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IMPACT OF A REMEDIAL STRATEGY ON TRIGONOMETRICAL ERROR PATTERNS- A CASE STUDY

DR.KHUSHVINDER KUMAR*
MR. GAURAV KUMAR**

ABSTRACT

Mathematics in daily life, to a large extent is problem solving. Problem solving approach which is core of teaching and learning of Mathematics, depends upon trial and error theory. The errors committed by students cannot be eliminated but reduced to certain extent by studying their causes. Teaching is a process in which a teacher follows various steps out of which two major steps are to discover the errors of students and to provide the remedy for the errors. An attempt was made in the present investigation to study the case of a subject which showed maximum reduction of errors. It found that, the perceptual errors in case of the subject were totally eliminated.

Key-words: Case study, Entry behavior errors, Perceptual errors, Conceptual errors, Computational errors, Remedial Teaching, Strategy.

The present study is the case of Amandeep Kaur which is a part of the broader study "Impact of A Remedial Strategy on Trigonometrical Error Patterns in relation to Cognitive Styles and Cerebral Dominance". The study was experimental in nature. Percentage of reduction in errors committed by the students was studied with the help of statistics. For qualitative analysis, some case studies were done. The present study is also one of those case studies. The subject was in the experiment group of the investigator. Maximum percentage of reduction in errors reported in case of the subject.

Generally attempts have been made at identifying errors committed by students however a few studies have been found aimed at remedying the

* Principal, BCM College of Education, Ludhiana

**Asst. Prof. Moga College of Education, Ghal Kalan, Moga

trigonometrical errors. Mathematics in daily life, to a large extent is problem solving. It is not a rote learning subject. Problem solving approach which is core of teaching and learning of Mathematics, depends upon trial and error theory. Recognizing the significance of PSA, CBSE has introduced Problem Solving assessment for class IX and XI w.e.f. 2012-13 vide circular no. 087/2012 dt 6.11.2012. Trigonometry is a major topic in the curriculum of Mathematics. Students commit so many errors in Trigonometry.

Errors may occur at any stage in the progress of problem towards solution. There are many reasons behind an error.

Newman (1977), Casey (1978), Clements (1980), Raman (1989) classified errors in different types. In the present study, the classification given by Raman (1989) was taken. Overall as well as type wise percentage of errors of the subject was studied.

The subject was in tenth class of Govt. Sen. Sec. School, Khosa Randhir of Moga district. The school is affiliated to PSEB, Mohali. The health of the subject was normal and she was not affected from any serious disease. The vision, hearing and speech of the subject was also normal as observed by the investigator. Father of the subject is a farmer and mother is house wife. She has one sister studying in seventh grade. There was a congenial environment at home. Parents and siblings enjoy healthy relationship.

Subject usually watches television in her free time and also spends time with her peers. She took part in various co-curricular activities like Gidha, Athletics etc. organized by school. She also voluntarily helped in the organization of school functions. The conduct of the subject was good and she behaved very well with her peers and elders. She was not confident in classroom interaction whereas she was confident in her peer group.

Previous Achievement in Mathematics:

She got 44 out of 100 in Mathematics in IX grade annual exams 2009.

Diagnosis:

A self prepared diagnostic test of Trigonometry was administered to diagnose the errors committed by the subject in four categories i.e. Entry Behaviour errors, Perceptual errors, Conceptual errors and Computational errors.

On the diagnostic test comprising of 60 items, the subject committed total 39 errors in pre test out of which 10 were Entry Behavior, 7 Perceptual, 10 Conceptual and 12 Computational errors.

Treatment:

Amandeep was subjected to the remedial teaching of forty sessions of thirty five minutes duration each. After the treatment a post-test had been administered to the subject.

Results:

In the post test comprising of 60 items, the subject committed total 8 errors out of which 2 were Entry behavior, 3 Conceptual and 3 Computational errors. No perceptual error was committed by the subject. It found that there was significant reduction in Entry Behavior, Perceptual, Conceptual and Computational errors committed by the subject in Trigonometry which is evident from the comparison of pre and post test scores and percentage reduction of errors given in Table 1.1 and Figure 1.1. The subject benefited most from the strategy in remedying the perceptual errors.

Table 1.1 : Comparison of Type wise and overall errors committed by Amandeep in pre and post tests

Types of Errors	Test	Errors Committed	Percentage Reduction
E ₁	Pre Test	10	80%
	Post Test	2	
E ₂	Pre Test	7	100%
	Post Test	0	
E ₃	Pre Test	10	70%
	Post Test	3	
E ₄	Pre Test	12	75%
	Post Test	3	
E	Pre Test	39	79.49%
	Post Test	8	

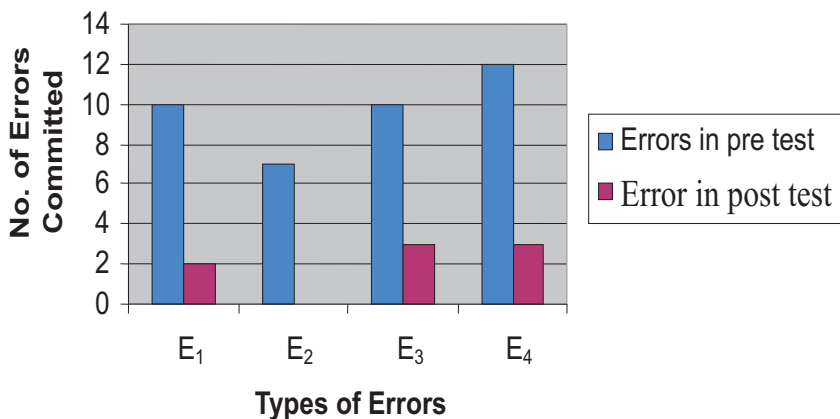


Fig. 1.1: Bar Graph showing comparison of different types of errors committed by Amandeep in Pre and Post tests

Follow Up:

Mathematics teacher of the subject was guided about drill work technique in Mathematics so that he can continue to offer support in the school. Two months after the treatment researcher visited the school again to witness the progress made by the subject. Her mathematics teacher told that her performance in classroom interaction was better than before the experiment and the performance in class tests has also been improved. The scores in class tests after the experiment were given in the table 1.2.

Table 1.2: Comparison of performance of the subject in Mathematics before and after the Experiment

Before Experiment	May, 2010	July, 2010	August, 2010	September, 2010	October, 2010
	12/20	13/20	11/20	10/20	12/20
After Experiment	Jan, 2011	Feb, 2011	March, 2011		
	16/20	15/20	15/20		

Opinion of siblings

The subject's sister reported that before the experiment she spent her ideal time in watching T.V. programs and talking about her classmates. She told that during the experiment Amandeep did home work regularly and talked about the classroom activities instead of classmates only. She made serious efforts towards doing drill work of mathematics daily during not only the experiment but she made it her habit.

Opinion of parents

The parents of the subject reported that the subject reduced the time in watching Television and straying. Before experiment she helped in house chores sometimes but during the experiment she preferred her home work to house chores. Everyday she studied about two hours at night after dinner.

Opinion of Mathematics teacher

The subject's mathematics teacher reported that her performance in class interaction as well as in class tests was average. She was punctual and interacted rarely in classroom discussions. Her homework were found occasionally full of mistakes. But after the experiment she not only interacted in the class but gave strong logics to the questions. e.g The teacher solved the problem $\sin^2 A + \cos^2 A = 1$ by deductive derivation from Pythagoras theorem as below;

In a Right angled Triangle ABC,

By using Pythagoras Theorem, $AB^2 + BC^2 = AC^2$

Divide both sides by AC^2 , We have,

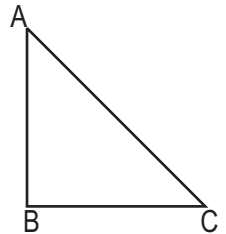
$$\frac{AB^2}{AC^2} + \frac{BC^2}{AC^2} = \frac{AC^2}{AC^2} \quad \text{or} \quad \left(\frac{AB}{AC}\right)^2 + \left(\frac{BC}{AC}\right)^2 = 1$$

$$(\sin)^2 + (\cos)^2 = 1 \quad \text{or} \quad \sin^2 + \cos^2 = 1$$

Take L.H.S. $\sin^2 + \cos^2 = \frac{AB^2 + BC^2}{AC^2}$

By using Pythagoras Theorem,

$$\text{L.H.S.} = \frac{AC^2}{AC^2} = 1 = \text{R.H.S.}, \text{ Hence proved.}$$



She studied every topic deeply and asked about application part of some topics.

e.g. In daily life, where we use heights and distances, profit and loss, mensuration, algebra, geometry etc. How would she benefited in routine life by using mathematics fundamental rules.

There were so many if, how, why, what etc. about the topics in her interaction. There was a lot of reduction in the mistakes in her homework.

Opinion of peer group

The peer group of the subject reported that she did her studies in free periods during the experiment. Now students consulted their problems in mathematics with her and most of the times she satisfied them by giving logics and making them understand about the fundamental rules in mathematics.

Conclusions :

After studying the case thoroughly, the investigator reached at the following conclusions:

Errors

- It was noted that total number of errors committed by the subject has been reduced significantly. The total percentage of reduction in errors was 79.49%.
- The perceptual errors have been totally eliminated.
- The least percentage of reduction in Conceptual errors have been 70% which is also highly significant.
- In the follow up after two months subject reported significant increase in marks in the monthly class tests.

General Behaviour

Following changes have been observed in the general behavior of the subject

- The subject started exhibiting interest in class activities.
- Subject exhibited her deep knowledge of Mathematics by offering help in solving problems of peers.

Study Habits

Following changes were reported in the study habits of the subject

- The subject started spending her ideal time in doing homework after the experiment.
- The subject started more judicious use of time for studies.
- After the experiment, the subject exhibited the habit of planned, neat & clean and stepwise home work.
- The subject started taking interest in discussions on topics of mathematics with peers.
- The subject started taking active part in classroom interactions.

Introspection Report by the Subject

I feel that the experiment proved very beneficial for me. I had interest in Mathematics but not performed well in solving problems. During the experiment, I came to know where I was weak in Mathematics. I took drill work very seriously. I have interest in solving problems in which we have to convert word problems in figures and diagrams than in calculation work. Now I prefer the school work than helping in house chores. I became confident not only in classroom discussions but also I help my peers in solving their problems in Mathematics. During the experiment, the investigator taught the group with a lot of drill work and no punishment was given to us which is not in our routine school life.

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ASPIRATION AND ACHIEVEMENT DIFFERENTIALS IN CHILDREN OF WORKING AND NON WORKING MOTHERS

BALTINDER KAUR*

INTRODUCTION

To quote Pt. Nehru, "To awaken the people, it is the women who must be awakened, once she is on the move, the family moves, the village moves, the nation moves". Certainly today the woman is on the move. She moves in the house to look after the needs of one all, set it to order, improve it and enrich it and she moves out of her house to go to her place of work to empower herself, to enhance herself, to enrich herself and to find for herself recognition, status and also acknowledgement that she can work well both within and outside the four walls of the house. It is a fact that in whatever field she has been, she generally works satisfactorily well to carve out a distinctive position for herself.

Whatever the role and status the woman has attained; one role which has remained unchanged is the role as a mother. The age old proverb. 'The hand that rocks the cradle rules the world' still holds true because it is the mother who is basically responsible for the rearing of the child and inculcating in it the healthy habits, thus leading to harmonious growth and development in an atmosphere marked by cordial relations, whole hearted commitment and true to life adjustment. It is here that consciously and unconsciously aspirations arise, and all the efforts made to help the child adjust in a manner where aspirations turn out to be achievement or in other words efforts are made to turn the dreams of today into realities of tomorrow. Indeed the moment the child attains the concept of self his aspirations also start taking its concrete shape. Aspiration means an eager desire to achieve something. It is a force, which energizes, directs and sustains one's behavior. Eysenck, Hoppe Frank defined aspiration as a possible goal which an individual sets for himself. Hence aspiration works as a raw material for human behavior which determines his direction and rate of action which in turn is highly affected by the achievement of individual in various fields of Life.

* Principal, Kirpal Sagar College of Education, Dariyapur, Rahon

Achievement may be defined as the range of ability and skill which the individual has acquired in any field of life. Achievement according to Smith (1969) and Spence Helmrich (1983) is that task oriented behavior that allows the individual's performance to be evaluated internally or externally that involves that individual in competing with others, or that otherwise involves some standard of excellence

Certainly Aspiration, Achievement of an individual, no doubt, depends on various factors but the factor that influences the most is the home and in the home also the person who carries the most commanding influence is that of the mother who rightly is said to be the first teacher of the child, the one person who can make or mar the child's life.

Hence the problem was taken to study the Aspiration, Achievement Differentials in the Children of working and non-working mothers.

Objectives of the study

The main objectives of the study are:

1. To find out the difference between Level of Aspiration of Children of Working and Non-Working Mothers.
2. To find out the difference between Achievement of Children of Working and Non-Working Mothers.
3. To find out the difference between Level of Aspiration of Children having Rural and Urban Background.
4. To find out the difference between Achievement of Children having Rural and Urban Background.
5. To find out the difference between Level of Aspiration of Boys and Girls.
6. To find out the difference between Achievement of Boys and Girls.

hypotheses of the study

The following specific research hypotheses were formulated:

1. The Level of Aspiration of Children of Working Mothers is significantly higher than Children of Non-Working Mothers.
2. The Achievement of Children of Working Mothers is significantly higher than Children of Non-Working Mothers.
3. The Level of Aspiration of Urban Children is significantly higher than that of Children of Rural Areas.

4. The Achievement of Urban Children is significantly higher than that of Children of Rural Areas.
5. There exists a significant difference between Level of Aspiration of Boys and Girls.
6. There exists significant difference between the Achievement of Boys and Girls.

METHODS

Sample

In the present study out of 19 districts of Punjab one district i.e. Ludhiana was taken on the random basis. Further for data collection 20 senior secondary schools (10 from urban and 10 from rural area) were randomly selected. For administration of test 1000 students at 10+1 level were selected on purposive basis i.e. 500 of working mothers and 500 of non-working mothers. The further classification was made on the basis of locality, means 250 students of urban working and 250 for urban non-working. Similar classification was done for rural areas. This was still further segregated on the basis of gender differences. As such the data represented from the children of working mothers from urban areas was 125 girls and 125 boys and rural areas was 125 girls and 125 boys. Similar classification was done for non-working mother's children for boys and girls.

Variables

The Independent variables are Work status of mothers, Locality and Gender. The Dependent variables are Level of aspiration and Achievement.

Tools used

The following tools were used for collection of data:

1. Level of Aspiration by Dr. Mahesh Bhargava and Prof. M.R. Shah,
2. Academic Achievement (marks of previous board class will be taken).
3. Statistical Techniques: The analysis of the data was done by computing mean, SD, t- test and product of moment correlation.

Major finding of the study.

Analysis was done on the based on objectives and related hypothesis

Objective I: - To find out the difference between Level of Aspiration of Children of Working and Non-Working Mothers

Table. No.1

	N	Mean	SD	t-ratio
Children of working mothers	500	4.86	2.34	3.72*
Children of non-working mothers	500	4.26	2.77	

* significant at 0.01 level

It is observed from the result that the obtained “t”-value is 3.72 which is higher than the theoretical value at 0.01 level, Hence hypothesis 1st is accepted. The mean aspiration score of children of working mothers is (4.86) higher than that of children of non-working mothers (4.26). It means that the level of aspiration of children of working mother is higher than that of children of non-working mothers. The reason behind is that the involvement of working mothers and their high expectations make their children behave in a more responsible way which ultimately leads them to aspire for higher, richer and better goals for themselves.

Objective II: - To find out the difference between Achievement of Children of Working and Non-Working Mothers.

Table.No.2

	N	Mean	SD	t-ratio
Children of working mothers	500	62.59	12.92	2.48**
Children of non-working mothers	500	60.57	12.82	

* significant at 0.01 level

It is observed from the result that the obtained “t”-value is 2.48 which is higher than the theoretical value at 0.01 level, Hence hypothesis 2nd is accepted. The mean achievement score of children of working mothers (62.59) is higher than that of the children of non-working mothers (60.57). It means that achievement

of children of working mothers is higher than that of non-working mother's children. The reason behind is that the working mothers take full interest in the all round academics and all round activities of their children. They want to see them grow academically excellent because in their excellent academics the seeds for their soaring success are sown, as such they not only motivate them but also make all sorts of possible arrangements to boost their morale and enrich their intellect.

Objective III: - To find out the difference between Level of Aspiration of Children having Rural and Urban Background.

Table.No.3*

	N	Mean	SD	t-ratio
Children of urban background	500	5.04	2.74	5.98*
Children of rural background	500	4.1	2.32	

significant at 0.01 level

It is observed from the result that the obtained “t”-value is 5.98 which is higher than the theoretical value at 0.01 level, Hence hypothesis 3rd is accepted. The mean level of aspiration score of urban children (5.04) is higher than that of rural children (4.1). It means that urban children have higher level of aspiration. The reason behind is that the educational environment is a good contributing factor in this regard. The better facilities for education like good schools, excellent coaching centers, well equipped libraries supported by latest information technology and competent teachers prompt them to have higher level of aspiration.

Objective IV: - To find out the difference between Achievement of Children having Rural and Urban Background.

Table.No.4

	N	Mean	SD	t-ratio
Children of urban background	500	68.18	4.33	18.81*
Children of rural background	500	55.0	4.68	

* significant at 0.01 level

It is observed from the result that the obtained “t”-value is 18.81 which is higher than the theoretical value at 0.01 level, Hence hypothesis 4th is accepted. The mean achievement score of urban children is (68.18) higher than that of rural children (55.0). It reveals that the achievement of the children of urban areas is higher than the children of rural areas. The reason behind this is the social environment works as a great motivating force for higher achievement of urban children. Urban children are exposed to cut throat competition which prompts them to reach the heights of excellence in academics.

Objective V: - To find out the difference between Level of Aspiration of Boys and Girls.

Table.No.5

	N	Mean	SD	t-ratio
Boys	500	4.79	2.68	2.85
Girls	500	4.33	2.48	

* significant at 0.01 level

It is observed from the result that the obtained “t”-value is 2.85 which is higher than the theoretical value at 0.01 level, Hence hypothesis 5th is accepted. The mean aspiration score of boys (4.79) is higher than that of the mean aspiration score of girls (4.33). Therefore, it may be interpreted that the level of aspiration of boys is higher than the girls. The reason behind is that this may be due to the fact that in the family conditions are not congenial to the proper upbringing of the girls who are even today looked down upon as a big burden by the parents and the society.

Objective VI: - To find out the difference between Achievement of Boys and Girls.

Table.No.6

	N	Mean	SD	t-ratio
Boys	500	64.32	11.98	6.86*
Girls	500	58.84	13.22	

*significant at 0.01 level

It is observed from the result that the obtained “t”-value is 6.86 which is higher than the theoretical value at 0.01 level, Hence hypothesis 6th is accepted. The mean achievement score of boys is higher (64.32) than that of the girls (58.84). Therefore, it may be interpreted that achievement of boys is higher than the achievement of girls. The reason behind is that boys have more social interaction which provides them good opportunities to come in contact with their role models. They have a spirit to soar higher and higher in life.

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RELEVANCE OF CONCEPT OF SCHOOL OF B.R. AMBEDKAR IN PRESENT SYSTEM OF EDUCATION

HARMEET KAUR ANAND*

ABSTRACT

The present study was undertaken to study the relevance of concept of school of B.R. Ambedkar in present system of education. The study was based on B.R. Ambedkar's educational views scattered in his various works. The investigator had adopted descriptive method and constructive analysis of relevant literature by and on B.R. Ambedkar. The investigator had tried to undertake a close view of the primary and secondary sources of B.R. Ambedkar's educational philosophy. The objectives of the study were: To study the evolution of thought process of B.R. Ambedkar.; to study the educational thoughts of B.R. Ambedkar drawn out from his philosophy of life; to study the relevance of concept of school of B.R. Ambedkar in present system of education. His general philosophy was to remove the stigma of untouchability from the life of untouchables and able them to lead a respectful life. His educational philosophy was to serve the country & downtrodden; to provide equal opportunities in all fields of life especially in educational field. The relevance of concept of school of B.R. Ambedkar in present system of education can be seen in Article 29, 30; Sarva Shiksha Abhiyan, Right to Education Act; Right to Information Act; Reservation Policy and in modern aims of education.

INTRODUCTION

Education in real sense is to humanize humanity and to make life progressive, cultured and civilized. It is through education that man develops his thinking, reasoning, problem solving ability, creativity, intelligence and aptitude, positive sentiments and skills. According to Rig Veda, "Education is that which makes a man self-reliant and selfless. But Philosophy is an intellectual adventure for

* Principal, Mata Sahib Kaur Khalsa Girls College of Education, Dhamomajra, Patiala

excellence. It does not embody a mere emotional reaction or imagination as that of a poet but speaks the language of reason which is not prompted or influenced by feelings or emotions. It is a systematic and scientific process of investigation. It is a logical inquiry to know the true nature of different things. Philosophy is the father of all sciences and mother of all arts. It deals with every sort of knowledge. Educational philosophy seeks to determine what and why of education. According to Brubacher, Educational philosophy is speculative, normative and critical. Thus Philosophy is theory and Education is practice. Theory deals with practice and practice improves theory. It is said that Education without philosophy is blind and Philosophy without education is invalid. Philosophy deals with ends and education is meant to achieve these ideals, values and principles. The development of Indian Educational Philosophy can be divided into Vedic Period, Post Vedic Period, Buddhist Period, Medieval Period, British Period, and Modern Period.

EVOLUTION OF THOUGHT PROCESS OF B.R. AMBEDKAR

His life: Bhimrao Ramji Ambedkar was born on 14th April, 1891 of Mahar Parents (Ramji Maloji Sankpal and Bhimbai) at Mhow (Mahu in ex-indore state). His father was a military Subedar and was a Kabirpanthi devotee. He matriculated in 1908 from the Elphinstone High School, Bombay and graduated in 1912 from the Elphinstone College. In 1913 he went to USA on a Baroda state scholarship and joined the Columbia University from where he took his M.A. in economics in 1915 and Ph.D. in 1916. But in 1917 he had to discontinue his studies on the expiry of his scholarship and return to India. Back in India he taught at the Sydenham College of Commerce and Economics, Bombay as Professor of Economics from 1918 to 1920. Having saved some money with financial assistance from some of his friends he went to England again in 1920 to complete his studies. He obtained the M.sc. degree in 1921 and was awarded the D.sc. degree in 1923.

Thoughts of Babasaheb Ambedkar:

- ❖ If you want success, you must be narrow minded.
- ❖ There will be no difference between Parents and Animals if they will

not desire to see their children in a better position than their own.

- ❖ Student should pursue their studies very sincerely.
- ❖ Lost rights are never regained by begging, and by appeals to the conscience of the usurpers, but by relentless struggle.
- ❖ If Tilak had been born amongst the untouchables, he would not have raised the slogan "Swaraj is my birthright," but he would have raised the slogan: "Annihilation of Untouchability is my birthright
- ❖ I did not like Bhishma, Drona and Krishna. Bhishma and Krishna were hypocrites. They said one thing and did the opposite. Krishna believed in fraud. An equal dislike, I have for Rama. Examine his conduct in the Surupanakha episode, in the Vali-Sugriva episode, and his beastly behaviour towards the Sita. This is the origin of my interest in the Buddha and His Dhamma.
- ❖ No constitution will be workable which is not acceptable to the majority of the people...Let the consent of the people and not the accident of logic be the touchstone of your new constitution, if you desire that it should be worked.

His Works:

From December, 1919 to June, 1920 he had brought out a Marathi Fortnightly, the Mooknayak (leader of the Dumb). In January, 1919 he had also given evidence before the South -borough reforms committee, claiming political rights for the Depressed classes of India. In July, 1924 he started an organization in Bombay named the 'Bahiskrit Hitkarini Sabha' for the moral and material progress of the untouchables. In Sept., 1927 he started the 'Samaj Samrata Sangh' for preaching social equality among the untouchables and the caste Hindus. Inter-caste marriage and the Inter-caste dinner formed important parts of the programme of the organization. As the organ of this body he started another paper 'Samata' in March, 1929. He was the Chairman of the Drafting Committee to frame the Constitution of India and piloted the Bills successfully, winning encomium from all. He also drafted the Hindu Code Bill so well that he was called the 'Modern Manu'.

EDUCATIONAL THOUGHTS OF B.R. AMBEDKAR

His Educational philosophy considers all aspects of individual and social life & has given 3 types of messages viz. Social Message, Spiritual Message and Educational Message. The trinity of 'Buddha, Dhamma and Sangha' is the cornerstone of Ambedkar's Philosophy of life. In brief, it may be said that Ambedkar's philosophy of life stands for knowledge, moral duties and the collective approach in solving human and the collective mind of the society. The basic purpose of Ambedkar's educational philosophy was to serve the country and the downtrodden people. His educational thoughts are broad based and give a complex message 'Educate, Agitate and Organise' to the oppressed classes of India.

AIMS OF EDUCATION

- **Education should break down barriers:** As a pragmatist he was always scientific and rational in his outlook. He was also of the view that learning without insight is worthless.
- **Protection of the interests of deprived classes:** Safeguards provided by him for the protection of the interests of deprived classes are not only relevant in present Indian conditions but they are relevant for other nations also.
- **Development of virtues among students:** The aims of education according to Ambedkar are such individual and social virtues which are needed to make a rational and just society.
- **Free and Compulsory Education:** Due to compulsory education they will be able to get services and thus their economic standard will rise and get honour in the society and differences and untouchability will end itself.
- **Development of the Individual:** He wanted that each individual should be accorded with full opportunities to attain maximum development in the life.

CURRICULUM: His message, 'Nothing is infallible, nothing is binding forever'

may be taken as a guideline for curriculum framework. Ambedkar wanted that the curriculum should provide not only teaching and learning facilities but it should also give the education of character, behaviour, organization, experience, self-realization and self-expression.

- Work experience and development of reason were the integral part of his conceived curriculum.
- He gave due importance to Physical education for maintaining good health and hygiene.
- He realized the importance of vocational education and recommended that it should be given more importance as compared to literacy.
- He favoured vernacular language as a medium of instruction.

METHODS OF TEACHING:

- He recommended the use of Scientific Method, as a method of teaching.
- He was against the use of indoctrination and preaching methods of teaching.
- The instruction and training acquired by constant contact, experiments and discussions cannot be possible by reading books alone.

ROLE OF TEACHER:

He was of the opinion that a teacher should be sincere and intelligent. But there must be a social purpose before him. Living in speaking word is more important for him as compared to books. He conceptualized the transforming role of teacher in moulding student's personality and in evolving a rational & just social order.

RELEVANCE OF CONCEPT OF SCHOOL OF B.R.AMBEDKAR IN PRESENT SYSTEM OF EDUCATION

Article 29 says that any section of the citizens residing in territory of India have

the rights to conserve script. No citizen of India shall be given admission to any educational institution maintained by the state on the grounds of caste, religion and race. This was amended in 1951. It was added that nothing in this clause shall prevent the state from making any special provision for the advancement of socially backward classes of citizens.

Article 30 confers upon the minorities to establish and administer educational institutions of their choice. The state shall not discriminate against any educational institutions while giving grant and aid. .

'**Sarva Shiksha Abhiyan**' (SSA) is an effort to universalize elementary education by creating community ownership in the school system. It is a response to the demand of the Ambedkar to protect the rights of the deprived classes.

Right to Education (2005) is also a new step in this stream. The Act makes education a fundamental right of every child between the ages of 6 and 14 and specifies minimum norms in elementary schools. It requires all private schools to reserve 25% of seats to children from poor families. The RTE Act is the first legislation in the world that puts the responsibility of ensuring enrollment, attendance and completion of the Government.

Reservation Policy: The main objective of the Indian reservation system is to increase the *opportunities* for enhanced social and educational status of the underprivileged communities and, thus, enable them to take their rightful place in the *mainstream* of Indian society.

The Provision of RTI (Right to information Act) seems to be the impact of Ambedkar's educational philosophy. This new law empowers Indian citizens to seek any accessible information from a Public Authority and makes the Government and its functionaries more accountable and responsible. It has extended to the whole of India except the state of Jammu & Kashmir. The Act gives the right to access- Information held by a public authority; information under the control of a public authority.

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A STUDY OF CERTAIN SOCIO-PSYCHOLOGICAL CHARACTERISTICS OF TRAUNT AND NON-TRAUNT HIGH SCHOOL STUDENTS

KAVITA*

Dr. VIPUL NARANG**

ABSTRACT

The purpose of the present research was to study the intelligence, test anxiety and school satisfaction of truant and non-truant high school students of District solan and Shimla (H.P.) The sample consisted of 100 truant and non-truant students selected randomly from different Govt. Schools. Survey method was used for the collection of data. Test anxiety scale for children by Dr.A.Kumar(Hindi version of Sarason's 1960), General Mental Ability Test 1972 (Hindi Version) by Dr. S.Jalota and Sharma Adolescents' School Satisfaction Inventory by Dr.Meenakshi Sharma(1991) was used to test the level of intelligence ,satisfaction and level of anxiety. Insignificant difference was found between the school environment of truant and non-truant student and significant difference was found between the level of intelligence and anxiety level of truant and non-truant. Concluded that the anxiety level and intelligence play significant for being truant and non-truant.

Keywords:- Truant, non-truant, intelligence, test anxiety, school satisfaction.

INTRODUCTION

Children of today are the nation builders of tomorrow, on whom the future of the country will depend. For the prosperous and progressive development of a nation, due attention should be paid toward the problems of young children. There is a well-known fact that children do not have same nature, habits and problems of childhood and adolescence period. There is sufficient evidence that delinquency is increasing day by day at rapid rate in modern society. It is increasing both in terms of absolute number of offences committed and in terms of delinquent behavior. Daily in news papers are reported cases of delinquency of different types. This increasing trend in the percentage of delinquent behavior of adolescents has become the concern of all those who

* , ** Asst. Professor, Kenway College of Education, Abohar

are associated with the social economic welfare of the society .A rise in juvenile delinquency is a cause for serious concern for the future of the country

Among various mental hygienically disorders, the truancy can be considered as one of the main problems which bar the overall development not only of that particular child but the whole society as well. In general sense, truancy means an act of behaving like a truant. But in view of School management, a pupil who stays away from the school without prior permission of the concerned authority is called as a truant. The problem of truancy is global phenomenon and is responsible for many other problems like indiscipline, juvenile delinquency and wastage of human resources. Further, there are possible adverse implications of truant behavior not only for the student but also for the school, and the community.

Keeping in view the increasing trend of truancy in the schools and the research gap in this area, the present investigation was undertaken and this study was an attempt to find out the relationship of certain socio-psychological variables with the truant behaviour. The variables of present study were:

1. Test Anxiety: Test anxiety means the quality of performance in a test situation under the fear of taking examination and unpleasant emotional responses.

2. School Satisfaction;

School satisfaction is the various needs that must be fulfilled in the school atmosphere of a child. How does a child feels in the school is related with the school satisfaction.

3. Intelligence

Intelligence is conceived as an inborn ability which enters into performance of all activities and which differs in quality from person to person .it is a factor, which determines a good deal of educational outcomes. Intelligence or the I.Q. of an individual determines his/her achievement, adjustment and vocational efficiency.

OBJECTIVES

1. To study the significant difference between truant and non-truant high school students with respect to their level of test anxiety.
2. To study the significant difference between truant and non-truant high school students with respect to their level of school satisfaction.

3. To study the significant difference between truant and non-truant high school students with respect to their level of intelligence.

HYPOTHESES

1. Truant and non-truant high school students will differ significantly with respect to their mean scores on test anxiety.
2. Truant and non-truant high school students will differ significantly with respect to their mean scores on school satisfaction.
3. Truant and non-truant high school students will differ significantly with respect to their mean scores on intelligence level.

METHOD

Descriptive survey method was used in the present study.

SAMPLE

The sample consisted of 100 truant and non-truant students were selected randomly from different Govt. schools of Distt.Solan and Shimla (H.P.)

TOOLS

The following standardized tools were used for the collection of data.

1. Hindi version of Sarasons (1960) test anxiety scale for children by Dr.A.Kumar.
2. General Mental ability test (1972)Hindi by Dr.S.Jalota.
3. Shama adolescents school satisfaction inventory by Dr. Meenakshi Sharma.

STATISTICAL TECHNIQUES USED

Mean,S.D.,SE_M and t-ratio were used for the analysis of data.

RESULT AND DISCUSSION

Table 1

t-value for truant and non-truant high school students with respect to their mean scores on test anxiety.

Group	N	Mean	SD	SE_M	t-ratio	Level of Test Anxiety
Truant	50	16.16	6.11	0.86	6.21*	significant
Non-truant	50	10.08	4.34	0.61		

To see whether the difference was significant, t-ratio was calculated which was found to be 6.21, which is more than the table value of $t'=2.63$ for $df=98$

needed to be significant at 0.01 level of confidence. This Indicates that truant and non-truant high school students differ significantly with respect to their level of test anxiety. Since the mean scores on this aspect for truant (16.66) is higher in comparison to non-truant students (10.08), it may be interpreted that truant high school students exhibit higher level of test anxiety in comparison to their non-truant counterparts. This shows that there is significance difference between the truant and non-truant high school students with respect to their mean scores on test anxiety. Which indicates that anxiety level play a significant role for being truant and non-truant students.

Table 2

t-value for truant and non-truant high school students with respect to their mean scores on school satisfaction

Group	N	Mean	SD	SE _M	t-ratio	Level of significance
Truant	50	141.98	9.14	2.49	0.99*	Not significance
Non-truant	50	146.66	12.62	3.97		

Student's t-ratio was applied to see the significant difference of school satisfaction between truant and non-truant, which was found to be 0.99. This value was less than the table value of 't'=1.98 for df=98 needed to be significant at 0.05 level of confidence. Thus the obtained value of 't' is not significant at 0.05 level of confidence. This shows that both the truant and non-truant were having the same school environment and revealed that there is no difference between the school environment of truant and non-truant students.

Table 3

t-value for truant and non-truant high school students with respect to their mean scores on intelligence.

Group	N	M	SD	SE _M	t-ratio	Level of significance
Truant	50	30.46	9.14	1.29	8.09*	Significant
Non-truant	50	48.28	12.62	1.79		

t-ratio was calculated to see the difference between truant and non-truant students which was found to be 8.09, which is more than the table value of 't'=2.63 for df=98 needed to be significant at 0.01 level of confidence. This Indicates that truant and non-truant high school students differ significantly

with respect to their level of intelligence. Since the mean scores on this aspect for truant (30.46) is lower in comparison to non-truant (48.28). It may be interpreted that truant high school students exhibit lower level of intelligence in comparison to their non-truant counterparts. This shows that there is significance difference between the truant and non-truant high school students with respect to their mean scores on intelligence.

CONCLUSION

It has been concluded that truant and non-truant high school students will differ significantly with respect to their mean scores from the intelligence and test anxiety. It was also found that there is no significant relationship between the school satisfaction of truant and non-truant students which concludes that test anxiety and intelligence play significant role for being truant and non-truant.

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SCIENTIFIC ATTITUDE IN RELATION TO CRITICAL THINKING AMONG SCHOOL TEACHERS

GURPREET KAUR*
KULWANT KAUR**

ABSTRACT

Scientific attitude helps to tackle problem objectively without bias promoting logical thinking. It is the "scientific spirit" or "scienticism" which creates rational outlook. A person accepts whatever is based on scientific background. He tries to improve situation/condition according to new evidence. Scientific approach is progressive, such a person is never too certain of his facts and always ready to accept truth on the basis of empirical data. He encourages systematic doubts and critical thinking. Critical thinking is self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way. A person who thinks critically, consistently attempt to live rationally, reasonably, empathically. He works diligently to develop the intellectual virtues of intellectual integrity, intellectual humility, intellectual civility, intellectual empathy, intellectual sense of justice and confidence in reason. At the same time, he recognizes the complexities often inherent in doing so. He avoid thinking simplistically about complicated issues and strive to appropriately consider the rights and needs of relevant others. The study had been conducted on the schoolteachers of Mohali district of Punjab through descriptive research. Findings revealed that there had been significant difference among the male and female teachers on scientific attitude and critical thinking. On both the variables the mean scores favored the female teachers signifying more scientific attitude and critical thinking than their male counterparts. Both the variables signified positive co-relation meaning that there is strong co-relation among the two variables signifying the dependency of one on the another.

INTRODUCTION

"We should be teaching students how to think. Instead, we are teaching them what to think."-Clement and Lochhead.

Education is a field where knowledge panes through all walk of life from person

*Asst. Professor (Education), USOL, Punjab University, Chd.

**Science Mistress, Government School, Mohali, Punjab.

to person with varying degrees. It helps an individual to move towards the goal set and it may be said that people reach their goal following clearly defined paths. Scientific attitude refers to critical observation, inquisitiveness, broadmindedness and open mindedness. The teachers having critical thinking disposed to care that their beliefs be true and that their decisions be justified; that is, care to "get it right" to the extent possible.

SCIENCE

Science has derived from latin word "scientia" which means knowledge. Science is a systemized body of knowledge. This knowledge may pertain to any subject or field of life.

According to **Kothari Commission (1964-66)**, "Science is universal and so can be its benefits. Its material benefits are immense and for reaching industrialization of agriculture and release of nuclear energy, to mention two examples but even more profound is its contribution to culture".

According to **Skinner (1986)**, "Science is first of all a set of attitudes. It is disposition to deal with facts rather than with what someone has said about them."

Science and technology have been playing an important role in our lives and hence become integral parts of our social and cultural life. Various activities are controlled and governed by science. It has helped men to acquire supremacy over nature. In the literal sense, science means the pursuit of knowledge, but it has wider connotation for our purpose and can be said to mean knowledge of nature in the widest possible form. This includes nature study, Physics, astronomy, meteorology and much more. It is equally important to look beyond mere precise definition and see what science includes and the following are of fundamental importance to the approach of this subject:-

- Direct and indirect observations.
- Scientific inquiry-asking questions.
- The drawing inference from evidences.
- Recording observations.
- Developing ways and means to find answers.
- Classification & checking evidence.

ATTITUDE

A mental or neural state of readiness, organized through experience, exerting

a directive dynamic influence upon the individual's response to all objects and situations with which it is related. Attitudes are simply expressions of how much we like or dislike various things. They represent out evaluation-preferences-towards a variety of attitude "objects". Our attitudes are based on information. Our lives are filled with opportunities for attitude change. They are based on belief and often have import for guiding behavior. Any given attitude is a summary of the evaluations made of different characteristics of the attitude object.

Eagly & Chaiken (1993). "Attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor".

Fazio (2009), "Attitudes are summary judgments of an objector event which aid individuals in structuring their complex social environments".

SCIENTIFIC ATTITUDE

The National Council of Educational Research and Training (NCERT) conducted a workshop at Chandigarh and evolved the following specific behavior of a pupil who has developed scientific attitude. The pupil:

- Is clear and precise in his statements and activities.
- Bases his judgement on verification facts(not on options)
- Reacts favorably to efforts made to use science towards human welfare.
- Is prepared to reconsider his own judgements.
- Arranges the apparatus, material etc. in their proper places at the end of work.
- Suspends judgement in the absence of sufficient data.
- Is free from superstition.
- Is objective in his approach.
- Is honest and truth in recording and collecting scientific data.

Scientific Attitudes are the most important outcomes of science teaching. The development of scientific attitudes should not be left to chance. The science teacher should make a special effort to develop them. Some characteristics of scientific attitude in an individual are :

1. Open mindedness
2. Curiosity

3. Judgement based on verified facts.
4. Ready to test and verify conclusion.
5. Faith in cause and effect relationship
6. Be ready to reconsider his judgement.
7. Be free from superstitions and false beliefs.
8. Honest in recording, collecting and reporting scientific data.
9. Being critical in observations.
10. Accepting no conclusions a final or ultimate.
11. More faith in the books written by specialists in their respective fields etc.

Definitions of Scientific Attitude

A condition of readiness for a certain type of activity. Open mindedness, a desire for accurate knowledge, confidence in procedures for seeking knowledge and the expectation that the solution of the problem will come through the use of verified knowledge.

Smith et al (1962), "A major component of scientific attitude is love for science, the impulse to pursue knowledge as an end in itself."

Hanson & Victor (1975) "The positive or negative feelings, opinions and appreciation which individuals have formed as a result of interacting directly or indirectly with various aspects of scientific enterprise, and which exert a direct influence on their behavior toward science"

Bhaskara Rao (1989) stated that the most useful scientific attitudes are open mindedness, critical mindedness, respect for evidence, suspended judgment, intellectual honesty, willingness to change opinion, search for truth, curiosity, rational thinking, etc.

John Dupre (2006), "*The tendency to push a good scientific idea far beyond the domain in which it was originally introduced, and often far beyond the domain in which it can provide much illumination.*"

Staddon (2006), "*the idea that all decisions, in principle, can be made scientifically - has become, in effect, the religion of the intellectuals,*"

A major component of scientific attitude is love for science, the impulse to pursue knowledge as an end in itself. Otherwise, why would any one study the concentration of arsenic in 140-year-old tufts of Napoleon's hair (Smith et al 1962), or the behavior of beetles that feed exclusively on elephant manure

(Heirich & Bartholomew 1979), or the characteristics of a distant celestial body, which seems to project matter in two opposite directions (Margon 1980).

Development of Scientific Attitude

Scientific attitude refers to critical observation, inquisitiveness, broadmindedness and open mindedness, objectivity in approach and unprejudiced judgement. There are some suggestions for planning learning experiences to inculcate scientific attitude.

1. Increase the degree of consistency of the environment.
2. Increase the opportunities for making satisfying adjustment to attitude situations.
3. Provide opportunity for the analysis of problem or situation so that a student may understand and then reset intellectually in the desirable attitude.

Science teachers should make a special effort to develop scientific attitude among students. He can employ democratic procedures in the classroom, engaging students on projects, helping them in drawing conclusions from the selected hypothesis. As is the teacher so is the student: For inculcating scientific attitude we need well-equipped science laboratories and most important than this we need well qualified science teachers. As a teacher he should understand, sympathetic accessible and unbiased. At the same time he should have sound knowledge of the subject, creative and full of enthusiasm.

CRITICAL THINKING

Critical thinking includes the ability to respond to material by distinguishing between facts and opinions or personal feelings, judgments and inferences, inductive and deductive arguments, and the objective and subjective. It also includes the ability to generate questions, construct, and recognize the structure of arguments, and adequately support arguments; define, analyze, and devise solutions for problems and issues; sort, organize, classify, correlate, and analyze materials and data; integrate information and see relationships; evaluate information, materials, and data by drawing inferences, arriving at reasonable and informed conclusions, applying understanding and knowledge to new and different problems, developing rational and reasonable interpretations, suspending beliefs and remaining open to new information, methods, cultural systems, values and beliefs and by assimilating information. In its exemplary form, it is based on universal intellectual values

that transcend subject matter divisions: clarity, accuracy, precision, consistency, relevance, sound evidence, good reasons, depth, breadth, and fairness. A shorter version is "**the art of being right.**" Critical thinking involves both cognitive skills and dispositions. These dispositions, which can be seen as attitudes or habits of mind, include open- and fair-mindedness, inquisitiveness, flexibility, a propensity to seek reason, a desire to be well-informed, and a respect for and willingness to entertain diverse viewpoints. There are both general- and domain-specific aspects of critical thinking.

Definitions

John Dewey (1933), "Critical thinking is "active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it and the further conclusions to which it tends."

Scriven & Paul (1992), "the intellectually disciplined process of actively and skillfully conceptualizing, applying, analysing, synthesizing, and/or evaluating information gathered from, or generated by, observation, experience, reflection, reasoning, or communication, as a guide to belief and action."

Browne and Keeley (2000), "Critical thinking is a process that begins with an argument and progresses toward evaluation". The process is activated by three interrelated activities:

- a. Asking key questions designed to identify and assess what is being said,
- b. Answering those questions by focusing on their impact on stated inferences, and
- c. Displaying the desire to deploy critical questions.

Ennis, R.H. (2003) "Reasonable reflective thinking focused on deciding what to believe or do."

University of Massachusetts (2003), "Critical thinking is the identification and evaluation of evidence to guide decision making. A critical thinker uses broad in-depth analysis of evidence to make decisions and communicate his/her beliefs clearly and accurately."

MCC General Education Initiatives (2005) "Critical thinking includes the ability to respond to material by distinguishing between facts and opinions or personal feelings, judgments and inferences, inductive and deductive arguments, and the objective and subjective."

Linda Elder (September, 2007), “Critical thinking is self-guided, self-disciplined thinking which attempts to reason at the highest level of quality in a fair-minded way. People who think critically consistently attempt to live rationally, reasonably, empathically.”

Raiskums, B.W.(2008), “Critical thinking means thinking about thinking”.

Thus Critical thinking is described as:

- analysing and developing possibilities to compare and contrast many ideas
- improve and refine ideas
- make effective decisions and judgments, and
- provide a sound foundation for effective action

Critical thinking is the identification and evaluation of evidence to guide decision-making. A critical thinker uses broad in-depth analysis of evidence to make decisions and communicate his/her beliefs clearly and accurately. Thus, educating good critical thinkers means working toward this ideal. It combines developing critical thinking skills with nurturing those dispositions which consistently yield useful insights and which are the basis of a rational and democratic society. Critical thinking is concerned with reason, intellectual honesty, and open-mindedness, as opposed to emotionalism, intellectual laziness, and closed-mindedness.

Aspects of Critical Thinking

Brookfield (1987) defines five aspects and four components of critical thinking :

1. Critical thinking is a productive and positive activity.
2. Critical thinking is a process, not an outcome.
3. Manifestations vary according to the contexts in which it occurs.
4. Critical thinking is triggered by positive as well as negative events.
5. Critical thinking is emotive as well as rational.

Components of Critical Thinking

1. Identifying and challenging assumptions is central to critical thinking.
2. Challenging the importance of context is crucial to critical thinking.
3. Critical thinkers try to imagine and explore alternatives.
4. Imagining and exploring alternatives leads to reflective skepticism.
5. Can well develop and defend a reasonable position

6. Asks appropriate clarifying questions
7. Formulates plausible hypotheses; plans experiments well
8. Defines terms in a way appropriate for the context
9. Draws conclusions when warranted, but with caution
10. Integrates all items in this list when deciding what to believe or do

Characteristics of a Good Critical Thinker

Assuming that critical thinking is reasonable reflective thinking focused on deciding what to believe or do, a critical thinker:

1. Is open-minded and mindful of alternatives
2. Tries to be well-informed
3. Judges well the credibility of sources
4. Identifies conclusions, reasons, and assumptions
5. Judges well the quality of an argument, including the acceptability of its reasons, assumptions, and evidence
6. Can well develop and defend a reasonable position
7. Asks appropriate clarifying questions
8. Formulates plausible hypotheses; plans experiments well
9. Defines terms in a way appropriate for the context
10. Draws conclusions when warranted, but with caution
11. Integrates all items in this list when deciding what to believe or do.

STATEMENT OF THE PROBLEM

SCIENTIFIC ATTITUDE IN RELATION TO CRITICAL THINKING AMONG SCHOOL TEACHERS

RATIONALE OF THE STUDY

We need to have willingness to give up an old established theory and identify new ideas without being misled by hindsight bias and overconfidence. Having scientific attitude is not only the needs skepticism but also humility. There would be no branch of new knowledge discovered without this scientific attitude. Critical thinking is a process of analyzing arguments and conclusions. It is a process of examining the offered evidence and reasoning, and forming reasonable judgments about the facts. Without the critical thinking ability, we would be misled to our high sight bias and overconfidence of our judgments. *Science education often includes in its aims the development of*

critical-mindedness. This is usually regarded as one of a range of scientific attitudes. It is argued that critical-mindedness depends on appropriate cognitive and affective inputs as well as critical thinking ability, and that consequently critical-mindedness is context dependent. The concept of scientific critical-mindedness is proposed, and a hierarchical structure of objectives for its attainment, which takes into account current views on the nature of scientific activity, is developed.

DESIGN OF THE STUDY

Research requires one to proceed in a definite direction along well-defined lines. For this study Descriptive survey method had been used.

OBJECTIVES OF THE STUDY

1. To study scientific attitude among school teachers.
2. To study Critical Thinking among school teachers.
3. To study the relationship of scientific attitude and critical thinking among school teachers.

HYPOTHESES

1. There exists no significant difference of scientific attitude among male and female school teachers.
2. There exists no significant difference of critical thinking among male and female school teachers.
3. There exists no relationship of scientific attitude and critical thinking among school teachers

DELIMITATIONS OF THE STUDY

1. The present study had been restricted to teachers of primary schools.
2. The study had been restricted to Government Primary Schools of Mohali district.

SAMPLE OF THE STUDY

In the field of education, the population under study is quite large, which is practically impossible to conduct and study individually. Hence a convenient portion of total population to be investigated is selected randomly with assumption that they truly represent the total population. In order to collect the data a sample of 100 teachers belonging to government primary schools of Mohali District had been taken. Teachers consisting of two groups i.e. male and female, 50 male and 50 female. Convenient method of sampling has been

used for the selection of schools because only those schools had been selected which are easy to approach and teachers are willing to reply the questionnaires.

TOOLS USED: The tools employed in the present study are :-

1. Scientific Attitude Scale: Dr. (Smt.) Shailaja Bhagwat (2006)

Introduction

Scientific attitude helps to approach different problems objectively without any bias and it promotes logical thinking. It helps to take proper judgement. It is the “scientific spirit” or “scienticism” which creates rational outlook. On the basis of these characteristics, scientific attitude can be explained as follows:

Objectivity: A person having scientific attitude looks at the situation without any bias and tries to reach the conclusion on the basis of reality.

Verification: Such person never believes anything blindly. He tries to verify the problem as accurately as he can. He evaluates all aspects of the issue analytically and careful to take into consideration all aspects without excluding any fact.

Rational Outlook: He accepts anything when it is based on some reason and rejects that which is unreasonable or based on some fake information. He accepts whatever is based on scientific background.

Aversion to Superstition: Superstitious beliefs being irrational and based on some unknown fear, they are never followed by a person having scientific attitude.

Flexible: He is always flexible and changes his beliefs when some additional knowledge is contradicting. He never tries to defend himself in such situation. He tries to improve according to new evidence.

Critical Approach: Scientific approach is progressive, such a person is never too certain of his facts. He encourages systematic doubts and critical thinking.

It results in thorough evaluation of the situation. **Identification of Cause and Effect Relationship:** He tries to understand the situation by questioning such as knowing “why” and “hows” of observed phenomenon. Thus, he always tries to know the cause of the event and identification of cause and effect relationship.

2. Critical Thinking Test (2012) Prepared by the researchers.

A structured questionnaire had been used for the present study. The questionnaire consisted of 25 items. For each item there are two responses,

i.e. agree & disagree. The subject has to read the statement and then decide whether he/she is Agree or Disagree with the statement.

STATISTICAL TECHNIQUES USED

1. Descriptive Research Statistics i.e. Mean, Median, Mode, Standard Deviation, t-test
2. To find the correlation between variables, Pearson's coefficient of correlation used.

ANALYSIS AND INTERPRETATION

After collection and tabulation of the data, the next step is to analyze and interprets in terms of the objectives and hypotheses of the study. Analysis means categorization, ordering and summarizing of data to obtain answer to research questions. The purpose of analysis is to produce data to intelligible and interpretable form, so that the relation of the research problems can be studied and tested. Analysis and interpretation of data also help future researcher to handle the related problem with appropriate statistical techniques to avoid the unnecessary labor. Descriptive statistics like mean, median, standard deviation, and t-ratio had been found out to know the nature of distribution of scores with respect to various variables for scientific attitude in relation to critical thinking among school teachers.

OBJECTIVE: TO STUDY SCIENTIFIC ATTITUDE AMONG MALE AND FEMALE TEACHERS

H01 There exists no significant difference of Scientific Attitude among male and female school teachers.

Table 1 - t – Test Analysis of Scientific Attitude Scores among Male & Female Teachers

Gender	N	Mean	Std. Dev.	t-value
Female	50	84.68	10.499	2.944*
Male	50	79.08	8.408	

*significant at .01 level

Table 1 shows standard deviation is 10.499 for female teachers and 8.408 for male teachers, t-value is 2.944 which is significant at .01 level. It states that there is a significant difference between the male and female teachers. So the null hypothesis **H0 I There exists no significant difference of scientific**

attitude among male and female school teachers has not been accepted; which means there is difference between the scientific attitude of male and female teachers. As the mean scores of female teachers is higher than the mean scores of the male teachers, It signifies that the female school teachers are having high scientific attitude than the male school teachers from the selected sample.

OBJECTIVE: TO STUDY CRITICAL THINKING AMONG MALE AND FEMALE TEACHERS

H02 There exists no significant difference of critical thinking among male and female school teachers.

Table 2 - t – Test Analysis of Critical Thinking Scores among Male & Female Teachers

Gender	N	Mean	Std. Dev.	t-value
Female	50	15.40	2.407	2.434*
Male	50	14.18	2.601	

* significant at .05 level

Table-2 shows Standard deviation of female school teachers is 2.407 and of male school teachers is 2.601 and the calculated t-value is 2.434 significant at .05 level. It signifies there is a difference between the critical thinking of male and female teachers. So the null hypothesis **H0-2 There exists no significant difference of critical thinking among male and female school teachers has not been accepted.** As the mean scores of female teachers (15.40) is higher than the mean scores of the male teachers (14.18), It signifies that the female school teachers are having high critical thinking than the male school teachers from the selected sample.

OBJECTIVE: TO STUDY SIGNIFICANT RELATIONSHIP OF SCIENTIFIC ATTITUDE AND CRITICAL THINKING AMONG ALL SCHOOL TEACHERS

H03 There exists no significant difference of critical thinking and scientific attitude among school teachers.

Table 3 -Correlation Analysis of Scores of Scientific Attitude & Critical thinking of all Teachers

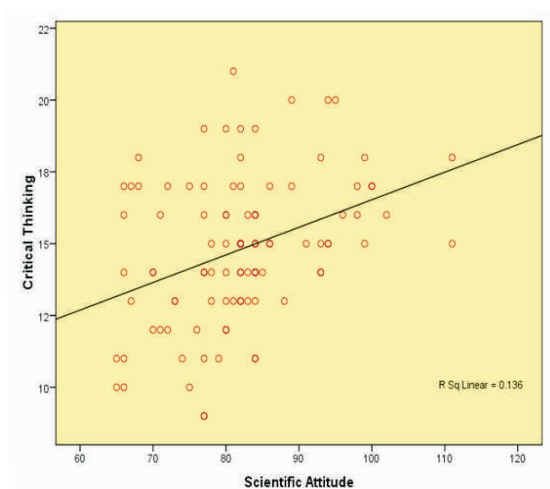
Variables	N	r-value
Scientific Attitude & Critical Thinking	100	.369*

* Correlation is significant at 0.01 level (2-tailed)

It may be seen from table 3 that the correlation between scientific attitude and critical thinking of total sample is 0.369 which is comparison to the table value was found to be significant at 0.01 level. It signifies some degree of positive association.

H03 Therefore, There exists no relationship of scientific attitude and critical thinking among school teachers.

Scatter Chart among the Scores of the Critical Thinking & Scientific Attitude of the Teachers



FINDINGS OF THE STUDYThe present investigation was undertaken to find out the relationship between scientific attitude and critical thinking and also to find out significant difference of scientific attitude and critical thinking between male and female school teachers.

The following conclusions were drawn after using various statistical techniques:

- There's a difference between scientific attitude of male and female school teachers.
- There's a difference between critical thinking of male and Femaleschool teachers.
- There exists relationship between scientific attitude and critical thinking among school teachers.

CONCLUSION

The present study had revealed many interesting findings females showing more scientific temper and critical thinking. Even the majority of teachers working in Punjab government's primary school are female teachers. The study had indeed rejected old established theories of male more rationally strong, critically analytic in approach, rational and objective in approach. Having scientific attitude is not only the needs skepticism but also humility. There would be no branch of new knowledge discovered without this scientific attitude. Critical thinking should be improved in teachers. It is a process of examining the offered evidence and reasoning, and forming reasonable judgments about the facts. Without the critical thinking ability, we would be misled to our high sight bias and overconfidence of our judgments. This situation arises from the lack of understanding of science and the scientific attitude. It can be remedied only through education in science, not just for those with a scientific bent but for all students and the public. It will require education that involves not just exposure to the facts and techniques of science, but education that instills a scientific attitude by teaching the process of critical evaluation of assertions and assumptions.

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REVAMPING THE HIGHER EDUCATION EXAMINATION SYSTEM IN INDIA

BHARATI GARG*

ABSTRACT

Examinations occupy a very significant place in higher education. To a student, they are an instrument to test what he has learnt and retained in his mind during the course of the study and to a teacher examination gives a stimulus and goal orientation in his work. Examinations are inevitable without which the work of students and teachers will neither have precision nor any direction. However, over a period of time examinations have become an end in themselves instead of means of evaluation emphasizing on rote memorization of facts, securing of minimum qualifying marks, getting degree certificates by the job-seekers, thereby, in the process ignoring the practical training for life and work. We, thus, need to ask: Are the conventional methods of conducting the examinations effective? Does the current assessment system provide the necessary space for learning? This has imparted seriousness to any discussion on examination reforms in the academic circles and amongst the policy makers at the highest levels. The objective of the paper is to throw light on the significant aspects of examination reforms in the university education system. The paper has been divided into four sections. Section I gives an introduction to an examination system in the higher education system of India from the historical perspective and Objectives of Examinations. Section II discusses the drawbacks in the examination system. Section III lists the suggested reforms in the examination system along with the impediments in the implementation of reforms and Section IV concludes the paper.

Section I

Introduction: Historical Perspective

Education has always been amalgam of teaching and testing enterprises. Examination system in India is quite old and unique practiced since ancient times in the 'Gurukulas' and 'Ashramas'. These institutions developed specific system for measuring the knowledge, learning capacity

***Asst. Professor, Post Graduate Govt. College for Girls,
Chandigarh.**

and skills of the disciples. The teachers used to test the knowledge through written and oral examinations to certify the scholarship of learners. The examination system was instituted in India by the British Government on the British model with the establishment of four Universities in Bombay, Madras, Calcutta and Delhi. It was based on the recommendations of the Wood's Dispatch (1858) to conduct matriculation examinations in India with the stated objective of identifying the level of attainment at a particular point of time. The newly introduced examination system, no doubt, appealed to the common man as a more methodical and systematic one making its acceptance smooth. It was indeed a politically motivated decision for linking examination certification for jobs as an economically viable factor.

The establishment of the three universities in the three presidencies brought in their wake some criticism of the examination system which Britishers had introduced. It was realized that the external examination system was the result of a political conspiracy deliberately hatched for undermining the indigenous system of testing by indirectly under-rating it. The manipulations were an attempt to downgrade the traditional system of education already in vogue. Quite stealthily and cleverly they tried to boost the importance of external examination, which in a positive manner, tended to reduce the importance of our indigenous examination system. The enticements of formal certification of qualifications as a requirement of jobs and also admission to courses of higher education was done to further enhance the prestige of this examination system.

Objectives of Examinations

Examinations are an extremely important part of the entire education system all over the world. The subject of examinations and evaluation occupies an important place in the field of education. Examinations are the central point around which every activity of educational process revolves. Examinations are conducted for each stage at the end of the academic session with the following objectives.

- a) They decide the eligibility of students for different courses of study at different levels of education.
- b) They are used as a means to organize and integrate knowledge, encourage student to go through various books and integrate ideas to respond to a given problem.

- c) They are a guide to the parents and teachers to know from time to time how the pupils are progressing and what their attainments are at any particular stage.
- d) It is equally necessary for the society to assure itself that the work entrusted to its educational institutions is being carried out on satisfactorily and that the students studying there are receiving the right type of education and attaining the expected standards. This kind of check up of education is essential in the interests of all concerned – pupils, teachers, parents and the public. Examinations are the usual means adopted for this purpose.

Examinations are conducted internally and externally. Internal examinations are conducted by schools/colleges from time to time and atleast once during the year for evaluating the progress of the students and grading them, and when the time comes, for selecting and promoting them to higher class. External examinations come generally at the end of the session. Its purpose is two fold: selective and qualifying, selecting those who have successfully completed a course and qualifying them from among many for the next higher stage.

Section II

Drawbacks in the Examination System

The examinations are an important means of assessing the ability and intellect of the students but they have come to dominate the education system. The examinations have become an end and the means to provide education. The ability of a student has come to be determined by examinations and there is no place for assessing the performance and critical thinking of the student in full academic session. Resultantly, stagnation has crept in the whole education and examination system of India generating stress among students. This has necessitated an urgent need to introduce reforms in the examination process.

Though the talk of examination reforms was going on even before independence but the examination reforms attained urgency in recent years so as to meet the challenges thrown by the emerging knowledge based society. The 20th Century has witnessed the widening of the meaning and scope of education. The demands of education system of today concerns not only with the intellectual pursuits but also with the emotional and social development of the child, his physical and mental health, his social adjustment

and other equally important aspects of his life i.e. all round development of the personality. The limitations and effects of examination system on our educational system were analysed by a number of educational committees appointed during the British rule and after independence. The first serious attempt at examination reforms by the Government of India was taken by appointing Radhakrishnan Commission on Higher Education in 1948. The Commission strongly felt the need for reforming education and examination system. Later on number of commissions and committees has studied the problems plaguing our examination system.

Our education system is universally criticized for a number of gaps in our examination system. If examinations are to be of real value they must take into consideration the new facts and test in detail the all-round development of pupils. Even as they test the intellectual attainments of pupils, the validity and usefulness of the present pattern of examinations has been widely questioned. It has been argued that the present system of examining by means of essay-type questions leaves so much scope for the subjectivity of the examiners that it can not be relied upon to any great extent. Some critical issues in the present examination system are as under:

1. Emphasis on Rote Memorization Rather Than Being Analytical

In our education, it is very easy to take stock of the question paper. The student can have a list and can go on repeating in order to get passed or get a rank. If a question comes this year, we can surely expect that the question is not going to come next year and as there is only one alternative to this question, that question is kept in temporary memory, can write exam and come out with flying colours. Analytical questions are not asked in exams and students got used to traditional methods and are not analyzing any issues which are resulting into graduate degree holders with no knowledge. The tests and examinations conducted at present are only testing the memory power of the students and not measuring the soft skills in the student and ignoring the testing of higher order skills of learning like analysis, synthesis and problem solving, understanding and the application of knowledge and skills.

2. Subjectivity

There is high level of subjectivity in the written examinations which operates at three levels:

a) At the level of paper setter: Question papers are set in a lopsided manner

where some content areas are over-emphasized and other areas completely neglected. Indeed, sometimes questions have been set which do not synchronize with the course content and the text books.

b) At the level of examinee in writing answers: The examinee operates very often due to the vague wording of the questions interprets the dimensions of the expected answer in his own idiosyncratic way. This leads to a host of differences of approach to answering the same question.

c) At the level of the evaluator evaluating the answer books: The subjectivity of the examinee (who may or may not have set the paper) is very dangerous. In the absence of precise directions, regarding the scoring of the answer scripts, he tends to judge the answers from the viewpoint of his own biases. He might even veer into recklessness in attempts to meet his examination reporting deadlines.

3. Stress Generating among the Students

The examination pattern, due to its inherent flaws, has become a source of stress generation among the students. Most of institutions do not give admission on marks basis. They have a separate test and this trend is growing rapidly because they have no faith in this examination system. The question then arises: What is the importance of getting more and more marks in an examination? Just getting admission in a reputed educational institution or making first impression to any employer firm! If any one gets a job then he must have to perform well on practical front. Marks of any examination won't work there. Only practical knowledge will work there. Unfortunately, these institutions too rely on examinations for assessment of a student. This faulty examination system is forcing many students to commit suicide every year.

The mindset of the society is also responsible for making examinations a source of stress. If someone scores good marks in examination then society starts treating him like a hero. On the other hand if someone scores less marks then society treats him just like an untouchable.

4. Poor Content Coverage

The poor coverage of the content by question papers had become such a common feature that nobody seemed to take any serious view of it. This phenomenon was unmistakably impairing the entire teaching-learning process. It exerted undesirable influences by encouraging selective study on the part of the students and selective teaching on the part of the teachers.

5. Effect on Teaching-Learning Processes

Our examination system has also dented the teaching-learning processes. The examinations have come to dominate not only the course content but also the methods of teaching. Students' entire focus through out his academic career is on passing the examinations rather than on developing critical thinking. Students are only interested in cramming, notes rather than reading text-books and original books which help him pass examinations on which his future depends. Most of the time is spent on the conduct of examinations leaving very little time for teaching and learning.

On the other hand, to the teacher also examinations are an easy method of grading pupils and pronouncing judgements on their work rather than showing progress on intangible aspects of good education such as character training, well rounded personality, a wholesome social adjustment and a proper development of appreciation of finer values of life. Making the matters worse for the teacher, his success is very often measured by the results of his pupils in the examinations.

The attitude of parents also lends support to this state of affairs since the employability is linked to passing of the external examinations.

6. Manual System of Examination

The examination process in most of the Universities is manual causing both physical and mental stress to the examinees – delay in publication of results, thus, students remaining idle for months together since they cannot join further studies or appear in competitive examination or join jobs. In the examination branches the correspondence of students/applications takes long time, students jostle in various service windows purchasing examination forms, depositing examination fee and getting to know the status of their results. The system leads to errors, time consumption, inefficiency and wastage of valuable resources. Moreover, the manual record is difficult to manage, store securely and making its retrieval very time consuming. Their remain chances of tempering of students records, sometimes fake degrees are prepared as there is no online verification of the same. This leads to unfair practices and also mars the credibility of the university. There is duplication of work in the existing system as the same data is recorded in different branches of the examination.

Thus, all the circumstances conspire today to put an undue and unnatural

emphasis on examinations specially the external examinations which has come to exercise a restricting influence over the entire field of Indian education and teaching-learning process. Many complained of the hampering effect of the examinations – examinations dictating the curriculum instead of following it, preventing any experimentation, hampering proper treatment of subjects and sound methods of teaching, fostering a dull uniformity rather than originality, encouraging the average pupil to concentrate too rigidly upon too narrow field and thus helping him to develop wrong values in education. Pupils assess education in terms of success in examinations. Teachers, recognising the importance of external examinations to the individual pupil, are constrained to relate their teaching to an examination which can test only a narrow field of pupils' interests and capacities and so inevitably neglect the qualities which are more important though less tangible. They are forced to attend to what can be examined, and to 'spoon-feed' their pupils rather encourage habits of independent thinking and study. Notes are dictated at every stage of education and when they are not given the children feel unhappy and helpless.

Section III

Suggested Reforms in the Examination System

Whatever be the limitations of the examination system in India it must be realized that they have come to occupy a very dominant position in our educational system. Abolition of examinations will not serve the purpose. What is required today is recasting of the examination system by thoroughly reforming it.

1. Improving the Curriculum

The objective of education, curriculum contents and purposes of examination should be well co-ordinated. Thus, the curriculum should be clear on what knowledge, skills or abilities are to be developed by teaching a particular course. To infuse dynamism, curriculum has to be progressive in nature, students should be given the option of doing multiple courses, the spirit of curriculum should be projects driven and not examination driven. It should be innovation driven and should evolve and not stay stagnant.

2. Improving Teaching

In class-room teaching, the teaching-learning method should move beyond the traditional chalk-board and lecture method. These conventional

methods of teaching-learning methods should be supplemented by demonstrations, discussions, assignments, workshops, group discussions, case studies, participation and role orientations. Different types of audio-visual and other aids should be made available to the teachers. If need be, teachers should be provided necessary technical assistance and training in the new techniques of teaching.

3. Improving Question Papers to Ensure Wider Coverage and Creativity

Questions should discourage cramming and encourage originality of the thought process. They should be distributed over the entire field of the subject. Each question paper should use the three types of questions, viz. essay type (which should be specific leaving no room for guess work on the part of the students), short answer type and objective type in about equal proportion. It is desirable that the medium of instruction, paper setting and answering should be the same.

Furthermore, the examining agency should develop a design of the question setter giving specific directions regarding the dimensions of the question paper and the considerations to be kept in mind while setting it. Moreover, the students should be given less choice in questions so that marks of the students depend on the knowledge of the students rather than his choice of the question.

4. Grace Marks

In almost every examination, some grace marks are given to borderline students to enable them to pass. How many marks should be given as grace-marks is often arbitrary? It has been found that procedure for assigning grace marks is unscientific. They recommend the use of 'passing probability' instead of giving grace marks. Those students who are above a specific passing probability should be allowed to pass.

5. Improving Accuracy in Marking

Accuracy can be increased in by providing an orientation to the examiner; giving them sufficient time to do examination work, and, by reasonably limiting the number of answer books to be examined.

It has been found that i) examiners have a tendency to boost borderline cases to the next higher stage; ii) marking of previous script affects the marking of the subsequent script; iii) during the process of marking there is a considerable variation of standard; iv) though some examiners are accurate

throughout, the others vary more during the first 1/3rd and the last 1/3rd of the answer books. Happenings of this nature can be considerably reduced by i) providing instructions for marking; ii) use of question-wise marking in place of whole script wise marking; and, iii) providing model answers providing instructions for markings.

6. Introducing Scaling

The need for scaling the marks of different papers has been emphasized by Indian educators and researchers alike. This is because of the variability found in the marking of different papers at the examinations.

7. Internal Assessment

With the view to improve the reliability of traditional type of tests, it has been suggested, from several sectors, to have internal assessment. In spite of a tendency to give liberal marks, on the whole, internal assessment is dependable. Internal assessment should be made more frequent, more systematic, more unbiased and be given more weightage as compared to external assessment. Students' record should show his achievement in both external and internal assessment.

8. Introducing Semester System

Introducing semester system as well as undertaking periodic and systematic measurement and evaluation, use of letter grades in place of numerical marks, internal assessment, credit system, reliance on home study, assignments, seminars and use of question banks etc. goes a long way in revamping the examination system. But for all this to happen satisfactorily, it is necessary that the teachers be thoroughly oriented.

Some advantages associated with the semester system are: i) students achieve their objective in a better way; ii) convenient for the teacher to improve the curriculum contents; and, iii) periodical tests necessitate that the students study seriously throughout the semester.

9. Introducing Viva Voce Examination

Internal (mid-semester or semester-end) and external viva-voce test should form part of the overall final examination especially for post graduate and professional courses. Viva voce tests should be conducted to test an examinee's qualities of oral expression like pronunciation, grammatical correctness, vocabulary and usage, thought content and its organization, delivery, manners and gestures.

10. Selection of Examiners

Examiners should be carefully selected, failing which some of them in their ignorance may make such demands upon candidates as cannot be satisfied. The teachers who have taught them and who know the students best are the most suitable persons to examine the candidates. This is the reason people prefer internal examiners but they are also not free from personal biases and prejudices. It would be better if with the help of experts instructions are drawn up for marking the scripts.

11. Use of Information and Communications Technology (ICT)

The use of ICT will ensure the transparency and reliability of the system of examination, evaluation and reporting. This will minimize human intervention since the use of ICT promises compact storage, speedy retrieval of data and untiring diligent work. Total automation of the system will facilitate integration of all branches physically, streamline the procedure for collation of examination fees, issuing receipts to large number of students, improvement in the quality of services, effective monitoring of examination processes, minimization of fraudulent activities, timely availability of compiled reports, and so forth.

Impediments to Examination Reforms

The very term 'reform' envisages the existence of something to be changed. Reform is invariably a difficult task to accomplish, because the traditional procedures and practices have become deeply rooted in the system. In the process of examination reform, the following hurdles have been encountered:

1. Inherent Resistance to Change

- a) by universities and colleges as it involved a reorganization of the administrative machinery and procedures;
- b) by teachers, because of their unpreparedness for taking up the challenges of the new system and because of additional work involved;
- c) by students, as post-reforms examinations are likely to become valid and reliable, and will require more precise and regular study;
- d) by unscrupulous elements, since malpractices are likely to lose ground as examinations are improved; and,
- e) by vested interests which are desirous of maintaining a status quo

which protects their powerful positions and sometimes financial gains.

2. Lack of suitable sample evaluation material of a sort that provides illustrations of the nature of reforms envisaged.
3. Lack of financial support, as the reform measures, in terms of over-all cost, tend to make the new examinations more expensive than the traditional ones.
4. Inadequate training of teachers for keeping up with the changed situation. Even though many other difficulties, problems and shortcomings pervade in India's system of education, those in the area of examinations are undoubtedly very serious. They are not intrinsic to examination activities, but these are the ones which can be remedied through effective measures. This is a challenge to educators which also radiates hope.

Section IV

Conclusion

The ills plaguing the examination system in higher education cannot be studied in isolation. Examination system intrinsically shares a forward and backward linkage with teaching and learning processes at other levels of education. Apart from the stumbling blocks in the path of examination reform, the lack of encouragement and recognition, opposition from teachers and examinees, piecemeal reforms are inherent limitations in the system.

To conclude, it can be stated that number of examination reforms have already been introduced not only in the higher education system but at the secondary and higher secondary level also like introduction of internal assessment, practical work, semester system, computerization of the examination administration, streamlining of the examination procedures, guidelines for the paper setters, ensuring objectivity in paper marking scheme and so on. We must understand the fact that these all round reforms cannot be introduced at all the levels in one go but have to be introduced in a phased manner so that there is preparedness of necessary institutions for undertaking these reforms, minimum of resistance from various stakeholders and greater acceptability to these reforms.

The survey of Indian researches in the field of examination, however,

highlights another aspect which are to be explored as yet like analysis of pupil's performance in different subjects, regional and other variations in performance and the influence of various factors on achievement, the area of administration and organization of examination remains largely unexplored, studies are needed in the effective use of examination results and feedback processes. Moreover, there is dearth of research on teachers' training, technology etc.

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SIGNIFICANT ASPECTS OF EXAMINATION REFORMS IN THE HIGHER EDUCATION SYSTEM IN INDIA

Dr. BHAWNA GUPTA

ABSTRACT

Education has all along been and continues to be an amalgam of teaching and testing enterprises. Testing is mainly done through 'continuous evaluation' or a 'fixed point examination'. Examinations acted as motivators and stimulators for both the teachers and scholars, but over a period of time they have become indispensable and have dominated the system in India. Instead of becoming the means to provide the right type of education, they have become an end in themselves, with the job seekers devising ways of obtaining certificate without putting in hard work. Therefore, any move for a change in curriculum, teaching methods and evaluation practices are met with resistance. Our present examination system is a legacy of the colonial rule where importance is being placed on passing examinations and acquiring status, while practical training for life and work is ignored. That we need to assess the child is unquestionable and that students should be able to express and explain what they have learnt is indisputable but the question is how useful are examinations anyway? Does the current assessment system provide the necessary space for learning? With these considerations, the issue of examination reforms has become a matter of serious discussion in the academic circles and amongst the policy makers. Over the past many years, the University Grants Commission and the Ministry of Human Resource Development has introduced many examination reforms to (i) undo the dominance of conventional examination pattern and; (ii) improve the quality of examination with a view to making them valid and reliable. There is a strong case for introducing and implementing examination reforms earnestly. The present paper attempts to throw light on the significant aspects of examination reforms in the higher education system. The paper gives an account of the key concerns of the examination system in higher education in India highlighting its drawbacks and lists the reforms introduced in the examination system. The last section includes recommendations for successful implementation of these reforms.

* Asst. Prof. in Public Administration, P.G. Govt. College for Girls, Chd.

INTRODUCTION

The Indian higher education sector is in the midst of tremendous growth and change. The population demographic has created an unprecedented number of young people in this country. Education had been a subject of national debate and the political push by the Human Resource Development (HRD) minister, Mr. Kapil Sibal has given further impetus to the debate on the need for reform in the Indian education system.

The present system of education is a legacy of the British rule in India. It is altogether unsuited to the needs of independent India. Even after the attainment of independence no significant changes have been brought about in the structure and content of education system. Examinations have to be related to the goals of education. These goals are to enable the students to acquire the capacity to learn new facts, to understand and comprehend them, and to develop the capability to apply these facts to obtain more and more knowledge, to develop the capacity to analyze problems and to synthesize knowledge and acquire the maneuverability to face new situations confidently which our systems do not test. It is, therefore, necessary to redesign our examination system to make it more relevant to the goals of education and the needs of our present day society.

The system of imparting higher education should be such that after completing education in college, the youth should not be dependent solely on service, but must be able to start some independent small scale industry or business on their own. Vocationalisation of education is the need of the hour. More and more technical and vocational institutions need to be started where training modules in practical aspects of career must be compulsory. Every effort should be made to inspire the students with noble and innovative ideas. It should be compulsory for students to appear in psychological tests. This will enable the students to choose subjects and careers of their own choice. In this way, the students can plan their careers from the very beginning. Just after their schooling, they would be able to decide the career which they wish or are interested in pursuing.

An examination is a means to assess the progress made by the students in the subjects taught to them. In the routine day-to-day teaching process, an examination seems to be an innocent affair, but troubles start when an

examination turns from normal revision exercise to formal or rigid exercise of selection and promotion. The student community considers examinations as an unwelcome ordeal to be gone through. That apart, the system of examination itself suffers from many serious shortcomings.

Examinations have specific objectives. They are means to evaluate the performance and judge the academic achievements of students. Such evaluation on the one hand helps the students to adjust their learning programmes accordingly and on the other hand helps the teacher to adjust his teaching programme according to the requirement of the examination. It also provides some motivation for hard and continuous work by the students and for continuous improvement of teaching by the teacher. It is on the basis of the divisions or grades awarded to the students after evaluating their merit and ability that they are allowed or refused admission to institutions of higher learning. These grades are generally a pre-condition for entry into competitive examinations for public employment.

Examinations are held by universities at various levels:

- Entrance exams test potential candidates on minimum acceptable standards for entry to courses.
- In-course (internal) exams help students understand the need for further guidance, improvement and feedback.
- End-course (final) exams are final verdicts of student performance, to determine the knowledge, skills and abilities imbibed by the student from the course.

There is a general view, and rightly so, that the traditional examination system does not bring out the real ability, achievement or potentiality of students. Hence, there is a need for examination reform. Before delving into this aspect, let us look at the history of examinations in Indian Higher Education System.

EXAMINATION IN HIGHER EDUCATION - A HISTORICAL PERSPECTIVE

With the establishment of the Universities of Calcutta, Madras and Bombay in 1857, effectiveness of examinations, the purposes they serve, and their relevance came under review. Even the earliest of the reviews of education in India, dating from 1886, pointed out that the university entrance examination 'matriculation' stimulated the holding of at least six external examinations extending down to the lower primary stages. A very high frequency of examinations in the education scenario has been a concern since long. Evn the

Hunter Commission (1882) stated that: 'It is beyond doubt that the greatest evil from which the system of Indian university education suffers is that teaching is subordinated to examination and not examination to teaching.' The shortcomings in the examinations system were also identified by the Calcutta University Commission (1917-19) and it specifically indicated its unhappiness about alternative questions, the mechanical system of marking, grace marks, frequency of examinations, etc.

Boards of Secondary Education were established in the states to conduct external examinations at the school-leaving stage after the transfer of administrative responsibility for education from the British to the Indian Ministers in 1921-22. The Hartog Committee Report (1929) criticized the academic bias of examinations at the school level which continued to be geared to the needs of university entrance and provided no opportunities for the majority of students to take up industrial, commercial, or technical courses as a preparation for life. Further the emergence of provincial autonomy in 1935 brought all the stages of education under the effective control of Indians themselves.

After independence, 'Education' became the responsibility of the states and the Central Government coordinated the technical and higher education by specifying the standards. The problem of ensuring better integration of education with other spheres of human activity has been a cause of concern. Educationists and policy makers felt that there is a virtual generation gap in education and that there are barriers in the educational system. Others were of the view that the crisis has also been caused by such faults in the system as the question-answer emphasis to show examination results. It would not be out of place to mention here that the Radhakrishnan Commission on Education (1948) stated that the most important single reform in our educational system that it could suggest was the reform in the examination system. The crippling effect of external examinations showed that the reform had become crucial to all progress and had to go hand in hand with improvement in teaching as mentioned by the Kothari Commission on Education (1964-66). Later in 1976, education became a joint responsibility of both the state and the Centre through a constitutional amendment. The Central Government through the Ministry of Human Resource Development's Department of Education and the governments at the states formulated the education policy and planning.

National Policy on Education (NPE), 1986 and revised PoA 1992 envisioned that free and compulsory education should be provided for all children up to 14 years of age before the commencement of 21st century. The NPE 1986 postulated that the examination system should be recast so as to ensure a method of assessment that is a valid and reliable measure of student development and a powerful instrument for improving teaching and learning. Whether we need the present form of examination or we need some other forms of examination is an issue which calls for an immediate debate.

II

KEY CONCERNS IN HIGHER EDUCATION EXAMINATION SYSTEM

The problems that have contributed to the crisis in education are countless. Quite relevant to the crisis in education are the questions of the curricula, the syllabi and the much criticised system of examinations, which some people describe as the bane of the system in this country. Some of the key issues related to examination system in India are discussed in this section.

Creation of Fear & Tension

When examinations determine a child's advancement through school and his later life's opportunities, parents understandably put pressure to ensure that their child succeeds. The examinations create psychological fear and tensions amongst the students. Under duress, the students resort to all kinds of malpractices to pass the examination. On the other hand, the teachers also teach what will be examined rather than focusing on teaching for life.

Emphasis on Cramming or Memorisation

The practice of asking questions which demand only the recall of information rather than higher mental level operations has resulted in over emphasis on cramming or memorisation. As a consequence there is a noticeable tardiness in the development of higher mental abilities. To check this, the open-book examination system has been recommended by some educationists. The open-book examinations are specially designed to test the qualities of comprehension and capability of synthesis for which new types of questions need to be set. This system is claimed to eliminate the habit of unintelligent memorisation by students and also to minimise the evil of copying in the examinations. However, with the present essay-type question papers, students cannot be allowed to consult books.

Scholarship Oriented Nature

The present system lays emphasis on the growth and development of scholastic aspects while the non-scholastic aspects are almost ignored. This results in frustrating the efforts of bringing about all round development of the students.

Fixed Point Examination vis-à-vis Comprehensive Continuous Assessment

The students are subjected to three-hour testing based on a limited course content. Not only this, their sustained efforts of so many years are evaluated by the examiners in a short span of a few minutes. This raises a question mark on the entire system of examination because it does not take into account the work done throughout the years in terms of projects, assignments, tests and class work, etc.

External versus Internal examination

The system of external examination is alleged to encourage selective study and cramming, use of made-easy notes and to discourage the habit of regular work, use of good text books and innovations. The students do not take the regular class work seriously. Their total attention is fixed on the final examination. The gravest charge against the external examinations is that instead of serving as a useful aid to improve the quality and standard of education and teaching, education itself becomes subservient to examinations. External examinations are more objective and less prone to local influences or external pressures. For this reason, though academically more unsound than the internal assessment system, they are preferred and advocated by certain educationists. Any new scheme that combines the merits of internal as well as external examinations would best serve the purpose.

Subject wise Gradation vis-à-vis overall grade

Another concern is that the students should not be given only an overall grade but should be given subject-wise grades. Only subject-wise gradation can be considered a true assessment of a student's calibre. Such a system would enable the teacher to know the exact level of achievement of a student in various subjects and disciplines which would improve their employability. It has also been suggested that successful students may be permitted to improve their divisions and grades by reappearing in a particular subject.

Reforming Course Curriculum

In the last few years, much debate has taken place with respect to reforming course curriculum and learning pedagogy. There is a greater emphasis on raising current standards to make the curriculum more relevant to professional requirements, and in line with international norms. The growth of private sector educational institutions and universities has helped improve supply, in terms of the number of seats available. However, these have also worsened the quality problem. Not only is there wide variance in the quality of graduates from different institutions, there are too many with unacceptably low standards both in the government and private sectors.

Curriculum Flexibility and Student Mobility

Students should be allowed to appear in the examinations by bits or in instalments. They may appear in some papers or subjects in one particular year and may complete the rest or another few papers or subjects in the subsequent year or years. They may get the degree, diploma or comprehensive certificate after having qualified in the minimum number of subjects or papers.

MIS-MANAGEMENT OF EXAMINATIONS

We often come across the startling news about the leakage of question paper, mishandling of answers scripts, mismatch of roll number, errors in marking and totaling, awarding of grace marks, wrong declaration of results and many more. Most of the examining agencies still appear to be "technology-shy" and are hesitant in adopting the latest techniques of computerisation and optical scanning.

There exist a lot of quality problems in the prevailing system, including:

Quality of Question papers

Quality of term-work assessment

Holding of fair practical examinations

Exam Schedules

Management of Malpractices in Examinations

Question paper leakages

Student cheating/impersonation

Quality of Answer Script Evaluation

Shortage of qualified examiners

Delays in paper correction

Discrepancies in handling of transcripts

Manipulation of scores

Award of Grace Marks

Delays in results processing and declaration

Handling of re-evaluations

Quality of Question Paper

The question paper is the most vital component of any examination system. Very often the papers are not set with sufficient care. It is necessary that the setter should be given a clear cut policy statement for a particular paper, which must specifically indicate the areas of abilities sought to be tested with inter se proportions, the value of each major unit in terms of marks for setting questions, the different types of questions to be included in the paper and the proportion of marks allotted to them.

Objective Questions: When formulating an objective type question paper, the preparation of the scoring key and marking scheme requires more attention in order to reduce the element of subjectivity in marking the script. The questions must be pointed and unambiguously clear. The misleading answers should be chosen with great care.

Essay Type Questions and Subjectivity of Marking : The examination does not remain a valid measure of student achievement because essay type questions lead to limited sampling of the course content and prompts the students to do selective study. There is a lot of inter-examiner and intra-examiner variability in marking and as a result of that the reliability of the examination suffers.

Quality of Answer script Evaluation

Manipulation of Scores: The marks secured by candidate in an examination do not truly reflect the acquisition of ability because they suffer from lot of errors some of which are identifiable and many more which are unidentifiable. This does not allow us to ensure the comparison of scores within the subject and across the subject.

Numerical Marking System Vs. Grading : The current practice of awarding numerical marks suffers from lot of discrepancies caused because of variety of errors. Besides, spread of scores in different subjects being different further compounds the problem. In view of this numerical marking does not give right

picture as it gives unrealistic assessment of human potential. This can be overcome if the students are placed in an ability band which represents a range of marks.

Awarding of Grace Marks : The awarding of grace marks is not based on any scientific rationale. In almost all the cases they are arbitrary, unscientific, adhoc and comic. The practice currently followed is not to consider the passing probabilities for deciding the award of grace marks.

Re-evaluation

It is the right of every student to be evaluated as accurately as possible. With a view to ensuring objectivity and transparency, most of the universities and boards prepare and supply the detailed marking scheme for the guidance of the examiners. If the answer scripts are marked conscientiously and the Boards ensure the adherence of the examiners to the marking scheme, the need for re-evaluation should not arise. However, in some cases lapses may occur and the request for re-evaluation of those students should be acceded to not only to provide for natural justice but to make it all the more transparent and tangible. In this, it may be understood that the re-evaluation is not to be confused with retotalling. It is reassessment of the answer script.

Returning of Marked Answer Scripts

There has been an appreciable movement in the direction of returning the marked answer script to the examinees in the interest of accountability, credibility and transparency in evaluation process. The greatest dilemma is whether such a scheme would be administratively feasible especially in the Boards/ Universities which handle and process the results of hundreds of thousands of students.

III

SIGNIFICANT EXAMINATION REFORMS

For promotion of quality and excellence in higher education, the University Grants Commission (UGC) developed an 'Action Plan for Academic and Administrative Reforms' to outline the main steps, the central and state universities, colleges and other educational institutions of higher education need to consider and adopt in respect of

Curriculum development

Semester system,

Choice-based credit system

Admission procedures

Examination reforms

The new grant making policy developed by UGC as part of the 11th Plan strategy for improving the quality of higher education involved linking of grant making process with adoption of academic and administrative reforms by the concerned universities and colleges. Therefore the educational institutions were expected to initiate this academic reform at the earliest. Some of these initiatives concerned with examination reforms are as under:

Curriculum Development and Streamlining Examinations

Continuous updating and revision of curricula is something which must be deeply ingrained in the academic culture of a university. Each individual university must ensure that the curricula development exercise leading to major revision in course contents and curricula is taken up every three years. Uniform academic calendar across all institutions of higher education has already been urged upon by the UGC. Universities need to streamline their examination process such that the results are declared in a timebound manner and no student suffers in his/her career mobility and academic progression due to delays in declaration of results and issue of mark sheet.

Introduction of the Semester System

Annual examination with emphasis on external written examination needs to be reformed. We can make a beginning by introducing Semester system. Similarly we have to gradually move to a system which emphasises on continuous internal assessment and reduces the written examination component to a reasonable level. Duration of the semester, number of contact hours per paper, per semester and relative weightage of continuous internal assessment and semester-end examination needs to be prescribed unambiguously. The greatest advantage of this system is that it reduces the load of the students and inculcates regular study habits in time. Since the academic year is divided into two semesters, it also has the advantage of providing upward mobility; the students can clear the backlog even after moving to the next semester. It also enables the students to learn at their own pace. There need be no doubt that the type of education that concerns itself only with the study of a prescribed set of books and annual or term examinations in the traditional manner, or in the semester system, is not only

incomplete, but also wasteful and a failure.

Introduction of Internal Assessment

The fixed one point written examination is not an effective measure for gauging all the abilities nor does it promote the application of multiple techniques of assessment. The scheme of Comprehensive Continuous Examination (CCE) is inspired by the age-old adage that it is the teacher who knows the pupil best, and it is through this teacher that we would get to know how the learner is progressing with reference to his own earlier achievements, with reference to his peer group as also with reference to the expected levels of attainments set by the teacher.

Curriculum Flexibility and Student Mobility

Curricular flexibility and students' mobility is another issue that warrants our urgent attention. These can be addressed by introducing credit based courses and credit accumulation. In order to provide with some degree of flexibility to students, we need to provide for course duration in terms of credit hours and also a minimum as well as a maximum permissible span of time in which a course can be completed by a student.

Treating Public Examination Optional

The credibility of terminal examination is under question and they are used only for purposes of certification and promotion. As a consequence, the institutions of higher and professional learning started conducting their entrance examinations. The ultimate victim is the student, who ever since his entry into schooling, is constantly subjected to an examination galore. He suffers from the examination syndrome all through his education career. In view of the above, there is a need to debate on the significance of the public examination being made optional.

A Common National Test for Institutions of Higher and Professional Learning

Multiple entrance tests for a student passing class XII for admission to institutions of higher and professional learning not only results in financial burden on the parents but also turns the student into a nervous wreck. Examinations have no emotions. This prompts us to do some loud thinking for replacing separate entrance examinations by a common national test.

Grading System

We also need to move away from marks and division system in evaluation and need to introduce Grading system – preferably on a 9 point scale and Cumulative Grade Point Score (CPGS) in order to make our evaluation system at par with the best practices in the rest of the world.

Development of Question Banks

If quality questions of different types are generated, measuring various objectives of varying difficulty levels, the quality of question papers will improve. For this question banks need to be developed in each curricular areas for all stages of education. These question banks should be made accessible to the teachers who can use them for making various tests and also to students who can use them for their own drill and practice.

Implementation of Multiple Sets of Question Paper

The CBSE introduced multiple sets of question paper in the year 1992. The wisdom of this move has been questioned by the cross-section of the society because it has led to many apprehensions in the minds of the examinees in particular and the society in general. This experiment was in conformity with the recommendations of the Madan Mohan Committee. However, it is important to compare the parallelism of the multiple sets of question papers.

Online Examination Module and Use of IT in Examination Management

With steadily rising enrollment numbers and new courses being introduced each year, the number of entrance and other exams conducted is expected to grow substantially in the coming years. Indian educational institutes spend much time, money and effort to manage these exams, which are as yet being conducted through traditional paper and pen methods with manual evaluations. Online examination module can be introduced.

IV

CONCLUSION AND RECOMMENDATIONS

Indian higher education landscape is changing rapidly. Demographic bulge, expanding school education and rising aspirations has put considerable pressure for expansion of higher education. There are greater expectations from higher education due to the country's rapid economic growth. Every now and then, the country's leaders, including educationists of various hues and disciplines, talk of the deficiencies of the present system, and plead for reforms. No wonder, there has been a plethora of education reform committees

and commissions. There has also been considerable experimentation in the processes of education, but the basic problem of fitting the system to the real needs of the country and its people has remained unsolved.

The aforesaid reforms, if introduced in isolation, might not produce desired results as they are inter linked. They need to be implemented simultaneously and the changes that they are supposed to bring about will be very gradual and imperceptible but in the long run these will help in improving the learners' achievement and thereby promote the development of human resource. Not only all this, they will also go a long way in promoting the teachers' potential and institutions' capabilities and thus will have a 'far reaching effect on the quality of education in the country.

Examination Reform Package

The question of examination reform should be construed as a package of all the following factors:

Introduction of semester system.

Continuous internal evaluation;

Teachers playing the key role

Student Mobility and Curriculum Development with scope for flexibility

Subject gradation rather than overall gradation

Improving the efficiency of Examination Bureaucracy

It is this package as a whole which should be brought about to improve the higher education pattern and not in a piecemeal fashion.

Improvement in the Role of the Teacher

The teachers themselves might not be prepared to accept the onerous responsibilities going with examination reforms. It is natural that any attempt at reforms for the purpose of changing the status-quo means resistance from the established order. However, the call for examination reforms on the part of experts over the years is having been very consistent and several States and universities already having taken up examination reforms in fact, though in a piecemeal way, there is undoubtedly need for orderly progress towards examination reforms in terms of the above package. Implementation of this package however bristles with several practical problems, diversities in the educational system in the country being vast.

Need for an Examination Reforms Commission

'An Examination Reforms Commission should be set up as a permanent body to facilitate monitoring of progress in examination reforms from time to time until the task is fulfilled in stages. The terms of reference for this Commission may be:

- i) Review of the status of examination reforms from time to time.
- ii) Phasing of examination reforms, indicating timeframe within which, and levels at which, the reforms are to be effected.
- iii) Introduction of fair and objective systems of grading/scaling.
- iv) Laying down norms for continuous comprehensive internal evaluation and suggesting safeguards against abuse of this evaluation system.
- v) Advising on minimum levels of learning to go with internal evaluation system.
- vi) Laying down modalities for semesterisation and modularisation.
- vii) Advising on inter-institutional linkages to secure comparable standards.
- viii) Teacher orientation for successful implementation of examination reforms.

It is obvious that the Examination Reforms Commission will have to go into problems relating to the reforms in each State, fully involving the State level authorities such that problems at the State as well as the sub-State levels are fully taken into consideration' (GOI, NPE 1986). Functionaries of UGC, AIU, AICTE, NCERT, NIEPA, State resource institutions, State Boards of Education and other expert bodies at the national and other levels, apart from teacher and student organisations will also have to be consulted from time to time by the Commission.

Focus on Nation Building through Education

For more success in higher education, it is required that instead of lengthy examinations at a stretch, the due importance should be given to intelligence tests, personal interview and class room works at regular intervals. The development of clean character towards prosperity of nation is another important aim of higher education. The aspects of these higher studies must develop lessons of national integration as well as international integration and unity more effectively.

Free Use of Libraries, Laboratories and Internet as tools of Knowledge Enhancement

A great stress needs to be given for establishing good libraries in our colleges and universities. Students should be encouraged to make free use of them under the able guidance of teachers free of cost. More discussions and arguments on varied topics can impart more knowledge and information than more lecturing and completing the course. Equally important are the laboratories with latest equipments and items. To test the learning of books, students need to have good laboratories. An experiment is an unending quest of learning and knowledge on a permanent basis. The institutions providing higher education should be made temples of the modern age.

In the true spirit of the motto "Experiment and innovate or perish", we must try to experiment and innovate and learn from them and finally reform our system of examination. Any rigid attitude will result in total waste of our efforts to rid our examination system of the existing evils.

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A STUDY OF CAREER MATURITY AMONG SCHOOL CHILDREN IN RELATION TO ACADEMIC ANXIETY

GURDEEP KAUR*

AMANDEEP**

ABSTRACT

This paper presents the results of an investigation aimed to explore the career maturity among school children in relation to academic anxiety. Research was carried out on randomly selected sample 120 on school children within the age range 12-15 years in Abohar Tehsil. The research used standardized tool for the study. Results revealed negative correlation between career maturity and academic anxiety among school children. Results also revealed significant difference in career maturity of boys and girls.

INTRODUCTION

Career maturity refers to individual's degree of readiness to choose, prepare and plan for future vocation. The concept of career maturity has come to be used as pre-requisite of the ability to make a wise exceptional choice and assuming that maturity represents development along a continuum. The greater the maturity, greater is the likelihood that individual is able to cope with developmental tasks at different stages of Career maturity means the readiness to make appropriate career decision. Career maturity is not thought of as a goal i.e. achieving satisfaction and success in an occupation. Career maturity denotes the point reached on the continuum of career development from early exploratory years i.e. adolescents years to decline i.e. old age: In other words it refers an individual's readiness for career decision making. Career maturity is the term which denote the place reached on this continuum of career development from early exploratory years to decline. This process of career development has been further analysed as unfolding through several distinct but unrelated factors. These include :-

* Lecturer, D.A.V. College of Education, Abohar

** M.Ed. Student

- * **Consistency of career choice**
- * **Realism of career choice in relation to personal capabilities and employment opportunities**
- * **Career choice attitudes**
- * **Career choice competencies**

Naidoo (1998) states that "Career maturity is influenced by age, race, ethnicity, laws of control, socio-economic status and gender." **Salami (2008) states that** "Career maturity is conceptualized as an individual's readiness to make well informed age appropriate career decision and to shape one's career carefully in the face of existing societal opportunities and constraints " At the time of selection of career, stress is laid only on intelligence and academic achievement. No consideration is given to non-intellectual characteristics of personality of the students, where as it depends upon many other factors like personality, academic anxiety, parental encouragement, make appropriate career decisions." motivation, interest and attitude etc.

Academic anxiety is the uneasiness, apprehensions or nervousness felt by students who have a fear of failing in exam. Emotional, cognitive, behavioural and physical components can all be present in academic anxiety. Sweating, dizziness, headaches, racing, heart beats, nausea, fidgeting and drumming on a desk are all common in academic anxiety. Anxious persons are unaware of ways in which they behave. **Sarason (1996)** a prominent scholar suggested that academic anxiety might interfere with ones concentration on the task and consequently undermine one's performance. Thus in nutshell we can say academic anxiety is a complex emotional state, which is a feeling of fear and dread related to academic affairs.

NEED AND SIGNIFICANCE OF THE STUDY

Selection of career and setting on it, is an important task and source of personal gratification. In the modern age of science and technology, hundreds of vocations thrown open to an individual. The choice of right vocation is becoming difficult in these days. As we know, major turning will take place in the life of children, because career will depend upon the subjects selected

at this level. On the recommendation of National Policy on Education 1986, school curriculum after 10th class has been diversified into academic & vocational streams. The educational and vocational decisions at this stage pave the way for future decisions to be taken by any individual in the world of work. Any wrong decision of vocational choice due to pressure of the family or from indecisiveness on the part of children can block his/her growth and development in future. Therefore, it was considered relevant to study this aspect namely career maturity among children.

The understanding of vocational world is vital for students as it enablesthem to review their career decisions in the light of their potentialities. For proper guidance in the selection of courses of studies as well as in occupation, academic anxiety and parental encouragement play an important role. If a person upon entering an occupation, possess low anxiety level and high parental encouragement, he will found himself suitable for the type of work. The close relationship of academic anxiety and parental encouragement with career maturity establishes the importance of academic anxiety and parental encouragement in guidance & education. Therefore, for the selection of a particular course of studies as well as in occupation, testing of academic anxiety and parental encouragement is require.

STATEMENT OF THE PROBLEM

The Present Problem is entitled as

"A STUDY OF CAREER MATURITY AMONG SCHOOL CHILDREN IN RELATION TO ACADEMIC ANXIETY"

OBJECTIVES OF THE STUDY

- (1) To study the significant relationship between career maturity and academic anxiety among school children.
- (2) To study the insignificant difference in career maturity of boys and girls school children.

HYPOTHESES OF THE STUDY

- (1) There exist a significant relationship between career maturity and academic anxiety among school children.
- (2) There exist an insignificant difference in career maturity of boys and girls school children

DESIGN OF THE STUDY

Present study consist of one dependent variable i.e. career maturity and one independent variables i.e. academic anxiety. Main purpose of the study was to see how for the independent variable effect the dependent variable.

SAMPLE OF THE STUDY

Study was conducted on 120 school children within the age range 12-15 years in Abohar Tehsil.

TOOLS USED

1. Indian Adaptation of Career Maturity Inventory (CMI) by Dr. (Mrs.) Nirmal Gupta (1989)
2. Academic Anxiety scale for children (AASC) by Dr. A.K. Singh and Dr. (Km.)A. Sen Gupta (1984)

STATISTICAL TECHNIQUES

1. Pearson product moment coefficient of correlation was calculated to find out relationship between Career marutiry and academic anxiety
2. t-ratios were calculated to compare Career maturity of boys and girls school children.

ANALYSIS OF DATA

The data consist of scores of career maturity and academic anxiety among school children. This data is processed statistically in following order

1. Co-efficient of correlation between Career Maturity and AcademicAnxiety.
2. t-ratio betwee Career Maturity of Boys and Girls School Children.

TESTING OF HYPOTHESES AND INTERPRETATION OF RESULTS

HYPOTHESIS-1 "There exist significant relationship between career maturity and academic anxiety among school children"

**Table1
Showing Coefficient of Correlation
Career Maturity and Academic Anxiety**

Sr. no.	Variables	N	R	Levels of significance
1	Career maturity	120	-0.0107	Not significant
2	Academic anxiety	120		

The table1 shows that correlation between career maturity and Academic Anxiety has come to be -0.0107. The obtained results shows that career maturity and academic anxiety has negative correlation, which is not significant at .05 level as well as .01 level.

HYPOTHESIS-II "There exist an insignificant difference in career maturity of boys and girls school children".

**Table 2
Showing mean, standard deviation, difference between means, standard error of difference between Means and t-ratio of career maturity of boys and girls**

Group	Sample	mean	standard deviation	standard error of difference between Means	t-ratio
Boys	60	72.40	9.12	1.50	3.00
girls	60	67.90	8.50		

To see whether this difference is statistically significant or not, t-test was applied. Thus with help of mean, standard deviation and standard error of mean, t-value was calculated and t-value comes out to be 3.00 which is significant at both levels. Hence it may safely be stated that career maturity of boys vary from career maturity of girls.

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AGGRESSION AS RELATED TO FAMILY CLIMATE OF SECONDARY SCHOOL STUDENTS

RAKESH AGNIHOTRI*
DALJEET RANI**

Abstract

Aggression in humans ranges through fear-induced aggression, parental disciplinary aggression, maternal aggression, and sexual aggression. One clearly biologically adaptive type, defensive aggression, occurs when fight responses are mobilized in defense of an organism's vital interests, such as obtaining food or the protection of its young. The aim of defensive aggression is not destruction but the preservation of life. Thus, aggression can serve both destructive and constructive purposes. So, today's children are the future of tomorrow. Their future depends on the type of education which is provided to them in the schools, depends on the environment in which they are growing. Family climate plays an important role in determining the attitude and behavior of the child. The purpose of the present study is to find out the relationship between aggression and family climate of school going children. **These tools were used to study the relationship between two variables** 1. Aggression Questionnaire by G.C Pati(1976). 2. Family climate Questionnaire by B. Shah (1990). Statistics like mean, median and standard deviation were calculated to study the general nature of the data. It is finally found from studies that there exist a negative correlation between Aggression and Family Climate of the Secondary school Students.

Introduction

Aggression, in the anti-social sense, is violent and destructive behavior that is purposely directed against other people or the environment. According to social psychologists aggressive action is behavior aimed at causing either physical or psychological pain. In the context of psychology

* Principal, B.R. Ambedkar College of Education, Kurukshetra

**Research Scholar, Department of Education, Panjab University,Chd.

aggression is the act of behaving in a hostile fashion with the likely result of physical harm or emotional hurt. The first interaction of the child is with their mother, then other members of the family and then society and school.

Family is a unit of the society. In a family the relationship between individual constituting the family is very closely knit and the interdependence more pronounced. In the process of growth from childhood through adolescence and to adulthood an individual to some degree is dependent on the family for his needs and duties.

Now the social order has become highly complex. Life itself has got complicated. The whole social order has undergone a radical change. It affects the family climate, which further affects the performance of the child performance of the child.

Aggression

Behavior that is intended to threaten or inflict physical injury on another person or organism; a broader definition may include such categories as verbal attack, discriminatory behavior, and economic exploitation. The inclusion of intention in defining aggression makes it difficult to apply the term unequivocally to animals in which there is no clear means of determining the presence or absence of intention. As a result, animal violence is usually equated with aggression.

According to Anderson, C.A. and Bushman, B.J. (2002), "Behavior directed towards another individual carried out with the proximate (immediate) intent to cause harm."

Family Climate

Children who become successful are almost always from homes where parental attitude towards them was favorable and when a wholesome relationship existed within the family such a relationship produces a happy friendly child who is free from anxieties.

Justification of the Problem

Aggression on the form of anti-social behaviors has been found to be associated with unhealthy social development and personality of child. Aggressive behavior sometimes related to biological processes, is also social and consequently very much subjective to the environmental influences. Family climate is a salient force in shaping aggression in an individual.

Socialization practices, parental behavior, security are silent forces in shaping aggression in an individual. Thus family is the most important socializing agent among three which influences the child's life. It is most influential primary agency investing in the cognitive and non-cognitive development of the child. Thus the level of Child's aggression depends upon the type of climate provided to them in their homes. The purpose of the present study is to find out the relationship between aggression and family climate of school going children.

Objectives

The main objectives of this study were:-

1. To study the level of aggression among secondary school students.
2. To study the family climate of secondary school students.
3. To find out the relationship between aggression and family climate of secondary school students.

Hypothesis

- There exists a relationship between aggression and family climate of secondary school students.

Tools

The following tools were used:-

1. Aggression Questionnaire by G.C Pati(1976).
2. Family climate Questionnaire by B. Shah(1990).

Design of the Study

The descriptive survey method of research was employed to investigate the

relation of aggression with the family climate. A sample of 100 students was selected from Government Model Senior Secondary School of Sector-20D, Chandigarh.

Analysis and Interpretation of the data

Descriptive statistics like mean, median and standard deviation were calculated to study the general nature of the data.

Table

Correlation of aggression and family climate of secondary school students

Variables	Number	Correlation	Significance
Aggression	100	-0.483	Correlation is significant at the 0.01 level
Family Climate	100		

Findings and Conclusion

There exist a negative correlation between Aggression and Family Climate of the Secondary school Students. Maximum of students shoe Low and Mild Aggression Proneness and have congenial Family Climate.

It can be concluded that there is negative impact of family climate on the Aggression of secondary school students thus present study reveals that children having good family climate are less aggressive on the other hand the children whose family climate is not good are a high aggressive child.

Educational Implications

The present study will help in providing knowledge of aggression among Secondary School Students by which the process of effective guidance can be facilitated.

1. Guidance can be rendered to examine the cause of aggressive behavior and to have better understanding as to how they originated.
2. The proper attempts to eliminate excess aggressive behavior will help in effective teaching Learning process.

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IMPACT OF E-PUBLISHING ON SCHOLARLY COMMUNICATION

KIRAN KATHURIA *
KULVEEN KAUR**

ABSTRACT

The use of technology in publishing world has paved a new way to the scholarly communication which has brought a significant change in the global information process. This paradigm shift in e-publishing which is in a full bloom has transformed the nature of scholarly communication. In e-publishing, information dissemination is possible electronically which is cost effective, fast and time saving. Such qualities of e-publishing industry are attracting scholar communities to adopt information technology in their writings. The prompt communication of manuscripts is possible in ICT era. For publishing in scholar journals, manuscripts are peer reviewed at different stages and publisher notifies the author at each stage of reviewing as per the suggestions of the review committee. This process otherwise takes months in conventional methods of publishing.

Keywords: Scholarly communication, scholar community, e-book, e-media.

INTRODUCTION:

The use of technology in publishing world has paved a new way to the scholarly communication. Gone are the days when scholar communities had to wait for months to communicate their nascent ideas as well as the results of their research. If their work had to go through peer reviewed process, more time was required. Now the whole publishing world is in transition phase. E-books have entered in e-publishing and have become so important that we are talking on the same. Scholar journals are of utmost importance for scholarly communication. Most of the print journals are also available in e-format. Some journals are coming only in e-format. Online scholarly journals are also in e-market and these are considered "as a commodity to an academic institution. Users prefer electronic form of journals to the print one" (Dhingra & Mahajan,

* Asst. Prof. ** Asst. Librarian, Punjabi University, Patiala

2007). E-publishing is not replacing the print one, but it complements print industry which is very useful for scholarly community as it simplifies and expedites activities related with their publishing work. E-manuscripts can be submitted online to different publishers in different ways. Moreover, scholars can easily track the progress of their work in question. Revision as well as maintaining quality of work is now an easy job in e-environment.

The emergence of ICT has changed the ways of communicating, storing, disseminating and preserving the information in the publishing world. With web interface, manuscripts can be sent directly to publishers. An optical diskette may also be used for the same purpose. Lancaster defined electronic publishing as a “publishing process where the manuscripts are submitted in e-format, edited, printed and even distributed to users in electronic format by computer and communication technology”. Grolier Electronic Publishing Encyclopedia (2005) defines as the term e-publishing refers more precisely to the storage and retrieval of information through electronic communication media. It can employ a variety of formats and technologies, some already in widespread use by businesses and general consumers and others still being developed. Although the advancements in information technology have opened a new gateway for scholar communities, yet it has also imposed certain responsibilities as well as challenges on them.

E-publishing has revolutionized the format of recorded knowledge, switching to new means of publishing using electronic media. This has brought a significant change in the global information process. The paradigm shift in e-publishing which is in a full bloom has transformed the nature of scholarly communication. “The next chapter in the history of publishing is being written and published electronically”(Pedek, 1994). Ever since the first electronic book was published in 1985 in Germany there has been a steady growth in the number of electronic publication. More and more publishers of scholarly, academic and reference works from almost all fields of human knowledge are entering into the field of electronic publishing.

E-MEDIA IN SCHOLARLY COMMUNICATION:

- **Electronic book:** E-book is a boon for the scholar community. This can either be born digital or can convert the print form into digital one.

This type of book published in computer file format can contain audio, video with the availability of hyperlinks. Many hand-held devices are available in the market to read e-books.

- **Electronic journals:** Electronic Journals are recognized as a major link in scholarly communication. According to ALA Glossary, a journal is a periodical especially one containing scholarly article and/or disseminating current information on research and development in a particular subject field. "E-journals are available electronically via a computer network that they may or may not be published in some other physical medium, but that are not CDROM's" (Jones, 1998). A significant change in electronic delivery of journals has resulted in better storage options, low cost, easy dissemination and comfort in publishing information.
- **Blog:** In scholarly communication blog alerts the readers about the recent advances in their field and adds value to the resources. "There is an increase both in terms of researchers reading blogs and researchers blogging" (Selg, 2008). Scholarly communication is motivated by the fact that researchers, in their search for new knowledge, want to legitimate their results by having them vetted by other researchers in their discipline (Becher & Trowler, 2001) e.g. PEA Soup, is a blog that focuses on philosophy, ethics and academia (<http://peasoup.typepad.com/>); scienceblogs.com; <http://radar.oreilly.com>.
- **Discussion forums:** These are forums where scholars communicate their thoughts, opinions, ideas and engage in a conversation about the recent trends, news alert e.g Google Groups or subject specific group like LIS Forum.

FEATURES OF E-PUBLISHING:

In e-publishing, information dissemination is possible electronically which is cost effective, fast and time saving. Such qualities of e-publishing industry are attracting scholar communities to adopt information technology in their writings. Some of the key features of it are as follows:

- **COMMUNICATION:** The prompt communication of manuscripts is

possible in ICT era. For publishing in scholar journals, manuscripts are peer reviewed at different stages and publisher notifies the author at each stage of reviewing as per the suggestions of the review committee. He further communicates with author either for revision or for appreciation of his/her work. This process otherwise takes months in conventional methods of publishing.

- **ACCESSIBILITY AND AVAILABILITY:** The electronic information is accessible anytime i.e. 24x7 as well as anywhere. It is not restricted to one man's hands; rather any number of users can access it irrespective of geographical barriers. It is readily available at the desktop and is just a click away. The electronic publishing has made possible the end of 'out of print' era.
- **MULTIMEDIA:** Multimedia has made possible to elaborate and present the information graphically with high resolution, animations and has made the information a virtual reality. The navigational aids like hyperlinks have made the scanning of various pages instantly.
- **STORAGE AND MAINTENANCE:** Storage of e-documents is not a big issue now. Fears of loss, damage, tear of pages are obsolete problems.
- **CUSTOMIZATION:** The e-information can easily be customized depending upon customer's needs. One can change font type as well as size, colour setting etc. at one's will, which has simplified further use of information.
- **ECO-FRIENDLY:** As no paper is involved physically, thus it is economically and environmentally safe.

OPEN ACCESS MODEL FOR SCHOLARLY COMMUNICATION:

Open Access model provides free access to digital scholarly communication without any restrictions of taking permission from the authors and publishers. According to The Budapest Open Access Initiative "by 'open access' to ... literature, we mean its free availability on the public Internet, permitting any user to read, download, copy, distribute, print, search, or link to the full texts of these articles, crawl them for indexing, pass them as data to software, or use

them for any other lawful purpose, without financial, legal, or technical barriers other than those inseparable from gaining access to the Internet itself. The only constraint on reproduction and distribution, and the only role for copyright in this domain, should be to give authors control over the integrity of their work and the right to be properly acknowledged and cited”.

According to the Bethesda statement –

In open access publication “the author(s) and copyright holder(s) grant(s) to all users a free, irrevocable, worldwide, perpetual right of access to, and a license to copy, use, distribute, transmit and display the work publicly and to make and distribute derivative works, in any digital medium for any responsible purpose, subject to proper attribution of authorship as well as the right to make small numbers of printed copies for their personal use”.

Open access model includes open access journals, institutional repositories in digital form i.e. intellectual output by the scholars of the institution in a digital format and open access forums, blogs. e.g. The Documentation Research & Training Centre, Bangalore and the University of Arizona maintain open access digital repositories of e-prints in LIS.

Open Access Resources:

- Directory of Open Access Journals (<http://www.doaj.org/>)
- Directory of Open Access Repositories (<http://www.openoar.org/>) e.g. arXiv is a repository covering physics and related disciplines (<http://arxiv.org>).
- ROAR—Registry of Open Access Repositories, formerly called Tim Brody's Institutional Archives.
- Open access Forums (eg American Scientist Open Access Forum).
- Blogs (<http://catalogablog.blogspot.com>; <http://radar.oreilly.com>; <http://techcrunch.com>.)

ISSUES CONCERNING E-PUBLISHING ON SCHOLARLY COMMUNICATION

The main aim of any research is to communicate its findings which are considered its crucial part. In traditional model of scholarly communication,

scholar community is not satisfied due to lack of prompt communication of information as it is considered its source of instant power. The drawbacks with traditional publishing of books, journals, etc. urged for using ICT in this field which has amused everyone with the emergence of e-book, e-journal, etc.

Factors responsible for this dissatisfaction include:

- Decrease in number of scholarly journals in libraries due to escalating price of paper publishing known as serial crisis.
- Time lag between publishing and dissemination.
- Restrictions on what can be published.

Apart from this, they face some problems dealing with e-media too, such as

- Lack of universal common format for submission of articles such as Portable Document Format (PDF), Digital Object Identifier (DOI), etc.
- Lack of uniformity in online submission pattern of different scholarly journals.
- The fast flow of information has made the quality check difficult.

CONCLUSION:

The advent of ICT offers many advantages for scholarly communication. Access and exchange of information is so convenient and so cost effective now that it has attracted the attention of scholarly communities. It has revolutionized the format of recorded knowledge. E-publishing has brought changes in publishing industries to keep pace with the changes in communities and their information seeking behavior. E-publishing has resulted in a meaningful and substantive change in library, its collection, services and offers many advantages including ease of search; value added features and universal accessibility. It has become a powerful channel/tool for knowledge dissemination in today's electronic enrich environment. Its low cost, open access to all, wider dissemination of knowledge has opened new vistas for scholar community. However, in e-publishing, consistent uniformity and simplicity is required.

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HUMAN RIGHTS EDUCATION: A CALL FOR INCLUSION IN TEACHER EDUCATION PROGRAM

SONAL CHABRA
DHANANJAY JOSHI

ABSTRACT

The concept of human rights has evolved over the years and now got hold of a rationality of human kind getting accepted and actualized. They are a kind of grammar which one needs to recognize to invest human kind with dignity, equity, existence and non-exploitative social justice. Thereby human rights education has gained importance in the current context. Sabine Horenberg (2002) argues that human rights education should become an integral part of general education Human rights education is important for everyone and it is the safest, surest and cheapest way to a knowledgeable and enlightened society through the medium of teachers. This leads to a major task of teacher education. The paper is exploring the inclusion of human rights education in teacher educational program.

Education must be utilized in a constructive manner. Education is supposed to transmit to the pupil what mankind has learned about it and about nature and everything of importance it has created or invented. The impact of education is till the eternity. It pervades in every aspect of life. It helps in the formation of the attitudes, skills, and values among others for better living. Education makes you aware about the rights, duties and responsibilities. The importance of rights or specifically human rights is incontestable. Rights are such kind of statutes which are helpful in the development of personality of human beings. Human rights come from a universal set of ethical principles, which seek to ensure the equal worth of each individual life and which are applicable to all people at all times and in all places. They are the natural rights of a human being which means the fundamental right

* Asst. Prof., Rawal College of Advanced Studies in Education, Faridabad.

** Associate Prof., Guru Gobind Singh Indraprastha University, Delhi.

to guarantee dignity as a person.

So education needs to carry this responsibility of making everybody aware about human rights, whether through formal education or informal education. The following words exhibit the same idea-

Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms.

-Article 26(2), Universal Declaration of Human Rights.

Education about human rights is an empowering process. It has to do with development of attitudes and values that uphold human rights in daily life and in the agendas of nations. There is a growing consensus that education in and for human rights is essential and can contribute to both the reduction of human rights violation and the building of free, just and peaceful societies. Human rights education is also increasingly recognized as an effective strategy to prevent human rights abuses. The World Conference on Human Rights considers Human Rights education, training and public information essential for the promotion and achievement of stable and harmonious relations among communities and for fostering mutual understanding, tolerance and peace. While discussing the importance of human rights education, it is also essential to define human rights education. Human rights education may be defined as training, dissemination and information efforts aimed at the building of a universal culture of human rights through the imparting of knowledge and skills and the moulding of attitudes which are directed towards:

- The strengthening of respect for human rights and fundamental freedoms.
- The full development of the human personality and its inherent dignity.
- The promotion of understanding, tolerance, gender, equality and friendship among all nations.
- The enabling of all persons to participate effectively in a free society.

- The furtherance of the activities of the United Nations for the maintenance of peace.

Human rights education is much more complex than mere awareness-raising. It consists of legal standards, knowledge, awareness and skills and it aims to influence political and social behavior. Human rights education works on three aspects - teaching skills, offering knowledge and shaping attitudes. The skills would aim at encouragement needed to take action to defend human rights and prevent human rights abuses. The knowledge is about provisions of information about human rights and mechanisms for their protection. The values, beliefs and attitudes would be shaped which promote a human rights culture. So, the three dimensions of human rights education campaigns are knowledge; values, beliefs and attitudes; and skills. In other words, human rights education can be done at three levels- the cognitive level, the affective level and the application level.

It has been well accepted that promotion and protection of human rights and fundamental freedoms at the national and international levels should be universal and conducted without conditions attached. This education needs to be given to everybody, irrespective of the variations. There are various agencies which are involved in the process. In fact, a 'National Plan of Action for Human Rights Education' had been developed by the Office of the High Commissioner for Human Rights (OHCHR) in the framework of the United Nations Decade for Human Rights Education (1995-2004). The Guidelines are to assist States in responding to concerns and offering suggestions for developing State Plan of Action for the individual states. The World Conference on Human Rights calls on all States and institutions to include human rights, humanitarian law as subjects in the curricula of all learning institutions in formal and informal settings. The importance may be discussed, plans may be charted out, however, it needs to be appreciated that while Human Rights Education is a global issue; it is effective primarily at the national and the local levels. This is especially because human rights need to be understood in the particular psycho-social dimensions of the country, which is influenced by religious, social, economic and political climate of the country.

The increasing recognition of the importance of human rights is making Human

Rights Education a vital part of international education activities throughout the world. The same has to filter down at the national and local levels. In India also several efforts have been made. Various bodies have been formed and charged with the responsibility for the same. Among all these identified and recognized organizations, there is one agency which has yet not been completely harnessed. Or rather, if put in impolite words, it has been overlooked for its potential in contributing to the matter. It is widely accepted that when it comes to education for human rights, literacy for all and schooling for the greatest number of children possible should be the first priority. However, this very agency of 'school' has not been assigned the task of promoting human rights. There have been a few self-initiated efforts in this direction but they are not very organized, consistent and continuous.

Schooling provides not only basic education, but under the best of circumstances it aids a child to explore the world and to express ideas, ask questions and puzzle out answers. Hence, provides a useful ground to a child for gaining knowledge, forming attitudes and developing skills essential for protection and promotion of human rights. In United States of America, one of the largest organisations working in the area of Human Rights, has gone far and named its journal as 'Fourth R', with this fourth R being 'rights'. This cannot be denied that besides reading, (w)riting and (a)rithmetic knowledge of human rights is equally essential. Several steps can be taken to develop a school curriculum, which would help the raw and the tender minds at the lower and the basic levels to develop the eternal value of life and understand the real meaning behind human rights. Some aspects of Human Rights can be dealt within the prescribed periods of the timetable but most of the vital aspects have to be kept in view and dealt within the whole school and home life as occasions arise.

The next question which comes up in mind is that is it really so easy to do. Are we able to achieve whatever we preach in school? The obstacle to the same is rooted in the epistemology, the handling of the concepts. The difficulty of putting the theory of education for international understanding into practice is frankly recognized and expressed. "How can human rights be achieved through education at various levels?" The first solution to this problem lies in teacher training. The world conference on human rights has proclaimed

'Educators have a responsibility to ensure that educators contribute to the promotion of equality, peace and universal realization of human rights.' So this aspect needs to be given due attention and has been given weightage on several platforms, as is evident in the objectives framed by NCTE for teacher education. The general objective of teacher education as elaborated by NCTE states that it should sensitize teachers towards promotion of social cohesion, international understanding and protection of human rights in children.

Teachers must be familiar with human rights if they are to effectively help their students to respect these rights and to recognize any flagrant violations in the world. So now the onus comes on teacher training. Our teacher education institutions should professionally equip the student teachers who plan to take up this profession with all the necessary qualities and competencies. So education on human rights needs to be an essential component of our teacher training practices. Only a trained teacher could share and shoulder responsibility of teaching of human rights in the right way. Thus, arises an urgent need to include teaching of human rights in the teacher education curriculum at B.Ed and M.Ed levels.

Human rights is not just an academic subject matter, feelings are touched upon in the course of Human Rights Education. So it cannot be considered as yet another theoretical subject which can be just added and the purpose would be solved. The point is thus how should it be transmitted and how should it be taught so that the knowledge is truly acquired? The teachers should not only learn the cognitive but also the affective content of human rights that prospective teachers should learn. The teachers need to develop the affective part, which includes tolerance, mutual respect, commitment, and empathy among others. It has to be introduced very carefully for the prospective teachers should not feel another subject being loaded on them. Our teacher education programs are already carrying the blotch of being overloaded. There is no doubt that overloaded programs have the effect of blunting teacher's keenness and enthusiasm.

The teaching on human rights should be teaching to sensitize. It should provide basic interdisciplinary knowledge of world problems and problems of international cooperation. Creative participatory teaching methods that are

relevant to people's lives should be used, and human rights should be introduced as a holistic framework. An enabling environment should be ensured for the teacher trainees so that they are not just preaching but are also practicing rights. Priority should be given to integrate human rights into all relevant training and educational curricula. A multicultural, multidisciplinary team should be arranged for training on human rights so as to facilitate the exchange of knowledge between its members.

Besides teaching pre-service teachers to commit themselves to the ethic of human rights and the aim of changing society towards more complete fulfillment of human right goals, preparation programs would help teachers to-

- Appreciate the fundamental unity of mankind;
- Acquire a basic interdisciplinary knowledge of world problems and problems of international cooperation and how to work in solving them.
- Take active part in devising international education programs, educational equipment, and materials.

Human rights education in the teacher education courses should set out the core competences needed by teachers to put democratic citizenship and human rights into practice in the classroom, throughout the school and in the wider community. These programs should provide Global education; Social and Civic education; and Moral education. Human rights in modern India cannot be examined appropriately without taking into account the socio-cultural and religious forces at play. So the education should be contextualized. For instance, right to education is a human right; however, the length of compulsory education offered by different States varies depending on various factors. For Netherlands, it is 13 years, but for India, it is eight years. The Indian Constitution needs to be made the base for all the efforts. The Preamble of the Indian Constitution reflects the spirit of Article 1 of the Universal Declaration of Human Rights that "All human beings are born free and equal in dignity and rights". This spirit needs to be developed in our teachers.

Our teachers should have

- a moral commitment to human rights and human dignity

- a personal commitment to fundamental values and norms
- the readiness to defend human rights
- to display social and civic responsibility.

CONCLUSION

Education on human rights and the dissemination of proper information, both theoretical and practical, play an important role in the promotion and respect of human rights with regard to all individuals without distinction. Education about human rights should be considered as a central core in the entire life of the school and outside school also. Teaching and learning about human rights is not just an aspiration. It is a key and practical defence for upholding and protecting rights. . The idea that the Human rights education should be included in teacher training curriculum was emphasized by the Third World congress on human rights in New Delhi in 1990. so it is almost two decades after that and the conditions are still the same. At both pre-service and in-service levels, efforts need to be made for capacity building of our teachers on the same issue. The gloomy part about the whole thing is that we talk of training teachers, however, our teacher educators (the trainers of the teacher trainees) are themselves ill-equipped for the same. There are no established mechanisms to create a professional cadre of teacher educators. The program of M.Ed and other higher education courses should have a component of the same. These programs can have an optional paper on Human Rights Education, so that we can have trained teacher-educators for our teacher trainees. At the international level, Publications, Seminars and Conferences have supported teacher educators in their attempts to discover how to include more teaching about human rights in their programs. They have also given guideposts to educators exploring the meaning of schooling and teacher education in the rapidly emerging 'global village'. The Indian teacher educators need to be made conscious about them.

To put in one line, 'Education in and for human rights is a fundamental right' and so the State needs to make efforts at all levels to ensure that everybody seeks this right.

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