और तकनीक के क्षेत्र में अत्याधिक विकास के साथ–साथ लोगों की विचारधारा में काफी परिवर्तन आया है। वे अधिक भौतिक वादी बन गए हैं। कई प्रकार के संघर्ष जैसे– नए एवं पुराने विचारों में संघर्ष, नए एवं पुराने मूल्यों में संघर्ष उत्पन्न हो गए है। ऐसे समय में स्वामी विवेकानन्द और दयानन्द द्वारा बताई गई मूल्य निहित शिक्षा ही सारी स्थिति को सुधार सकती है।

स्वामी विवेकानन्द और स्वामी दयानन्द ने अपने विचारों द्वारा सीख दी कि राष्ट्र निर्माण के कार्य में लगे सहयागियों के गुणों को परखना चाहिए और उन्हें इसके विकास के लिए प्रोत्साहित करना चाहिए। उनके जीवन दर्शन और शैक्षिक विचारों का अध्ययन करने के पश्चात् कहा जा सकता है कि सभी अध्यापकों तथा शिक्षा–शास्त्रियों को अपने विद्यार्थियों के जीवन में उन विशेषताओं को डालना चाहिए जो स्वामी विवेकानन्द और स्वामी दयानन्द जी द्वारा बताई गई हैं।

REPORT ABOUT THE COLLEGE
SOHAN LAL DAV COLLEGE OF EDUCATION (IASE)
AMBALA CITY

Sohan Lal DAV College of Education (IASE), Ambala City is a premier institute of education catering to the needs of Northern India in teacher education. This esteemed institution was established at Lahore in 1939 by a great Geographer and Educationist-**Rai Bahadur Sohan Lal**, who himself was the Founder Principal. It was rehabilitated at Ambala City in 1954 after Independence and later handed over to the DAV College Managing Committee, New Delhi. Since then, this institution has carved a niche in the field of teacher education by producing teachers of great repute. The college strives to maintain the ideals of its founding father Rai Bahadur Sohan Lal and articulate the ancient Vedic wisdom in the modern context. Lala Bhagwan Dass was the first Principal of the college at Ambala who was succeeded by Dr. R.L. Ahuja (1957-64), Shri A.R. Sharma (1964-74), Dr. V.B. Taneja (1975-77), Dr. V.K. Kohli (1977-91) and Dr. D.P. Asija (1991-2007). Dr. Vivek Kohli is admirably heading the institution since 2008.

OUR VISION

To be one of the Centres of excellence in teacher education based on Indian vedic culture and ethos coupled with modernity.

OUR MISSION

- Generation, Preservation and Transmission of knowledge
- Building core competencies and adaptability among prospective teachers
- Disseminating skills for life long learning and information processing
- Developing creative and critical thinking in prospective teachers
- Initiating and experimenting innovations in teacher education
- Undertaking action research at grass roots level
- Keeping pace with information and communication technology
- Cultivating human & spiritual values

OUR COMMITMENT

C – Creating Knowledgeable and Human Society

O – Organisational Pride

M – Mutual Trust and Democratic Sharing

M – Modernity Blended with Tradition

I – Total Quality in Teacher Education Programme

M – Materialism Coupled with Spirituality

E – Empowerment of Teachers

N – Nurturing Vedic Values

T – Teacher Competency Focus

OBJECTIVES OF THE COLLEGE

1. To provide new frontiers of knowledge to teachers at Pre- service and In-service levels.
2. To interact with teachers, administrators, policy planners and the community and to formulate/ design need based teacher education programme for both at the elementary and secondary level.
3. To develop instructional material for schools.
4. To bring examination reforms in school system.
5. To encourage action research at the grassroot level in relation to the process of teacher training and functioning of school system.

ACHIEVEMENTS OF THE COLLEGE

In order to realise the objectives of this college, many sustained efforts have been made. The following benchmarks in the field of teacher education reflect the collective wisdom of the faculty under the dynamic leadership of the former Principals and the present incumbent.

(i) The college has the credit of being approved and recognized by the National Council for Teacher Education (NCTE), a statutory body established by an Act of Parliament.

(ii) It enjoys the proud privilege of being the first DAV College to be awarded **A+ Grade** by National Assessment and Accreditation Council **(NAAC)** with 93% marks. Out of

all colleges of Education across the country, in that particular year this is the first College of Education which was graded as A+by NAAC.

(iii) The college has received an **ISO 9001-2000** certification.

(iv) The college now enjoys the status of an Institute of Advanced Study in Education **(IASE)** conferred by Ministry of Human Resource Development, Govt. of India. This speaks very modestly about its gymnastic growth in the area of teacher education in five states namely Punjab, Haryana, Himachal Pradesh, Jammu & Kashmir and U.T. Chandigarh.

(v) This college enjoys the privilege of being one of the Colleges and Departments of Education of the country which has been selected by **UGC** for conducting **Innovative programmes**.

(vi) The University Grants Commission **(UGC)** has established a Centre for **Sri Aurobindo Studies** which is the only one created in a College of Education Northern India.

(vii) This is the only college in the North India which could has successfully competed in the nation wide contest for the best Integration of Technology in Education. Governor of Punjab Gen. (Retd.) SF Rodrigues bestowed this honour to the college. The honour includes an award of Rs. 50,000/- and a citation.

(viii) A major research project titled 'Effect of Different Teaching Strategies on the development of Environmental awareness, Attitude building and Implementation of Action Programme in Rural Youth of Haryana has been Sanctioned to Dr. Sushma Gupta, Associate Professor of the college by UGC with a grant of Rs. 6.88 Lakhs.

The Principal of the college, Dr. Vivek Kohli is a well-known seasoned Principal and educationist. His contribution in teacher education is viewed with respect. He has the vision and judgment of an administrator par excellence. The college has a great future under his stewardship.

Faculty Achievements

1. **Dr. Nirmal Goyal Librarian** attended 51st All India Library Conference of Indian Library Association from Dec. 16-18, 2005 in Kurukshetra University, Kurukshetra.
2. **Dr. Vivek Kohli, Principal** attended National Seminar on Quality Assurance in Elementary Education – Vision and Issue, Organised by Deptt. of Education, Kurukshetra University Kurukshetra on March 30, 2008.

3. **Dr. Neelam Luthra** attended One day National Seminar on **"A Women of 21st Century: Her Resolve to Face Challenges"** at S.A Jain (P.G.) college Ambala City, organised by **"Women studies Cell"** on October 13, 2007 sponsored by UGC, New Delhi.
4. **Dr. (Mrs.) Nirmal Goyal** attended Two day seminar on "**Information Literacy & Digital Environment"** held at Arya P.G. College Panipat from 9th Feb. 2008 and presented paper on the theme "Role of Library Professionals in Promoting Information Literacy.
5. **Dr. Pooja R.P. Singh** attended Two days UGC Sponsored seminar on **" Mahatma Gandhi's Views on Prakritik Chikitsa and Health"** organised by the the Gandhian Studies Centre & Naturopathy Deptt. of M.D.S.D.Girla College, Ambala City held on Jan. 22-23, 2008.
6. **Mrs. Samriti Bahrgava** attended the **"Legal Literacy Workshop for Women Teachers and Research Scholars"** held on March 26, 2008 in Women's Studies Research Center, Kurukshetra University, Kurukshetra.
7. **Dr. (Mrs.) Nirmal Goyal, Librarian** attended One-day **"Erudition Library Meet 2008"** held at ICFAF National College, Yamuna Nagar on Nov.4, 2008. and presented paper on the theme **"Role of Librarians in the Era of Information Technology".**

   An article on **"Role of Library Professionals in Promoting Information Literacy"** also published in Journal **"ARYAN HERITAGE"** Vol. XXVI, No 3 March 2009.
8. **Dr. K.K.Sharma, Lecturer** delivered extension lecture on the **"Life and Contribution of Neta Ji Subhash Chander Bose"** at DAV College Ambala City on Jan 23, 2009.
9. **Dr. Neelam Luthra, Lecturer** attended One-day workshop on **"Sexual Harassment at workplace"** on March 9, 2009 at Kurukshetra University, Kurukshetra.
10. Almost all Lecturers attended Seven day **"Computer Teaching Programme for Teacher Educators"** From Sep. 8-13, 2008.
11. Almost all lecturers attended 'Two days "UGC Sponsored National Seminar on Construction and Standardization of Research Tools from Nov 25-26, 2008.
12. Almost all Lecturers attended UGC Sponsored National Workshop organised on **"Origami"** and **"Animation"** from March 6-7, 2009.
13. Almost all Lecturers attended **"World Consumer Rights Day"** programme on March 16, 2009.
14. Mrs. Rajni Sharma, Lecturer attended One-day National Seminar (sponsored by Commissioner, Higher Education, Haryana) on **"India's Security Concerns in the Context of 26/11 Terrorist Attacks on Mumbai"** organised by G.M.N. College Ambala Cantt on March 28, 2009.
15. **Dr. Narender Kaushik** attended and participated in DHE Sponsored Seminar on **"Right to Education Act-2008, Realities, prospects and possibilities** –Right to Education Act-2009. a critical outlook, organised by Dr.Ganesh Dass DAV College of Education for Women, Karnal. On Oct 24-25, 2009.

16. **Ms. Jyoti** attended National Seminar on **"Human Rights sponsored by DCSSR,** organised by Chandigarh College of Education, Landran (Mohali) on JAN 30, 2010.
17. **Dr. Bala Rani Bhullar** attended & Participated in State Level Seminar on Democracy in India: **"A Success or Failure?-Role of Education in the Development of Democracy in India,** organised by DAV College, Naneola Ambala on Feb 11, 2010.
18. **Dr. Narender Kaushik** attended and participated in National Seminar on **" Teacher Education in the New Millennium"- Role of the Value " Education in New Millennium"** organised by Budha College of Education, Karnal on Feb 13, 2010.
19. **Dr. Neelam Luthra** attended and participated in DHE sponsored Two-day National Seminar on **"Women Rights and Awareness"-Women Empowerment: Issues and Concerns** organised by DAV College (Lahore), Ambala City on Feb 19-20, 2010.
20. **Dr. Narender Kaushik** attended and participated in DHE sponsored Two-day National Seminar on **"Women Rights and Awareness"-Women Empowerment** organised by DAV College (Lahore), Ambala City on Feb 19-20, 2010.
21. **Mrs. Renu Chander** attended DHE sponsored Two-day National Seminar on **"Women Rights and Awareness"** organised by DAV College (Lahore), Ambala City on Feb 19-20, 2010.
22. **Dr. Bala Rani Bhullar** attended DHE sponsored Two-day National Seminar on **"Women Rights and Awareness"** organised by DAV College (Lahore), Ambala City on Feb 19-20, 2010.
23. **Mrs. Renu Chander** attended DHE sponsored National Seminar on Liberalization and its impact on Economic Development organised by Gandhi Memorial National College (P.G) College, Ambala Cantt on Feb 21, 2010.
24. **Ms. Kamini** attended DHE sponsored National Seminar on Liberalization and its impact on Economic Development organised by Gandhi Memorial National College (P.G) College, Ambala Cantt on Feb 21, 2010.
25. **Ms. Bharti** attended DHE sponsored National Seminar on Liberalization and its impact on Economic Development organised by Gandhi Memorial National College (P.G) College, Ambala Cantt on Feb 21, 2010.
26. **Ms. Kamini** attended National Seminar on **"Quality Concern in Education"** organised by Nischal Singh College of Education for Women, Yamuna Nagar on Feb. 23-24, 2010.
27. **Dr. Mukesh Ahlawat** attended ICSSR sponsored One-day National Seminar on **"Human Rights Problems and Prospects in Present Scenario"** organised by DAV College (Lahore), Ambala City on March 3, 2010.
28. **Mr. Sushil Kumar** attended ICSSR sponsored One-day National Seminar on **"Human Rights Problems and Prospects in Present Scenario"** organised by DAV College (Lahore), Ambala City on March 3, 2010.

29. **Ms. Jyoti** attended ICSSR sponsored One-day National Seminar on **"Human Rights Problems and Prospects in Present Scenario"** organised by DAV College (Lahore), Ambala City on March 3, 2010.
30. **Dr. Vivek Kohli** attended MHRD Workshop on **"Strengthening Human Values & Life Skills in Education"** organised by DAV Institute of In-Service Education & Research, DAV College Managing Committee, New Delhi held at DAV Pub. Sch. Panipat on March 22-23, 2010.
31. **Mr. Pawan Kumar Dr. Vivek Kohli** attended MHRD Workshop on **"Strengthening Human Values & Life Skills in Education"** organised by DAV Institute of In-Service Education & Research, DAV College Managing Committee, New Delhi held at DAV Pub. Sch. Panipat on March 22-23, 2010.
32. **Mrs. Renu Chander** attended MHRD Workshop on **"Strengthening Human Values & Life Skills in Education"** organised by DAV Institute of In-Service Education & Research, DAV College Managing Committee, New Delhi held at DAV Pub. Sch. Panipat on March 22-23, 2010.
33. **Ms. Jyoti** attended National Seminar on **"Human Rights sponsored by DCSSR,** organised by Chandigarh College of Education, Landran (Mohali) on January 30, 2010.
34. **Dr. Bala Rani Bhullar** attended & Participated in State Level Seminar on Democracy in India: **"A Success or Failure?-Role of Education in the Development of Democracy in India,** organised by DAV College, Naneola Ambala on Feb 11, 2010.
35. **Dr. Narender Kaushik** attended and participated in National Seminar on **" Teacher Education in the New Millennium"- Role of the Value " Education in New Millennium"** organised by Budha College of Education, Karnal on Feb 13, 2010.
36. **Dr. Neelam Luthra** attended and participated in DHE sponsored Two-day National Seminar on **"Women Rights and Awareness"-Women Empowerment: Issues and Concerns** organised by DAV College (Lahore), Ambala City on Feb 19-20, 2010.
37. **Dr. Narender Kaushik** attended and participated in DHE sponsored Two-day National Seminar on **"Women Rights and Awareness"-Women Empowerment** organised by DAV College (Lahore), Ambala City on Feb 19-20, 2010.
38. **Mrs. Renu Chander** attended DHE sponsored Two-day National Seminar on **"Women Rights and Awareness"** organised by DAV College (Lahore), Ambala City on Feb 19-20, 2010.
39. **Dr. Bala Rani Bhullar** attended DHE sponsored Two-day National Seminar on **"Women Rights and Awareness"** organised by DAV College (Lahore), Ambala City on Feb 19-20, 2010.
40. **Mrs. Renu Chander** attended DHE sponsored National Seminar on Liberalization and its impact on Economic Development organised by Gandhi Memorial National College (P.G) College, Ambala Cantt on Feb 21, 2010.

41. **Ms. Kamini** attended DHE sponsored National Seminar on Liberalization and its impact on Economic Development organised by Gandhi Memorial National College (P.G) College, Ambala Cantt on Feb 21, 2010.
42. **Ms. Bharti** attended DHE sponsored National Seminar on Liberalization and its impact on Economic Development organised by Gandhi Memorial National College (P.G) College, Ambala Cantt on Feb 21, 2010.
43. **Ms. Kamini** attended National Seminar on **"Quality Concern in Education"** organised by Nischal Singh College of Education for Women, Yamuna Nagar on Feb. 23-24, 2010.
44. **Dr. Mukesh Ahlawat** attended ICSSR sponsored One-day National Seminar on **"Human Rights Problems and Prospects in Present Scenario"** organised by DAV College (Lahore), Ambala City on March 3, 2010.
45. **Mr. Sushil Kumar** attended ICSSR sponsored One-day National Seminar on **"Human Rights Problems and Prospects in Present Scenario"** organised by DAV College (Lahore), Ambala City on March 3, 2010.
46. **Ms. Jyoti** attended ICSSR sponsored One-day National Seminar on **"Human Rights Problems and Prospects in Present Scenario"** organised by DAV College (Lahore), Ambala City on March 3, 2010.
47. **Dr. Vivek Kohli** attended MHRD Workshop on **"Strengthening Human Values & Life Skills in Education"** organised by DAV Institute of In-Service Education & Research, DAV College Managing Committee, New Delhi held at DAV Pub. Sch. Panipat on March 22-23, 2010.
48. **Mr. Pawan Kumar Dr. Vivek Kohli** attended MHRD Workshop on **"Strengthening Human Values & Life Skills in Education"** organised by DAV Institute of In-Service Education & Research, DAV College Managing Committee, New Delhi held at DAV Pub. Sch. Panipat on March 22-23, 2010.
49. **Mrs. Renu Chander** attended MHRD Workshop on **"Strengthening Human Values & Life Skills in Education"** organized by DAV Institute of In-Service Education & Research, DAV College Managing Committee, New Delhi held at DAV Pub. Sch. Panipat on March 22-23, 2010.
50. **Dr. Sushma Gupta,** Associate Prof. presented her research paper entitled Role of Media Houses: Enhancing value based education in UGC sponsored National Seminar on "Role of Media in Changing Scenario" organized at Gopi Chand Mahila College, Abohar on August 21, 2010.
51. **Interactive Meeting – UGC Major Research Project (Dr. Sushma Gupta)**- was held. Dr. B.S.Wadhwa, former Principal, DAV College of Education, Abohar & Dr. KK Sharma, Former Pro Vice Chancellor, Nehu, Shillong. Interacted with the concerned faculty on August 23, 2010.
52. **Dr. Bala Rani,** Asstt. Prof. attended National Seminar on "Human Rights & Constitution- An Indian Perspective" organized at S D College, Ambala Cantt on October 21, 2010.

53. **Mrs. Renu Chander,** Asstt. Prof. presented her research paper entitled Freedom of Media & its Impact on Indian Mindset in National Seminar on "Defining Relationship of Media and Indian Mindset" organized at S D College, Ambala Cantt on October 27, 2010.
54. **Mrs. Bharti,** Asstt. Prof. presented her research paper entitled **Freedom of Media & its Impact on Indian Mindset** in National Seminar on "Defining Relationship of Media and Indian Mindset" organized at S D College, Ambala Cantt on October 27, 2010.
55. **Dr. Bala Rani,** Asstt. Prof. presented her research paper entitled Educational Psychology- its Perspectives and Aspects in National Seminar on "Defining Indian Psychology- Probabilities & Challenges" at S D College, Ambala Cantt on October 29, 2010.
56. **Ms. Kamini,** Asstt. Prof. presented her research paper entitled **Educational Psychology- its Perspectives and Aspects** in National Seminar on "Defining Indian Psychology- Probabilities & Challenges"at S D College, Ambala Cantt on October 29, 2010.
57. **Shri Pawan Kumar,** Assistant Professor attended Orientation Course at Kurukshetra University, Kurukshetra. November 8, 2010 to December 4, 2010 and obtained grade 'A'.
58. **Mrs. Satnam Kaur,** Associate Prof. attended National Seminar on "Global Environmental Issues and Climate Change**"** organized at MCM DAV College for Women, Chandigarh (U.T.). on November, 9-10, 2010.
59. **Dr. Narender Kaushik,** Associate Prof. attended World Conference of AIAER on "Professional Development of Teachers and Teacher Educators" organized at Lovely Professional University, Punjab on November 12-13, 2010.
60. **Dr. Sushma Gupta,** Associate Prof. presented her paper entitled **Blending ICT in Teacher Education for 21st Century** in CTE National Conference on" Revisiting Teacher Education in the 21st Century" organized at D.S. Gurukul College of Education for Women, Vill. Gholumajra, Derabassi Distt. Mohali (Pb.) on November 13-14, 2010.
61. Article entitled "**Role of Librarians in Qualitative Research**" published in a book titled **Recent Trends in Libraries**. published by Arihant Prakashan, New Delhi. ISBN 978-93-80872-22-3 on November 15, 2010.
62. Mr. Pawan Kumar, Asstt. Prof. attended UGC Sponsored Orientation Course organized at Kurukshetra University, Kurukshetra and obtained Grade 'A' on November 8, 2010 to December 04, 2010.
63. Dr. Vivek Kohli, Principal and Dr. Narender Kaushik, Associate Prof. attended Seminar on Scholarship Schemes organized by Higher Education Commission, Haryana, Panchkula in Govt. College, Ambala Cantt on November 18, 2010.

64. Dr. Narender Kaushik, Associate Prof. presented a paper titled **Values & Virtues of Teacher Education** in National Seminar on " Emerging Trends in Teacher Education" organized at Hindu College of Education, Sonepat (HR.) on November 20, 2010.
65. Dr. Vivek Kohli , Principal attended National Seminar on Heritage 2010 organized by DAV College Managing Committee, New Delhi on November 27, 2010.
66. Dr. Bhim Sain Wadhwa, Associate Prof. acted as Resource Person and presented a paper titled **Instructional Designs : Classical Models** in National Seminar on "Instructional Designing : Changing Perspectives and Issues" organized at Seth Tek Chand College of Education, Rattan Dera, Kurukshetra on December 4, 2010.
67. Dr. Sushma Gupta, Associate Prof. presented paper on **Education for Sustainable Development** organized at Patiala College of Education, Vill. Hardaspur, Opp. Omaxe City, Sirhind Road, Patiala on December 10, 2010.
68. Dr. Vivek Kohli, Dr. Neelam Luthra and Dr. B.S. Wadhwa attended an Interactive Meeting on Ethics & Values at DAV College Managing Committee, New Delhi on January 8, 2011.
69. Mrs. Renu Chander, Asstt. Prof. participated in National Seminar on "Continuous and Comprehensive Evaluation: A Paradigm Shift in Indian Evaluation System" organized by Tulsi College of Education for Women, Hissar Road, Ambala City on January 20, 2011.
70. Dr. Bala Rani, Asstt. Prof. participated in National Seminar on "Continuous and Comprehensive Evaluation: A Paradigm Shift in Indian Evaluation System" organized by Tulsi College of Education for Women, Hissar Road, Ambala City on January 20, 2011.
71. Dr. Rma Khanna, Asstt. Prof. participated and presented the paper entitled **New Trends in Assessment/ Evaluation** in National Seminar on "Continuous and Comprehensive Evaluation: A Paradigm Shift in Indian Evaluation System" organized by Tulsi College of Education for Women, Hissar Road, Ambala City on January 20, 2011.
72. **Dr. Narender Kumar Kaushik**, Associate. Prof. participated in National Seminar on Continuous and Comprehensive Evaluation: A Paradigm Shift In Indian Evaluation System organized at Tulsi College of Education for Women, Hissar Road, Ambala City on January 20, 2011.
73. **Dr. Sushma Gupta**, Associate Prof. presented a paper titled **Innovation Strategies for Developing Teaching Competencies in Teacher Trainees** in the two day National Seminar on the theme : "Quality Concern : Shifting Paradigms in collaboration with CTE, Haryana" organized at Rao Mohar Singh College of Education, Behrampur, Gurgaon on January 22-23, 2011.
74. **Dr. Sushma Gupta,** Associate Prof. participated in the Ist India International Energy Summit as a Delegate, held at Visvesvaraya National Institute of Technology, Nagpur on January 28-30, 2011.
75. Dr. Sushma Gupta, Associate Prof. presented a paper entitled **Developing National Vision, Identity, Commitment & Spiritual Consciousness in Teacher Educators** in National Seminar

held in "Collaboration with Council for Teacher Education" organized at Mahabir College of Education for Women, Opp. New Bus Stand, Kurukshetra on February 4, 2011.

76. Dr. Bala Rani , Asstt. Prof. presented a Research paper entitled **R.T.I. & Good Governance in India** in National Seminar on "Public Policy Making And Good Governance in India" organized at DAV College, Naneola (Ambala) on February 11-12, 2011.
77. Dr. Narender Kaushik, Associate Prof. participated as a speaker in **Joint Collaboration with Katha U.K. London** organized at D.A.V. College for Girls, Yamunanagar & Katha U.K. London on February 10-12, 2011.
78. Ms. Kamini, Asstt. Prof. attended two day National Seminar on "Conflict and Co-operation in South Asia in the Post Cold War Era" organized at Gandhi Memorial National (P.G.) College, Ambala Cantt on February 15-16, 2011.
79. Mrs. Satnam Kaur, Associate Prof. attended in the two days UGC Sponsored National Conference on Excellence Knowledge to meet the challenges of the 21st century organized at Government College of Education, Chandigarh on March 3-4, 2011.
80. Dr. Bala Rani, Asstt. Prof. presented a research paper entitled **Social Customs in India** in National Seminar on "Issue of Khap Panchayat Social Customs Honour Killing and Human Rights in India" organized at DAV College, Naneola (Ambala) on March 12-13, 2011.
81. Dr. Bala Rani Presented paper on 'The Role of Education in Qualitative Research at Two ay International Multi Disciplinary Congress on Political Science and Global Governance organized by Rajiv Gandhi National University, Chandigarh on March 26-27, 2011.
82. Mr. Pawan Kumar, Asstt. Prof., participated in one day seminar on the theme, "Inclusive Education : Practice & Challenges" , organized under UGC's scheme of HEPSN by Department of Education, K.U. Kurukshetra on March 28, 2011.
83. Ms. Renu Chander, Asstt. Prof. participated in one day seminar on the theme, "Inclusive Education : Practice & Challenges" , organized under UGC's scheme of HEPSN by Department of Education , K.U. Kurukshetra on March 28, 2011.
84. Ms. Renu Chander, Asstt. Prof. participated in one day seminar on the theme, "Teacher Education : Needed Reforms in the Present Indian Context " , organized under SAP(UGC) by Department of Education , K.U. Kurukshetra on March 28, 2011.
85. Dr. Narender Kaushik, Associate Prof. presented a paper entitled National Curriculum Framework for Teacher Education participated in National Seminar–cum-workshop on Implications of National Curriculum Framework for Teacher Education In The Context of Inclusive Education And Information And Communication Technology (ICT) organized at Maa Bala Sundri College of Education, Sadhaura – Dosarka Road, Distt. Ambala on April 30, 2011.

Extension Lectures

Seminars/Conferences/Workshops Organised

The institution organised several national and institutional events during 2008-2009, 2009-2010 viz:

1. Seven-day "Computer Teaching Programme for Teacher Educators" was held from sept. 813, 2008.
2. One-day programme on "Vedic Mathematics was held on Oct 15, 2008.
3. Three-days Talent search shows was held from Oct. 22-24,2008.
4. One-day programme on "importance of safe and Quality food" was held on 14, 2008.
5. Two-days "UGC sponsored National seminar on construction and standardization of Research Tools" was held from Nov 25-26, 2008.
6. One-day workshop on "Use of New Technology in class room" was held on Jan 10, 2009.
7. "National Youth DAY" was celebrated on the Birthday of Swami Vivekanand, on Jan 13, 2009.
8. Four day workshop on "Art of Craft" was held from Jan 19-22, 2009.
9. Two day Programme on **Commemoration of 137th Birth Anniversary of Sri Aurobindo and Evening Sandhya** was also organised on Aug. 11 & 12, 2009. Dr. Surinder Mohan Mishra, Deptt of Sanskriti, K.U.K and Acharya Muni Sanskritanand Maharaj blessed the students. Various inter school & inter college competitions were also organised.
10. **Orientation Programme** of B.Ed, Session 2009-2010 was held on 18, 19 & 20 Aug. 2009.
11. **Talent Show** was held on Sept. 8 to 10, 2009.
12. One day Programme on **Commemoration of 137th Birth Anniversary of Sri Aurobindo and Evening Sandhya** was also organized on 29 Sept.2009. Prof H .S.Sinha, Ex-Chairman, Deptt. Of Philosophy, K.U.K was the Chief Guest, Prof. Keshav Shrama, Former Chairman, ICDEOL, H.P.University, Shimla blessed the students.
13. **AIDS Awareness among Masses** Programme was organised in Oct. 24, 2009. Sh. Virender Ji Shastri was the Chief Guest.
14. One day National Seminar on **Vocational Education – A Need of the Day** was organised on Dec. 5, 2009. Justice R.N.Mittal Vice President, DAV College Managing Committee, New Delhi was the chief Guest, Sh. Vimal Dave Practicing Lawyer, Supreme Court New Delhi; Dr. D.P Asija Director, Education Deptt. M.M.University Mullana, & Dr. Shalini Gupta, Director, Desh Bhagat Group of Institutions, Mandi Gobindgarh, addressed the audience.
15. One day seminar on **Vocational Guidance and Training** in collaboration with Rotary Club was held on Dec. 19, 2009. Dr. S.N.Panda, Director of Regional Institute of Mgt. & Tech., Mandi Gobindgarh was Chief Guest.

16. **Poster Making Competition** in collaboration with Haryana Police was held on Jan. 6, 2010.Mrs. Bharti Arora S.P. of Ambala was the Chief guest. Sh. D.R.Dhawan gave away the prizes.
17. **National Youth Day & Lohri** was celebrated on Jan. 13, 2010. Sh. A.P Mehta was the Chief Guest.
18. **Havan Yog Competition** was celebrated on Jan. 23, 2010. Smt. Raj Bhasin was the Chief Guest.
19. With a special theme National on Jan. 23, 2010.
20. Moral Education Exam was conducted in collaboration with DAV Managing Committee.
21. 'Alumni Meet' was organised on 31st Jan, 2010.
22. Four days Fine Art Workshop was organised in collaboration with PIDILITE, on 2 to 5 Feb, 2010.
23. Rishi Bodh Utsav was celebrated in college on 13th Feb, 2010.
24. Preparation of Teaching Aid competition was organised on 19th Feb, 2010.
25. Sports Meet was Organised on 20th Feb, 2010.
26. Drawing, Painting, Candle Making and Computer Application competition was organised on 23rd Feb, 2010.
27. National Seminar on "Self Education & Human Values" for Teachers was organised on 26-27 Feb, 2010.
28. Clay Modeling, Gardening and Interior Decoration competition was organised on 27, Feb, 2010. Two–day Programme on Commemoration of 137th Birth Anniversary of Sri Aurobindo. **The main speakers were Dr. Surinder Mohan Mishra,** Kuruskhetra University, Kurukshetra and **Muni Sanskritanand Maharaj (**August 11-12, 2009)
29. Orientation Programme B.Ed. 2009-10. **The Chief Guest** was **Sh. Arvind Sharma, SDM Ambala** (August 18, 19 & 20, 2009)
30. Extension Lecture on Organic Farming. **Chief Guest/Speaker** was **Prof. G.S. Murthy,** Ex-HOD, Department of Chemistry, Andhra Pardesh University, Hyderabad (September 17, 2009)
31. Commemoration of 137th Birth Anniversary of Sri Aurobindo. **The main GuestS were Prof. H.S. Sinha,** Ex-Chairman, Deptt. of Philosophy, K.U.K. and **Prof. Keshav Sharma,** Ex-Chairman, ICEDOL, H.P. University, Shimla (September 29, 2009)
32. National Seminar on Vocational Education-Need of the Day. **The Guests/Speakers were Mr. Justice R.N. Mittal,** Vice President, DAV College Managing Committee, New Delhi, **Sh. Vimal Dave,** Lawyer, Supreme Court, New Delhi, **Sh. Arvind Sharma,** SDM, Ambala, **Dr. D.P. Asija,** Director (Education), MM University, Mullana and **Prof. Shalini Gupta,** Institute of Management, Mandi Gobindgarh (December 5, 2009)
33. Workshop on Vocational Guidance and Training. guests/speakers were **Dr. S.N. Panda,** Director, Regional Institute of Mgt. & Tech. Mandi Gobindgarh, **Prof. K.K. Khurana,** President, Rotary Club, Ambala Central (December 19, 2009)

34. Visit of M.Ed. Students to Asha School of Physically Handicap students Ambala Cantt. Our students alongwith **Dr. Sushma Gupta, Dr. Pooja and Dr. K.K. Sharma** visited the school (January 22, 2010)
35. Programme on Concept of Learning. **Dr. Khushwant Kumar,** Principal, BCM College of Education, Ludhiana delivered lecture to the students (January 28, 2010)
36. Alumni Meet. Many old students of B.Ed. & M.Ed. participated & Cultural programme organized (January 31, 2010)
37. Our students participated in **TERI** organized by British Council, New Delhi (February 2-3, 2010)
38. Four-day Fine Arts Workshop, **Ms. Suman Munjal,** Principal, Govt. Sr. Sec. School, Prem Nagar, Ambala City gave away the prizes. (February 2-5, 2010)
39. Two-day UGC Sponsored National Seminar on Self-Education & Human Value for Teachers **Guests/Speakers: Sh. Rajinder Nath,** Hony. Treasurer, DAV College Managing Committee, New Delhi, **Smt. Rashmi Chari,** DAV IIER, DAV College Managing Committee, New Delhi, **Prof. J.R. Dhir,** Ex-Chairman & Dean, Faculty of Education, KU Kurukshetra, **Prof. C.B. Singh,** University of Delhi, Delhi, **Prof. K.K. Sharma,** Former EVC, NEHU, Shillong, **Prof. D.S. Yadav,** KU, Kurukshetra, **Prof. A.N. Mishra,** KU, Kurukshetra, **Prof. Jai Narayan Sharma,** KU, Kurukshetra, **Prof. D.P. Mani,** PU Chandigarh (February 26-27, 2010)
40. Campus Interviews (March 10, 2010) Sri Aurobindo Study Centre of the College organized program in Police DAV Public School, Ambala City. **Dr. Rameshwar Sharma, Ex–Physiotherapist, AIIMS, New Delhi was the Resource Person** (November 24, 2010).
41. Sri Aurobindo Study Centre of the College organized extension lecture of **Dr. Rameshwar Sharma, Ex–Physiotherapist, AIIMS, New Delhi** at Vijay Vallabh Public School, Ambala City (November 25, 2010)
42. ICPR sponsored National Seminar on "Socrates: Shishya Parampra" was organized to celebrate the National Philosophy Day.

    Resource Persons :

    Prof. M R Chilana, Former Head, Deptt. of
    Teacher Education, NCERT, New Delhi.
    Dr. Rameshwar Sharma, Ex–Physiotherapist,
    AIIMS, New Delhi.
    Prof. K K Sharma, Former Pro Vice
    Chancellor, Nehu, Shillong. National Philosophy
    Day (November 26, 2010)
43. One day UGC sponsored National Seminar on National Knowledge Commission–Prospects, Possibilities and Issues was organized.

Presided by: Sh. Rajinder Nath, Hony Treasurer, D.A.V. College Managing Committee, New Delhi & Chairman local D.A.V. Institutes, Ambala.

Chief Guest: Prof. Sudhanshu Bhushan. Prof. of Education, National University of Educational planning & Administration(NUEPA), New Delhi.
Resource Persons :
Prof. M.R. Chilana, Former Head, Deptt. of Teacher Education, NCERT, New Delhi.

Prof. KK Sharma, Former Pro Vice Chancellor, NEHU, Shillong.

Prof. H.R.Shan, Associate Prof., Deptt. of Distance Education, University of Jammu, Jammu

Prof. A.N.Mishra, Associate Prof., Lingayan University, Faridabad. (December 15, 2010)

44. DAV Moral Education Examination. 18 students from M.Ed. class and 37 students from B.Ed. class appeared (January 15, 2011)
45. Extension Lecture by **Dr. B.K. Kuthiala,** Vice-Chancellor, **Sh. Makhan Lal Chturvedi** National University, Bhopoal and **Dr. S.P. Singh,** Former Principal, S.A. Jain College, Ambala City (January 17, 2011)

Extension Activities of the College

Following educationists delivered extension lectures on different aspects of education.

"Extension lecture on Organic Farming and Cow based Economy".

i) **Dr.G.S.Murthy**, Former Chairman, Deptt. Of Chemistry, Andhra University Hyderabad.
ii) **Dr.M.R.Chilana**, Former Field Advisor, NCERT, New Delhi.
iii) **Mr. S.N.Panda** Director, Regional Institute of Mgt. & Tech., Mandi Gobindgarh.
iv) **Sh. S.N.Shrivastava**, Ex-President, Rotary Club, Ambala Central.
v) **Dr. Khushvinder** Kumar, Principal B.C.M College of Education, Ludhiana.
vi) **Mrs. Renu Dhawan** on Yogic Value.
vii) **Shri Ram Nath Sharma** Retd. Head Master delivered extension lecture on Vedic Mathematics.

Cultural Activities

- Talent Show Programme in (September, 2009)
- AIDS Awareness among Masses. **Chief Guest Sh. Virender Ji Shastri** (October 24, 2009)
- Celebration of Woman Empowerment Day (October 31, 2009)

- District Level Poster Making Competition. **Chief Guest Mrs. Bharti Arora,** S.P., of Ambala. This programme was organized in collaboration with Haryana Police (January 6, 2010)
- Celebration of National Youth Day & Lohri. **Chief Guest Sh. A.P. Mehta** (January 13, 2010)
- Havan Yajna Competition the **Chief Guest Smt. Raj Bhasin** (January 23, 2010)
- Celebration of National Integration Day (January 23, 2010)
- Examination on Moral Education (January 25, 2010)
- Lecture on Yog Shiksha Evam Sharirek Tatha Mansik Sawasthaya. **Speakers Smt. Gauri Vandana,** Lect. M.D. DAV Sr. Sec. Public School, Ambala City, **Mrs. Renu Dhawan,** Patanjali Yog Snasthan (February 6, 2010)
- Celebration of Rishi Bodh Ustav (February 13, 2010)
- Educational Tour (February 16-19, 2010)
- Programme on Art of Living **Guest/Speaker Smt. Neelema Gupta,** Ambala City (February 17, 2010)
- Intra College Competitions on Teaching Aids. **Guests/Speakers Smt. Kiran Singh,** W/o Dr. Mahabir Singh I.A.S., **Sh. M.L. Bansal,** Principal, Vijay Ballabh School, Ambala (February 20, 2010)
- Sports Meet. Chief Guest **Sh. S.C. Ganesh,** Former Lecturer, Govt. College, Ambala Cantt. (February 22, 2010)
- Intra College Competitions (February 23, 2010)
- Work Experience Competitions. **Chief Guest Prof. A.S. Kaang,** Dean, Academic Affairs, KU Kurukshetra (March 6, 2010)
- Film on "Peace". **Mr. G.S. Chopra,** Member, Local DAV Institutions (March 6, 2010)
- Celebration of International Women Day. **Chief Guest Prof. O.P. Bajpai,** Dean & Director, University Institute of Engg. & Tech. (UITE) KU Kurukshetra (March 10, 2010) Tree Plantation Programme was organized in the college in collaboration with Rotary Club, Ambala Central.
- Executive Committee meeting of the Alumni Association of the College was held and the office bearers of the Alumni Association were elected (September 9, 2010)
- B.Ed. Inaugural Function, **Chief Guest: Sh. S.S.Kaushal,** Consultant, Haryana Scout & Guide and Former DPI, Primary Education, Haryana (October 4, 2010)
- Talent Show Competition- Various types of competitions were held like Speech, Singing, Mon-Acting, Dancing, Mimicry, Painting, Poem Recitation and Quiz competition (October 27-29, 2010)
- Youth Festival- Our student participated in various activities in youth festival held at a college of education, Ugala (November 2-4, 2010)

- Green Fest Competition, Gurpreet, B.Ed student (Roll. No. 97) participated in "**Best of Waste Exhibition"** and secured 1st position organized by Environment Awareness Club, S.D.College (Lahore), Ambala Cantt (November 20, 2010)
- Green Fest Competition, Krishna, B.Ed student (Roll. No. 98) participated in "**Rangoli Making**" organized by Environment Awareness Club, S.D.College (Lahore), Ambala Cantt. (November 20, 2010)
- Green Fest Competition, Kavita Badal , B.Ed student (Roll. No. 108) participated in "**Eco- Chic fashion show**" organized by Environment Awareness Club, S.D.College (Lahore), Ambala Cantt. (November 20, 2010)
- Green Fest Competition, Archana, B.Ed student (Roll. No. 46) participated in "**Slogan Writing**" organized by Environment Awareness Club, S.D.College (Lahore), Ambala Cantt (November 20, 2010)
- M.Ed. Inaugural and Orientation Programme- **Prof. C.R. Darolia, Deptt. of Psychology, Kurukshetra University, Kurukshetra was the chief guest** (November 25, 2010)
- Program for Special Children, Our two special students of B.Ed. class participated in the awareness program for special children organized at Govt. Sr. Sec. School, Baldev Nagar, Ambala City. In this workshop, the students were sensitized about various policies of the Govt. for their rehabilitation (December 10, 2010)
- Programme for Special Children, **Dr. Neelam Luthra, Associate Prof.** was the Guest of honour in the awareness program for special children organized at Govt. Sr. Sec. School, Baldev Nagar, Ambala City. She delivered an exhaustive lecture on the topic "Parental Counseling of special children: some valuable tips" (December 10, 2010).
- Awareness Female Foeticide- Amity House of college organized a programme to aware the students about female foecticide. **Chief Guest Shri Mukesh Ahuja,** HCS, SDM, Ambala addressed the students (January 8, 2011)
- State Level Vedic Havan Yajna Competition- State Level Vedic Hawan Yanjna Competition was organized. **Shri Mukesh Ahuja,** HCS, SDM, Ambala was the Chief Guest (January 8, 2011)
- National Youth Day was celebrated in the college (January 13, 2011)
- Programme on Save Environment, Save Earth- Equality House of the college organized a programme to aware the students above the how to save environment, save earth (January 15, 2011)
- Programme on "आत्मा–एक संक्षिप्त परिचय"- Freedom House of the college prgramme on आत्मा–एक संक्षिप्त परिचय Chief guest: **Dr. R.R. Malik,** Principal, G.M.N. College, Ambala Cantt (January 22, 2011)

- Dental Checkup Camp was organized in the college- **Dr. Deepak Arora,** MDS checked the students (January 22, 2011)
- Celebration of National Voters Day- Progress House of the college celebrated the National Voters Day (January 22, 2011)
- National Level Inter College Literary Competitions. Miss Gurpreet Kaur D/o Sh. Baljit Singh, B.Ed, participated in Self Composed Poetry Competition organized by Tulsi College of Education for Women, Hissar Road, Ambala City (January 22, 2011)
- National Level Inter College Literary Competitions. Kavita Badal D/o Sukhdev Badal, B.Ed participated in Caption Writing Competition organized by Tulsi College of Education for Women, Hissar Road, Ambala City (January 22, 2011)
- National Level Inter College Literary Competitions. Suman Lata D/o Lajja Singh, B.Ed participated in Caption Writing Competition organized by Tulsi College of Education for Women, Hissar Road, Ambala City (January 22, 2011)
- National Level Inter College Literary Competitions. Preetika Rawat D/o Surendra Singh Rawat, B.Ed Participated and got Consolation Prize organized by Tulsi College of Education for Women, Hissar Road, Ambala City (January 22, 2011)
- National Level Inter College Literary Competitions. Narinder Kaur D/o S.Darshan Singh, B.Ed got Participating 2nd Prize in Self – Composed Poetry in National Level Inter College Literary Competitions organized by Tulsi College of Education for Women, Hissar Road, Ambala City (January 22, 2011)
- National Level Inter College Literary Competitions. Archana D/o Hukum Singh, B.Ed got Consolation Prize (Slogan Writing) in National Level Inter College Literary Competitions organized by Tulsi College of Education for Women, Hissar Road, Ambala City (January 22, 2011)
- Centre for Sri Aurobindo Studies of the college organized a programme on Life and Works of Sri Aurobindo at P.K.R. Jain College of Education, Ambala City (February 3, 2011)
- Programme on National Integration- Unity House of the College organized a Programme on National Integration.
- Guests : **Shri Jasbir Malour,** Ex-M.L.A., **Shri Arun Bali,** Working President, Sector-9, Ambala City (February 5, 2011)
- Wisdom House of the college organized a programme on AIDS awareness. **Chief Guest- Dr. Dev Raj Gupta,** Member, DAV College Managing Committee, New Delhi and President Arya Samaj, Model Town, Ambala City (February 19, 2011)
- **Ms. Kanchan Verma,** M.Ed. student got second prize in Intra College Essay Writing competition, Arya Girls College, Ambala Cantt (February 21, 2011)

- Four Day Fine Arts workshop organized in Collaboration with PIDILITE on February 22-25, 2011. **Mrs. Kiran Singh W/o Dr. Mahavir Singh** was the Chief Guest on concluding day.
- **Mandeep Kaur (Roll No. 222) & Hardeep (Roll No. 22),** B.Ed Students participated in **Inter-College Speech Contest** & Hardeep got Consolation prize organized by The Haryana State Co-operative Development Federation Ltd., Chandigarh (February 21, 2011)
- Inter House Decoration Competition (on February 26, 2011)
- Inter College Competitions- Parveen (Roll No. 212) & Poonam (Roll No. 116), B.Ed students participated in **Inter College Competitions (Solo Folk Dance)**. Parveen got Ist prize & Poonam got third prize organized at Arya Girls College, Ambala Cantt (February 26, 2011)
- Inter College Competitions- Ruchi (Roll No.65), B.Ed student participated in **Inter College Competitions (Corel- Draw).** Ruchi got third prize, organized at Arya Girls College, Ambala Cantt (February 26, 2011)
- Skill in Teaching Competition- Ms Harjeet Kaur D/o Sh. Parduman Singh, B.Ed student obtained Second position in Teaching of Hindi in Inter College Skill in Teaching Competition organized at Maa Bala Sundri College of Education, Dosarka Sadhaura Road, Vill. Zaffarpur, Teh. Barara , Distt. Ambala (February 28, 2011)
- Skill in Teaching Competition - Komal Popli D/o Sh. Madan Popli B.Ed student obtained Third position in Teaching of Mathematics in Inter College Skill in Teaching Competition organized at Maa Bala Sundri College of Education, Dosarka Sadhaura Road, Vill. Zaffarpur, The. Barara , Distt. Ambala (February 28, 2011)
- Haryana Quiz Competition- Rinku, Hardeep & Sanjeev Kumar, B.ed students participated in **Haryana Quiz Competition** & got Second Prize. Organized at S.A. Jain (P.G.) College, Ambala City on February 29, 2011.
- Women Empowerment Day was celebrated by Women Cell of college and many competitions were organized. Chief Guest- **Mrs. Renu Dhawan,** Social Worker, **Mrs. Neeru Mehta,** Principal, Dev Samaj College, Ambala City (March 29, 2011)
- Blood Donation Camp was organized in college in collaboration with Red Cross Society, Ambala. Many students and faculty members donated blood (March 30, 2011)
- Sports Meet was organized in the college. Chief Guest: **Shri Hari Om Kaushik,** President Haryana Net Ball Association, Vice President Haryana, Olympic Association (April 2, 2011)

COLLEGE RESULTS

Year 2008-09

In the area of academics, our college is always on the top. Keeping up the traditions set by the students of last sessions, our M.Ed. students have reached another milestone by securing all the first fifteen positions in the University examinations held in May 2009 which is a unique record set by our students.

Among the colleges of education with M.Ed. seats, this is the only institution that stands with a victory flag in hands. Preeti Kalsia, a M.Ed. student bagged the Gold Medal by getting 586/750 marks followed by Garima Batra who secured second position with 584/750 marks. Amrita Sawhney of our college got the third position in the university with 576 marks. Other position holders are Shweta Raina, Rajni Khurana, Pooja Gaba, Esha Sekhri, Deepti, Rajni Dhiman, Kiran Deep, Nivedita Rai, Geeta Bali, Veenu Saini, Meenu, Kamini Jain, Harvinder Kaur have bagged 4^{th} to 15^{th} position respectively. Only 16^{th} positions is shared by our Deepa Rani with a student of another college of Kurukshetra University.

Our ten students Priti Kalsia,Garima Batra, Shweta Rana, Rajni Khurana, Esha Sekhri, Deepti, Geeta Poli, Sushil Kumar, Pardeep Kumar, Anil have cleared NET examination held in 2009-10. Out of these four students namely Garima Batra, Shaweta Rana, Esha Sekhri and Anil have been awarded junior Research Fellowship by UGC besides clearing NET examination.

Result of NET examination conducted by UGC in June 2010 is awarded. Hopefully ten more M.Ed students of this College will clear Net examination held in June 2010. Net examination is held in June and December every Year.

The number of students clearing NET examination gain importance in view of the fact that the sanctioned intake capacity of M.Ed Course is 25 only.

M.Ed.

2009-2010

All the students of M.Ed. class (2008-2009) have been placed in First Division

Priti Kalsia	**First** in University
Garima Batra	**Second** in University
Amrita Sahney	**Third** in University
Shweta Raina	**Fourth** in University
Rajni Khurana	**Fifth** in University
Pooja Gaba	**Sixth** in University
Esha Sekhri	**Seventh** in University
Deepti	**Eighth** in University
Rajni Dhiman	**Ninth** in University
KiranDeep	**Tenth** in University
Nivedita Rai	**Eleventh** in University
Geeta pali	**Twelfth** in University
Veenu Saini	**Thirteenth** in University
Meenu	**Fourteen** in University
Kamini Jain	**Fifteenth** in University
Harvinder kaur	**Sixteenth** in University
Deepa Rani	**Seventeenth** in University

B.Ed. (2009-2010)

B.Ed. Class Result	**100%**
Students appeared	- 238
Students passed	- 238
Students securing more than 60% marks	- 179
Deepika Gupta – 724/1000	1st
Pushpa Rani – 717/1000	2nd
Divya - 713/1000	3rd

Academics M.Ed. Class (2010-2011)

All the students of M.Ed. class have been placed in First Division. Our following students got positions in the Kurukshetra University (2009-2010)

1. Deepika Gupta (Ist)

2. Ruchy Sharma (2^{nd})
3. Jaspreet Kaur (3^{rd})
4. Aarti Sharma (3^{rd})
5. Shivani Mahajan (4^{th})
6. Kanchan (7^{th})
7. Raj Pal (8^{th})
8. Swati Bajaj (9^{th})
9. Harpreet Kataria (11^{th})
10. Manpreet Kaur (13^{th})
11. Shashi Bala (15^{th})
12. Jaspreet Singh (16^{th})
13. Poonam Bist (18^{th})
14. Dharmender Kashyap (19^{th})

Academics B.Ed. Class (2010-2011)

B.Ed. Class Result (2009-2010) **100%**

Our following students got positions in the College

1. Amarjeet Kaur (1^{st}) 746/1000
2. Pooja Goyal (2^{nd}) 727/1000
3. Bharti Choppra (3^{rd}) 726/1000
4. Jyoti Kapoor (4^{th}) 725/1000
5. Shelly Bhalla (5^{th}) 723/1000
6. Shivali (6^{th}) 720/1000
7. Neha Gupta (7^{th}) 718/1000
8. Shivani Sharma (8^{th}) 717/1000
9. Shelly Sharma (9^{th}) 715/1000
10. Hemant Chaudhary (9^{th}) 715/1000
11. Neha Gupta (10^{th}) 714/1000

Co-Curricular Activities

The institution ensures participation of students in various curricular, extracurricular and cocurricular activities by providing facilities and opportunities leading to the harmonious development of the individual. The institution provide specific platform to participate in various competitions and students not only participate but bring Laurel and the College.

Our B.Ed student Tarun Kaushal was conferred National Youth Award by Vice President of India for his Outstanding Contribution to National Development and Community Services.

This year 25 Students participated in various competitions organised at State Level. Out of whom, 8 stydents obtained first position and 4 got second position and 6 got third position. Four B.Ed students of our college got the opportunity to participate at International level in 'Yuva Meet 2010' organised by 'The Energy Resources Institute (TERI) in collaboration with ministry of Youth Affairs and Sports, Government of India and British Council, U.K.

YEAR 2007-08

For the last seven consecutive years, M.Ed. students of this College have secured First position. Bharti Alagh got 569 marks out of 750 and topped the list of successful candidates. Baljeet Singh, Preetinder Kaur, Sanjeev have got Sixth, Seventh and Ninth positions respectively. Result is cent percent. All the students have been placed in First division.

Garima Batra B.Ed Student got second position in university securing 779 marks out of 1000. Nivedita Rai and Neetu Bhandari have got Eighth and Twelfth position in Merit List of B.Ed Students declared by Kurukshetra University, Kurukshetra respectively.

Our Twelve students Bharti Alagh, Ila, Sonia Yadav, Baljeet Singh, Naina, Preetinder Kaur, Neeru, Budh Singh, Sanjeev, Vandana, Angrej Singh and Seema have cleared NET examination held in 2008-09. Out of these three students, namely Naina, Preetinder Kaur and Angrej Singh have been awarded Junior Research Fellowship by UGC besides clearing NET examination.

YEAR 2006-07

For the last six consecutive years, M.Ed. students of this College have secured First position. This year Mrs. Sheetal Batra got 574 marks out of 750 and topped the list of successful candidates. Ruchi Mehta, Nisha Singh, Reetika have got Second, Fifth and Seventh positions respectively. Result is cent percent. All the students have been placed in First division.

Our eleven students Sheetal Batra, Ruchi Mehta, Reetika Dhingra, Parvinder Kaur, Vaishali, Supninder Kaur, Priya Dhingra, Ravinder Siani, Avnish Kumari, Gaurav Saini and Suman have also cleared NET examination held in December, 2006. Out of these three students, namely Sheetal Batra, Ruchi Mehta and Reetika Dhingra have been awarded Junior Research Fellowship by UGC besides clearing NET examination.

POTENTIALS OF THE COLLEGE

Sohan Lal DAV College of Education, being a premier college of teacher education, is doing its best in giving training to prospective teachers, who will in turn shape the future of the nation in their classrooms. Over the years, the college has seen its contours of development. In the process, it could familiarize itself with its strengths to be exploited for its growth to the optimum extent. The following potentials of the college as a resource have been taken into cognizance for its future growth:

(i) Deep-rooted philosophy of the institution for human emancipation
(ii) Well-established and visionary Managing Committee
(iii) Adequate physical infrastructure and resources
(iv) Dedicated, committed and professionally well qualified personnel
(v) Sound financial back up of the college
(vi) Qualified and well placed Alumni of the College
(vii) Progressive Parent Teacher Association
(viii) Community and Industry support available to the college
(ix) Established centres, cells and subject associations/societies in the College

RESOURCES OF THE COLLEGE

With sustained efforts and clarity of purpose, the college has mobilized its rich resources that have resulted into the establishment of well built physical infrastructure and conducive learning climate. A brief description of these resources is given here in order to understand the present status of the college and possibility of its future growth and development. The resources are:

(i) Double storied Main Building, an Auditorium, Fine Arts Block, Health & Sports Block and Administrative Block
(ii) Grassy lawns and play grounds
(iii) Well established library with modern facilities (automation)
(iv) Science laboratories-Physical & Life Sciences, Home Science
(v) Home Science Laboratory
(vi) Social Science Laboratory

(vii) Mathematics Laboratory
(viii) Fully Air- conditioned Library
(ix) Fully Air- conditioned Computer Laboratory
(x) Psychology Laboratory
(xi) Work Experience Laboratory
(xii) Patanjli Yoga Centre
(xiii) Audio-visual Lab-Hardware equipment and Software
(xiv) Language Laboratory
(xv) Training, Placement and Counselling Cell (TPCC)
(xvi) Centre for Sri Aurobindo Studies
(xvii) Centre for Innovations, Research and Development (CIRD)
(xviii) Vocational Guidance Centre (VGC)
(xix) Women Study Cell (WSC)
(xx) Science Discovery Centre
(xxi) Science Park
(xxii) Reprography Centre
(xxiii) Muscle Zone (Health, Sports and Gym Centre)
(xxiv) Planning & Development Board
(xxv) Refreshment Corner

LIBRARY

This college is marching ahead in serving the cause of teacher education and library has assumed great heights under the dynamic leadership of Principal Dr. Vivek Kohli and able and energetic librariran Dr.Nirmal Goyal and the staff.

It is proud of its rich, well-equipped, computerized Library and Information Center with all modern facilities; It is the first of its kind in the entire Northern India. Both the staff and the students can now get the required information at the press of button and click of the mouse. It provides stimulus to reading by procuring and displaying materials on Internet for study and research, and organizing library resources in a scientific way. The Library and Information Centre meets the diverse scholastic needs of students, resear and faculty cbers in the shortest possible time. It has the follow characteristics features:

(i) BASIC INFORMATION:

The Library and Information Centre has a seating capacity of 125 readers. It has a circulation counter, Newspaper Section; separate reading sections for B.Ed. and M.Ed students and faculty members. It has about 24000 books on education, and other disciplines and 500 bound volumes of journals. It subscribes to 70 journals, 8 Newspapers and has 80 CD's on different subjects like Mathematics, Social Science and technology and separate reference section it has separate section books journals and newsletters on Sri Aurobindo (Related to Centre for Sri Aurobindo Studies), which can be viewed on computer.

(ii) LIBRARY AUTOMATION:

The library is fully automated. The various house keeping operations i.e. Acquisition of books, cataloguing, classification, circulation of books, inquiry, etc are in practice. The college library has purchased a new software package from an Australian based concern M.S soft link Asia Pvt. Ltd., Faridabad. It has electronic cataloguing resource management tools to simplify the library administrative tasks. Following are the modules with their brief application, which the library has purchased.

- **STANDARD MODULES:** Management, Periodicals, Inquiry.
- **ADVANCED MODULES:** Acquisition, Periodicals.
- **FEATURES OF THE SOFTWARE:** the main Features of the software for readers are:-
- **INQUIRY:**

The readers can use this software himself/herself just like catalogue and can seek inquiries on various fields such as Author, Title, and Publisher, Accession no, Bar code no, Call no, and Subjects.

The inquiry is not only for books but also for the Periodicals, Reports or any other material contained in the college library. With the help of this software, Reports regarding each module can be taken at the shortest time.

- **CIRCULATION COUNTER:**

Circulation Counter remains open from 9:30 a.m. to 4 a.m. for issue and return of books. Library has also introduced a Barcode System for circulation of books. All he books and the

borrowers will have their own barcode given on the book and library card. With the help of Barcode Scanner the required books get issued easily to members without wasting their time.

- **CLASSIFICATION SYSTEM:**

Books in the library are classified according to the Dewey Decimal system and shelved numerically according to their Call Numbers. Reference books, denoted by R before the accession no, are shelved separately in the Reference Section.

- **TECHNICAL PROCESSING:**

The library uses the following tools for technical processing of books and journals, so as to facilitate the members to locate documents easily.

1. DDC: 19th edition for Classification.
2. Cutter's Table for assigning Book Numbers.

(iii) RULES AND REGULATIONS:

1. Normally books from the general collection are only to be issued.
2. Two books are issued to B.Ed. students and four books are issued to M.Ed. students for 14 days. A fine of Rupee one per day is charged for each volume kept over due.
3. Rare and Valuable books, dissertations, CDS are not issued for home study.
4. Reference books like Encyclopedia, Dictionaries and bound materials are not issued.
5. Reports, Gazettes, Government Publications are issued to members for consultation within the library only.
6. Library has Open Access system and the readers can pick up the books of their own choice.
7. Borrowed books are to be returned to the library on or before the due date.
8. The lost of Identity card should be immediately reported to the Principal/Librarian in writing.
9. A duplicate card is issued on payment of Rs. 50/-.
10. A borrower is responsible for the safe custody and return of book on loan from the library.
11. Damage or loss of books should be immediately reported to the Librarian.

12. A borrower is liable to replace the damaged or lost book with the same edition or to pay the double price as fixed by the Librarian depending upon the current market price and conversion rate of foreign currencies.
13. It one volume of set is damaged or lost and the same is not available, the borrower will have to replace the entire set.
14. Students on leave must arrange for the return of books in time.

FUTURE PLANS:

Library and Information Centre has earlier organized a INFLIBNET Regional Training Programme for Librarians from Nov. 1-3, 2003 In this Programme, 38 Librarians from various states like U.P., Haryana, Chandigarh and participated. The college library is going to add Web Inquiry (OPAC) and Online Public Access Catalogue in to use the documents of other libraries also.

PROGRAMMES OF SLDAV (IASE)

The college has the following major thrust areas of study, research, development and research.

(i) Science Education
(ii) Maths Education
(iii) Social Science
(iv) Language Education
(v) Yoga, Value Education and Spirituality
(vi) Information and Communication Technology (ICT)
(vii) Adventure Sports – Hiking, trekking and Rock Climbing

The programmes under IASE have been under taken and classified under three categories:

1. Level-based – Elementary, Secondary/Sr. Secondary Schools
2. Area-based – Curriculum Development, Teaching Learning Process, Measurement & Evaluation, etc
3. Need-based – Related to students/teacher/teacher eductor/community

Basing on the above stated three categories of programmes in teacher education to meet the needs of functionaries & beneficiaries of the education system, the following initiatives have been taken:

(i) Structuring/revising of curricular programmes in teacher education for different categories

(ii) Designing effective strategies of teacher training of teachers at Pre-service & In-service level

(iii) Identification of professional needs of teachers in the changing scenario

(iv) Identification of changing needs of children & formulating programmes for the same having concern with parents & community

(v) Identification of changing needs of community & formulating programmes of teacher training to meet the same

(vi) Development of instructional materials through workshops

(vii) Orientation of Heads of schools and educational administrators on educational administration and management

(viii) Designing remedial/alternative strategies for quality improvement in different areas of teacher education

(ix) Orientation of teachers & supervisory staff towards different strategies of value development for students & teachers

(x) Experimenting innovations in classroom teaching & related programmes for quality improvement

(xi) Inculcating national awareness and commitment among educational professionals

IMMEDIATE GOAL OF THE COLLEGE

As a logical consequence of the developments of the college, recommendations of the National Assessment and Accreditation Council (NAAC) and the policy of DAV College Managing Committee, the college is heading towards attaining complete autonomy in its structure and functioning to realize its goals. The autonomy of the college would culminate into the formation of Deemed University of Pedagogical Sciences to serve the country with its best capacity and strength.

PRINCIPAL

FEATURES OF THE CENTRE

Innovation | **Research** | **Development**

- ❖ Exploring new ways for improving teacher education
- ❖ Initiating and experimenting innovations in teacher education
- ❖ Pooling and disseminating innovations in teacher education
- ❖ Developing creative and critical thinking
- ❖ Undertaking action research at grass-root level
- ❖ Consolidating researches and building new models/structures for further study
- ❖ Developing long-term thrust areas in research
- ❖ Application of innovations and research findings for development
- ❖ Development of instructional/reading material

Our Mission

Sohan Lal DAV College of Education (IASE), Ambala City, the premier institute of DAV College Managing Committee, New Delhi, has been catering to te needs of teacher education since 1939, firstly at Lahore and then after partition at Ambala City. It is marching ahead to translate the ideals of Rai Bahadur Sohan Lal Ji, the founder of the college for producing excellent teachers. In this background the college solemnly declares to build human resource devoted and dedicated to the cause of education. This task is being taken up in response to Indian ethos and culture coupled with science and technology, thus meeting the needs and challenges of third millennium.

For Restricted Circulation Only