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### **Editor's Note**

Whole hearted greeting to all our readers, contributors, reviewers and others associated with the *Indian Journal of Educational Research*.

The present issue is comprised of twenty articles and one research abstract related to good quality research covering various aspects of education. The topics include diverse issues like women education, environmental education, teacher education, human rights education and distance education. The articles on school education, higher education, special education, and mathematics education have also been included leading to the holistic approach of the journal. Moreover, as a truly research journal, it has delved into matters related to meta analysis, construction of standardized test, ICT, career choice and other issues. Articles are included in historical, sociological and psychological research. All the papers in the journal are expected to enhance the quality research in education. It is to be noted that our journal can be seen at present in our University website ([caluniv.ac.in](http://caluniv.ac.in)) through 'Education' Department.

Our whole hearted thanks to the authorities of the University, our colleagues in the department, the contributors, the panel of reviewers and the readers. We are fortunate enough to have a highly esteemed peer reviews committee who, in spite of their very busy schedule, provided thorough and critical inputs for each and every paper. I specially thanks to my colleague Dr. Md. Kutubuddin Halder for his silent dedication towards the shaping of the journal. As a big family we all tried our best to enhance and sustain the quality of the journal. In spite of utmost care, some limitations and incompleteness may crop therein. It is all due to our constraints to shoulder the responsibility to the perfection.

With warm regards,

Dr. Nimai Chand Maiti  
Professor, Department of Education,  
University of Calcutta



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## **Academic Overload and Mental Health of Class IX and X Adolescents**

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*Jhumpa Biswas\**

### *Abstract*

The social structure with its advancing technology and tremendous growth of knowledge is making more and more demands upon the adolescents which appear to be far beyond their capacity to cope. In such society adolescence are more vulnerable to competition. Competition leads to academic overload which is one of the most pervasive psycho-social stressor for the young generation in our country. The present study aimed to find out the impact of Academic Overload on Mental Health of adolescents with respect to their familial and social backdrop. A sample of 240 adolescents both boys and girls (15-16 years) from co-educational Government and Private Secondary schools of Kolkata Metropolitan city was studied. Data were collected by using Personal Information data sheet, RCEB Mental Health Scale developed by S.P. Anand (1980) and a self structured Interview schedule to assess Academic Overload was administered. From the study it was found out that female students of both class IX and X taken together suffered more in Academic Overload ie. 74.20% than male students' ie. 68.35%. In case of Mental Health score female students of both class IX and X taken together are 36.65% and male students are 58.30%, which clearly shows that when Academic Overload increases percentage of mentally healthy students decreases and vice versa.

**Key Words:** Adolescents, Academic Overload, Mental Health, Stress.

### *Introduction*

The present age is a transitional period suffering from economic hardship, unemployment, population explosion, poverty etc. Due to population explosion life space has become narrower. On the other hand the period is known as the competitive age. Everyone is striving for excellence and material gain seems to be the primary purpose of life and in a culture where happiness is often measured in terms of material success, people have become more dependent on material means as a source of security and power. In such society adolescence are more

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vulnerable to competition. Competition leads to academic overload which is one of the most pervasive psychological stressor for the young generation in our country. It generally refers to the state when certain aspects of our lives place excessive demands on us, and when we fail to satisfy those demands we experience distress. We all are aware of the multiple forms in which they are experienced as the adolescents live in modern, automated, fast paced, time driven, tensed world that leads to mental health problem due to academic overload which cannot bring lasting peace and tranquility. Overload reaches the class-room as well. Children are pressured to do well academically, to serve the purpose of grade battle in this competitive age. Academic overload is defined as the excessive internal and external demands regarding academic performance, which creates disequilibrium in the mental life of the child Pfiffer, (2001). There is a relatively constant underlying pressure to compete with upcoming assignment Hudd, S.S. *et.al.*, (2000). The load or demand from various sources does not seem to create a problem as long as the student is able to strike a balance and maintain its equilibrium amongst all. But when these expectations or load cross the level to which the student is unable to strike a balance, one feels overburdened or overloaded. The individual is then at a position to complain that one has to do too many things in too less time. Perhaps the academic load faced by the adolescents of today is higher than ever before. This is because today's challenging environment is pushing the children beyond the limit without providing opportunity to maximize their potential. Thus, a child's innate nature and capacities have no opportunity to find expression in a daily routine that permits no time to play, to enjoy simple pleasures and to explore the world. The situation has of course worsened during the years, and the situation now is not confined to metropolitan cities alone, it can be seen in small towns and bigger villages too. (Yash, P. 1993). Pediatricians, psychiatrists and neurologists are of the opinion that the effect of academic overload or pressure is immense on their young patients. Educators, social welfare societies and juvenile protective agencies are tracing out mal-adjustment problems which are resulting due to academic overload or stress.

In recent years, clinical psychologists as well as educationalists have started giving proper attention to the study of mental health. Mental health means those behaviours, perceptions and feelings that determine a person's overall level of personal effectiveness, success, happiness, and excellence of functioning as a person Cutts and Mosley (1994). The World Health Organization (2005) defines mental health as "*a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community.*" According to Richards, Campania, & Muse-Burke (2010) "*There*

*is growing evidence that is showing emotional abilities are associated with prosocial behaviors such as stress management and physical health".* Also without emotional support, mental health is at risk. By receiving emotional support your health can increase and prevent mental health disorders.

However, for the present work the targeted sample are in the higher secondary stage (class IX and X) of educational ladder of Kolkata Metropolitan city. Academic Overload and Mental Health of adolescents is taken into consideration to carry out the present work.

### ***Academic Overload***

Sarma (2004) in a study conducted that parental education was highly associated with the academic stress of their children. The students with the parents of official and government jobs may have poor level of academic stress and better adjustment compared to the students of business, coolie and agricultural parents. Asha Batnagar (2007) observed 600 tenth class students of Delhi and found a positive and significant correlation between the academic stress factors and the academic achievement. He also found a significant negative correlation between study habits and academic stress. Premalata Sharma (2007) in a study on achievement of rural girls found that poor study habits were highly associated with higher stress. The level of stress also leads o the academic success. Chakrabarthy (2007) observed that educational level of the family influenced the academic stress of the female students compared to the male students. Nagaraju (2009) conducted a study on 224 students of class X and reported that (i) the correlation between academic stress and anxiety is positive and significant. (ii) the correlation between intelligence and stress is negative and significant and (iii) the correlation between achievement and stress is positive and significant.

### ***Mental Health***

Bhargava and Qureshi (2006) made a comparative analysis of mental health of drug abuser and non-drug abusers and found that drug abusers were found significantly lower in adjustment, emotional stability, autonomy, intelligence and scored more in insecurity and self-concept. Singh, Chaudhary and Asthana (2007) studied the mental health status of high and low emotionally intelligent adolescent and observed a significant difference in mental health status indicating better mental health of highly emotionally intelligent adolescent. Singh (2008) studied the effect of socio-economic status and residence on mental health of college students and found that low socio-economic status had a negative impact upon sound development of mental health behavior. However rural urban region was not found to be significant determinants of mental health behavior. Tejpreet Kang, Asha Chawla (2009) studied the mental health: A study

of rural adolescents. The sample comprised of rural adolescent boys and girls. The tools used were: a) socio economic status scale, b) Mental health check list. Major findings of the study were: 1) A non-significant gender difference across mental health status but a significant difference in somatic health status of adolescent boys and girls, 2) Boys were found to be having better somatic health status as compared to girls. Justin Hunt M.D., M.S. Daniel Eisenberg Ph.D. (2010) studied the mental health Problems and Help-Seeking Behavior among College students. Mental disorders are as prevalent among college students as same-aged non- students and these disorders appear to be increasing in number and severity. The purpose of this report is to review the research literature on college student mental health, while also drawing comparisons to the parallel literature on the broader adolescent and young adult populations.

Hence these studies formulated a strong foundation to structure the present study. This study is not a replica of the earlier studies. It differs from earlier studies in respect to essential purpose, region and conditions in which it was conducted, population and mode of exploring the relationship between the variables involved. Although Academic Overload and Mental Health of adolescents (15-16 years) are important area from the educational point of view, these areas are not much explored. So the researcher chose to study the impact of Academic Overload and Mental Health of Adolescents (boys and girls) of class IX and X students.

#### ***Objective of the study***

- ◆ To find out the percentage of male pupils and percentage of female pupils of class IX and X with respect to high Academic Overload i.e. Q3 above.
- ◆ To find out the percentage of male pupils and percentage of female pupils of class IX and X with respect to high Mental Health i.e. Q3 above.
- ◆ To find out percentage of male pupils and percentage of female pupils (class IX and X taken together) with respect to high Academic Overload i.e. Q3 above.
- ◆ To find out percentage of male pupils and percentage of female pupils (class IX and X taken together) with respect to high Mental Health i.e. Q3 above.
- ◆ To find out the interrelationship of Academic Overload and Mental Health of adolescents (male pupils & female pupils) of class IX and X i.e. Q3 above.

#### ***Method***

Adolescents (both boys and girls) in the age group (15–16 years) studying in different schools of Kolkata metropolitan city of higher secondary level (session 2013–14) were selected for the study.

### ***Sample Selection***

Sample was selected by using stratified random sampling technique. Four schools were selected out of which two schools were government and two schools were private. After the selection of the schools, the Principals were personally contacted with a request to carry out research work in their schools. After obtaining the permission from the school principals, the class in charge of 9th and 10th grades were personally contacted and lists of adolescents (boys and girls) falling in the age group (15-16 years) were prepared. A sample of 60 adolescents (both boys and girls) was randomly drawn from class IX and X. Thus the final sample comprised of 240 adolescents.

### ***Tools***

- ◆ Personal information data sheet was prepared to assess the age, gender, education and occupation of parents, number of family members, parental income etc.
- ◆ RCEB Mental Health scale developed by S.P. Anand (1980). The inventory consists of total 60 questions which are to be answered on a five point scale meant for senior secondary level children. Likert's technique has been used for the construction of the scale. Five responses categorizes as (1) Strongly Agree, (2) Agree, (3) Undecided, (4) Disagree and (5) Strongly Disagree with scores corresponding 4, 3, 2, 1, 0 for 20 positive questions and 0, 1, 2, 3, 4 for 40 negative questions. The minimum score is 0 and the maximum score is 240. Children scoring above 160 are said to be mentally healthy. The test-retest reliability was calculated to be 0.95. This is a self-administering test that may be given individually or in groups. Although there are no time limits, the respondents normally complete it within 40 minutes.
- ◆ A self-structured schedule was prepared to find out Academic Overload of adolescents. Long sessions were arranged with teachers teaching the students of high classes in schools. Teacher educators were also involved in this process. A preliminary list of statements was also discussed with some school students. Modification was done according to their suggestion and ten new items were added to the questionnaire. The test-retest reliability was calculated to be 0.82 by using Pearson's Co-efficient of Correlation. The inventory consists of total 22 questions which are to be answered on a five point scale. Five responses categorizes as (1) Almost Always, (2) Very Often, (3) Often, (4) Seldom and (5) Never with corresponding scores 5, 4, 3, 2, 1. The minimum score is 22 and the maximum score is 110. Children scoring less than 71.58 are considered to have low academic overload whereas children scoring above 95.28 are considered to have high

academic overload. Validity of the questionnaire was found out by the inter-item consistency. At least four items from each dimension with the highest inter-item consistency value were selected for the final form. This is a self-administering test that may be given individually or in groups. Although there are no time limits, the respondents normally complete it within 15 minutes.

**Data Collection and Analysis**

A close rapport was established with the adolescents so that they will feel free to reveal their true feelings. The adolescents were requested to give honest responses and were assured that their identity would be kept confidential. After the collection of data frequencies, cumulative frequencies, cumulative percentage frequencies, mean, median, mode, standard deviation, co-efficient of correlation and Q3 were calculated.

**Table 1 : Mean, Median, Mode & Standard Deviation of Academic Overload of Class IX & X**

Academic Overload	Class-IX	Class-X
Mean	93.64	88.65
Median	95.00	91.50
Mode	91.00	92.00
Standard Deviation	7.81	9.22

**Table 2 : Mean, Median, Mode & Standard Deviation of Mental Health of Class IX & X**

Mental Health	Class-IX	Class-X
Mean	163.03	162.75
Median	163.00	164.50
Mode	163.00	163.00
Standard Deviation	21.68	24.92

**Table 3 : Percentage of Pupils (Male & Female) of Class IX & X with respect to High Academic Overload i.e. Q3 Above**

Classes	Gender	Q3 above	Total
Class IX	Male	73.40%	79.20%
	Female	85.00%	
Class X	Male	63.30%	63.30%
	Female	63.40%	

**Table 4 : Percentage of Pupils (Male & Female) of Class IX & X with respect to High Mental Health i.e. Q3 Above**

Classes	Gender	Q3 above	Total
Class IX	Male	53.30%	45.00%
	Female	36.70%	
Class X	Male	63.30%	50.00%
	Female	36.60%	

**Table 5 : Gender wise Academic Overload Shown Taking Together Class IX & X i.e. Q3 Above**

Gender	Q3 above
Male	68.35%
Female	74.20%

**Table 6 : Gender wise Mental Health Shown Taking Together Class IX & X i.e. Q3 Above**

Gender	Q3 above
Male	58.30%
Female	36.65%

**Table 7 : Academic Overload & Mental Health (Male Pupils & Female Pupils) of Class IX & X i.e. Q3 Above**

Classes	Gender	Academic Overload Q3 above	Mental Health Q3 above
Classes IX & X	Male	68.35%	58.30%
Classes IX & X	Female	74.20%	36.65%

***Result and Discussion***

From Table 1 and Table 2 Mean, Median, Mode and Standard Deviation of Academic Overload and Mental Health are given respectively.

From Table 3 it is found out that in class IX percentage of male pupils above Q3 in Academic Overload is 73.40% where as in case of female pupil it is 85.00%. The female pupils in class IX shows more Academic stress or overload than male pupil. Whereas in class X the situation is more or less same for male and female pupils that is 63.30% and 63.40 respectively.

From Table 4 it is found out that in class IX and X percentage female pupils above Q3 in Mental Health test is 36.70% and 36.60% respectively. Whereas

in class IX and X percentage of male pupils above Q3 in mental health is much more that is 53.30% and 63.30% respectively. Female pupils are found to be less mentally healthy compared to male pupil of both class IX and X.

From Table 5 it is found out that percentage of male pupils (class IX and X taken together) with respect to high Academic Overload i.e. Q3 above is 68.35%, whereas percentage of female pupils (class IX and X taken together) with respect to high Academic Overload i.e. Q3 above is more i.e. 74.20%.

From Table 6 it is found out that percentage of male pupils (class IX and X taken together) with respect to high Mental Health score i.e. Q3 above is 58.30%, whereas percentage of female pupils (class IX and X taken together) with respect to high Mental Health score i.e. Q3 above is much less i.e. 36.65%.

From Table 7 the interrelationship of Academic Overload on Mental Health clearly shows that when Academic Overload increases the number of mentally healthy pupils decreases and vice versa. In female pupils the Academic Overload or stress is found to be more i.e. 74.20% compared to male pupils i.e. 68.35% and thus we can see that the number of male pupils are more mentally healthy i.e. 58.30% than female pupils i.e. 36.65%.

### ***Conclusion***

Academic pressure on children and youth to succeed academically is a universal phenomenon of urbanized society. Our precious children are subjected to excessive stress and strain within the school and outside the school which leads to significant mental health problem in the recent years. Psychologists have found out the current emphasis on grades which is mainly extrinsic reward of learning and it de-emphasizes the importance and utility of what is actually learned. The grades on the report cards mean a lot to the parent's. Teachers and parents face pupils whose physical and emotional maturity is not sufficient to withstand these extra pressure which causes mental break down and even juvenile delinquency. Psychologist, scientists and welfare agencies have not put much importance to research the effect of Academic overload and Mental Health on adolescents for which there is dearth of statistics. It would be wise to bring up such studies so that a holistic approach towards mentally sick can be adopted.

Schools in response to community demands for more academic emphasis, makes the attainment of success more difficult and it contributes to one of the great social problem. Unrealistic demands for scholastic achievement seem to occur for unwillingness to accept the truth what is known as individual differences. The ultimate effect of unrealistic expectations of parents can only be defeatism. The child or youth who might have been a happy, well-adjusted person making a valuable contribution to his community in some worthy work suited



to his capacity and potentiality may become one of life's failure. An intense review of curriculum and workload of adolescents is vital. Seminar, training, workshop, conferences are very much necessary for the teachers, policy makers, parents, to enlighten and sensitize them regarding appropriate handling of children so that the adolescent do not face excessive demand and competition which leads to mental health problem. A major part of a country's population consists of adolescents. Thus the prosperity of any country in various fields depends upon the proper growth and development of the adolescents. A well adjusted adolescent will be a good adult in the society.

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## Adolescent Girls in Distress—A Cross-Sectional Study from Muslim Community in West Bengal

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### *Abstract*

Anxiety, depression and distress are known to affect adult females at higher risk by 12th grade because they experience more challenges in early adolescents and because of their tendency to cope with problems by ruminating. Girls also tend to respond to stressors more strongly than boys. Reported is the study of Muslim adolescent girl students distress. Hopkins Symptoms Checklist (HSCL-10) was used for collection of data. 171 respondents from Hawrah district (Bankra area) were used as the sample of the study. All the samples were taken from minority girls schools. Statistical analysis done using  $\chi^2$  test. Results showed that adolescent girls' students are affected from anxiety, depression and distress.

**Key Words:** Muslim Adolescent Girls, Community, Anxiety, Depression, Distress

### *Introduction*

Adolescence is a transition period from childhood to adulthood. In this developmental period they experience major physical, social, psychological and sexual changes that cause adolescents more stresses easily. In this stage of life they not only affected by the relations with other persons or environment, but they also concern about 'self'. They feel lonely, humiliated or dissatisfied with their appearance and become more sensitive to their life events (Seiffge-Krenke, 1995). "The adolescent girls in distress comes from a large family with a low socioeconomic status, a household that does not offer privacy for the adolescent girl and parents who have difficulties in daily functioning and are often dealing with problems of substance abuse, prostitution, illness etc.. The atmosphere at home is negatively charged with conflict and tension, and the neighbourhood

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environment also fails to provide a positive role model” (Stiener, 1979; Tene, 1987) (quoted from Azaiza, 2006).

The literature suggests various definitions for adolescent girls in distress, such as difficulties in functioning in different contexts, including familial and social neglect or physical abuse, familial or social conflict, emotional abuse, delinquency etc. (Azaiza,2006).

Some researchers claim that the main characteristics of adolescent girls in distress is their difficulty in functioning in family, school, community and work environment (Konopoka, 1966; Stiener, 1979; Tene, 1987). According to Shechter (1984) adolescent girls are affected from emotional problems like low self-esteem, high levels of stress, frustration and anxiety, difficulties in decision-making processes, and a fatalistic world view. Adolescents living in two-parent families with higher level of parental conflict tend to have poorer well-being than those from divorced families (Mechanic & Hansell, 1989). Furthermore, parental divorce is more beneficial for the better well-being of adolescents than higher level of parental conflict (Jekielek, 1998). Again parental divorce of a conflicting family is more acceptable for better well being of the adolescents than parental remarriage (Amato, et.al., 1995; Looms & Booth, 1995). But very little is known about why and how parental conflicts, divorce and remarriage affects adolescents well-being and more particularly its effects in terms of adolescents age. Emery (1988), Allison & Furstenberg (1989) observed that impact of parental divorce is more harmful to younger children than the older one. Adolescents from two-parent families are psychologically in well condition than those from the families where parental divorce occurs (Amato & Keith, 1991; Amato, 2001). Parental conflict and parental divorce are regarded as primary stressors for the adolescent because in such situation children may feel that they have lost a dream about their family. This psychological loss may increase the tension and conflict between children and custodial parents. These poor children may be more likely to experience financial decline, decrease in parental support, and moving as well as it increase the scope of their abusement.

Avison & Mclalpine (1992) suggested that gender differences was strongly associated with the levels of psychological distress.

Parental or close relatives illness, changes in relations with peers, family instability, changes in schools and violence are some common stressful life events for adolescents (Buchanan et.al., 1996).

Aseltine (1996) noticed that family structure not only directly affect adolescent distress, but also indirectly affect adolescents through life events and family relations. We found that both single parent families and conflict families are linked to adolescents more distress because of poorer family relations. Again adolescents life events may be associated with adolescent distress by poorer

family relations. Marital conflict and parental divorce are positively related to the level of adolescent distress and these two factors are primary stressors, where as life events are the secondary stressors. Again these stressful life events lead to emotional problems.

Depressive illness is known to affect adult females at about twice the rate found in males (American Psychiatric Association) because of their greater tendency to cope with problems by ruminating. Research with younger people have also highlighted increased vulnerability among girls, with longitudinal research showing that girls are at higher risk than boys for depressive symptoms by 12th grade due to their experiencing more challenges in early adolescence (Petersen, Sarigiani & Kennedy, 1991). Girls report more depression and tend to respond to stressors more strongly than boys (Hankim, Mermelstein & Roesch, 2007).

### **Objectives**

The objectives of the this study are to explore the extent of distress of adolescent Muslim school going girls in the age groups 11 to 18 years on the basis of some selected demographic features.

### **Sample**

Data were collected from 171 adolescent Muslim girl students in the age group 11-18 years. Demographic characteristics of the sample were shown in the table 1.

**Table 1 : Demographic Characteristics of the Sample**

Variables		Total No.	%
Age (in years)	11-14	135	78.95
	15-18	36	21.05
Habitat	Urban	84	49.12
	Rural	87	50.88
Monthly income	1000-5000	137	80.12
	5001-10000	21	12.28
	10001-15000	13	7.60
No. of Siblings	1-4	130	76.02
	5-8	38	22.22
	9-12	3	1.75
Family Structure	Nuclear	54	31.58
	Joint	111	64.91
	Broken	6	3.51
Birth order of the sample	1-4	130	76.02
	5-8	38	22.22
	9-12	3	1.75

**Measuring instrument**

Hopkins Symptoms Checklist questionnaire developed by Hopkins (HSCL-10) was used to measure psychological distress (anxiety and depression) of the respondents. The checklist was selected because it demonstrates good sensitivity and simplicity for detecting the psychological symptomatology and mental distress. Out of 10 items of this checklist first four items indicated anxiety and rest 6 items were related to the symptoms of the depression. The co-relation between original anxiety score and short version score was 0.91 and co-relation between depression score is 0.96. Each item of the scale was rated on a scale from one (not at all) and four (extremely). The original scale was adopted in Bengali by Nanda (2009).

**Collection of Data**

Adopted questionnaire with demographic data sheet were supplied to the selected respondents each in groups. Filled up demographic data sheet and questionnaire were collected personally, cleaned and quantified as much as possible and tabulated systematically for further analysis and interpretations.

**Results**

**Table-2 : Mean, Standrad Deviation and  $\chi^2$ -values**

Variables		No	T.S	M	Sd	df	X2	Sig
Age	11-14	135	2440	18.07	271.98	1	1014.7	0.05>
	15-18	36	665	18.47	110.19			0.01
Habitat	Urban	84	1601	19.06	174.22	1	3.04	<0.05
	Rural	87	1504	17.29	160.32			<0.01
Monthly income	1000-5000	137	2522	18.41	215.15	2	3226.73	>0.05
	5001-10000	21	360	17.14	76.67			>0.01
	10001-15000	13	218	16.77	17.07			
No. of Siblings	1-4	87	1518	17.45	162.43	2	853.6	>0.05
	5-8	69	1310	18.99	157.20			>0.01
	9-12	15	277	18.47	70.53			
Birth order of the participant	1-4	130	2340	18	204.44	2	2674.14	>0.05
	5-8	38	709	18.66	113.49			>0.01
	9-12	3	56	18.67	26.40			
Family Structure	Nuclear	54	926	17.51	124.84	2	1874.4	>0.05
	Joint	111	2061	18.57	194.74			>0.01
	Broken	6	104	17.33	38.76			

### ***Major Findings***

1. Significant differences exists in the anxiety, depression and distress of adolescent muslim girls students on the basis of their age.
2. No significant differences exists in the anxiety, depression and distress of adolescent muslim girls students in terms of their habitat.
3. Significant differences exists in the anxiety, depression and distress of adolescent muslim girls students in terms of their parental income (monthly).
4. Significant differences exists in the anxiety, depression and distress of adolescent muslim girls students in terms of their no. of siblings.
5. Significant differences exists in the anxiety, depression and distress of adolescent muslim girls students on the basis of birth order of the samples.
6. Significant differences exists in the anxiety, depression and distress of adolescent muslim girls students on the basis of their family structure.

### ***Discussion***

The concept of adolescent Muslim girl students in distress is an unfamiliar one within Indian cultures and is not in common use among lay people and non-professionals. The respondents in this study belong to an eastern ethnic minority. The main finding of this study is that Muslim adolescent girls understand the concept of distress. Now a days throughout the world self-harm behaviours constitute a high risk problem for adolescent girls (Rodham, Hawton & Evans, 2005). In Muslim community also the same trend is increasing. Adverse life situations and stressors play a vital role in the development of depressive and self-harm intentions in this age group. The girls possess a greater tendency to cope with problems and therefore, they are more affected from depressive disorders. In the absence of suitable intervention the likelihood of suicidal tendency increases. Lower age of menarche has also been associated with increased mental distress among adolescent girls. This is more applicable for the adolescent girls from Muslim society. Because , their orthodox view bound them to conceal this physical change and all the related uneasyness that makes them more depressive. Parental income is also a constituting factor for adolescent girls depression. Adolescent girls from lower-income group families experience higher rates of depression than their middle or highier income peers (Gibbs, 1985; Schoen et.al.,1997). In the present study also same result was established. Muslim adolescent girls from lower family income possess more anxiety, depression and distress. Further in-depth research in this unfamiliar area of study is recommended.

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## Assessing the Relationship between Environmental Awareness and Action towards Reduce, Reuse and Recycle of Twelfth Grade Students

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### **Abstract**

*Environmental actions related to 3Rs namely reducing, reusing and recycling are the overarching principles of environmental education. Such actions are always preceded by environmental awareness, knowledge, inculcation of appropriate values etc. The educational institutions are considered to be the nursery of pro environmental behaviour. This study analyzes the relationship between the environmental awareness of the students with their reported environmental actions comprising 3Rs. The responses were collected from twelfth grade students (N=400) studying in and secondary and higher secondary schools affiliated to West Bengal Board of Secondary Education. The research instrument developed by the researchers consists of 10 pair of items related to 3R's based on Environment attitude and action scale by Kaspolu and Turan (2008). It measures the level of environmental awareness and the degree to which one practices the related environmental action. For analyzing the data chi-square with contingency of coefficient test was employed. Within the framework in environmental awareness and action, the items were categorized into three components namely–reduce, reuse and recycle. The results showed that in case of reduce and reuse, the score of awareness and action significantly correlated. Whereas weak relationship exists between these two scores in terms of items related to recycle. The study implies that positive measures are to be taken to improve the recycling behaviour of the students so that sustainable living can be ensured.*

**Key Words:** Environmental Awareness, Environmental Action, Reuse, Reduce and Recycle

### **Introduction**

The most important objective of environmental education is developing and practicing those behaviours which have minimum adverse impact on

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environment. As *Stern* (1997) maintained that environmentally significant behaviour should be defined in terms of its impact on the structure and dynamics of eco system or biosphere. The concept of environmental education has evolved during last decades. The period of metamorphosis demonstrates how the emphasis has shifted from acquiring environmental awareness, and knowledge towards environment towards civic action to minimize and arrest degradation of environment caused by unmindful human action. But environmentally significant behaviour is a complex issue and many factors are attributed to it apart from mere environmental knowledge, awareness and attitude. *Kollmus and Ageyman* (2002) had analysed the different theories of behaviour to explain the attitude behaviour gap in the context of environment. Among the various theoretical frameworks related to awareness attitude behaviour they have emphasized on *Theory of Reasoned Action* and their *Theory of Planned Behavior* (*Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980*). These researchers pointed out that in order to find out the exact relation between attitudes and behaviour the attitude towards a targeted behaviour should be measured. This is what has been done in this present research. *Rajecki* (1982) ascribed four causes of attitude action gap regarding environmental issues. These are—

- a) ***Direct vs. indirect experiences***– Indirect experience of an environmental issue like reading about pollution of a river from a book will result in weak environmental action than direct observation of the ways a river is being polluted.
- b) ***Normative influence***– Social norms, cultural patterns and the life styles of the family members exert strong influence on environmental behaviour.
- c) ***Temporal discrepancy***– It implies that with passage of time peoples ‘attitude and subsequent behaviours are likely to change.
- d) ***Attitude behaviour measure***– When attitude is broad in scope then it fails to relate with a particular behaviour. For example an attitudinal question likes ‘do you care about environment?’ ‘May not correlate strongly with ‘do you do composting?’ Thus result may show discrepancies (*Newhouse, 1991*).

There are varied types of environmentally significant behaviours. Among them sustainable practices have been associated with environmental actions namely Reduce, Reuse and Recycle. These are very important strategies to minimize resource and energy uses and to reduce waste production. To tackle the problem of sustainability, to awaken consciousness among students and implementing it into action – understanding the concept of 3R’s is an imperative need. This study primarily explores the interrelationship between awareness and action practiced by the school students. 3R’s are the essential elements in achieving

sustainability (*World Class Communications Technologies, LLC* 2011). In terms of hierarchy of 3R's, the first step is reduction. Reduction means to use less of something. It actually motivates the buyers to buy only those items which are of utmost necessity. The second step is reuse, this signifies to use something again without any kind of modification in it. For example, instead of throwing it away as waste, try reusing it different situations. Lastly the process of recycle includes using old items to make the new ones. Today proper implementation of 3R's has created societal, environmental and economic benefit (*World Class Communications Technologies, LLC, 2011*). Following the strategy of 3R's will ensure healthier lifestyles among individuals and a more responsible behaviour towards environment.

Several studies have been conducted on 3R's and sustainability from various perspectives in different countries. Studies related to environmental issues *Shahnawaj* (1990), *Hausebeck, K.W., Milbrath, L.W., & Enright, S.M.* (1992), *Bradley, J.C., Walichek, T.M. & Zajichek, J.M.*(1999), *Kuhlemeier, H., Bergh, H.V.D., & Lagerweij, N.* (1999), *Abdul Wahab S.A.*(2008) may be cited in this respect. However researches on awareness-action as one of the dimensions reflecting 3R's related to sustainability are scarce. Going green or using eco-friendly products is an essential for attaining sustainability. In this respect, *Saxena and Srivastava* (2012) reported that respondents had only a limited understanding of environmental issues which positively impacted their eco-friendly behaviour. *Mishra* (2012), *Sebastian and Nima*, (2005) study showed that the science students have more awareness of biodiversity and its conservation than other students. Whereas no significant differences on environmental awareness among students of public and govt. schools was found (*Mishra, 2012*). Researches on 3R's in the Indian perspective especially in school education context are not adequate. Hence this work is to be accepted as in right direction especially to understand the importance of 3R's vis-à-vis environmental awareness and action.

### ***Objectives***

This paper observes the perceptions of the students regarding their awareness of 3R's. The present study investigates the relationship between students' awareness and action regarding 3R's (Reduce, Reuse and Recycle). This study is unique as it explores the extent of interrelationship between the two variables and their likely consequences on environment.

### ***Methodology***

#### ***Sample***

The sample was drawn from the schools (affiliated to West Bengal Board Secondary Education) of twelfth grade students, situated in the city of Kolkata. The present sample comprises 400 (N) students comprising both girls and boys.

**Instrument**

The research instrument was based on Environmental attitude and action scale developed by *Kaspolu and Turan* (2008). The items were modified to relate to Bengali culture and practices. It consists of 10 pair of items representing 3R's to measure the level of environmental awareness and the degree to which one practices those environmental actions. Actually each item is essentially a pair of awareness and action in the context of a particular environmental issue for example saving water. This item has two parts as indicated below-

- ◆ *Awareness : Broken and dripping taps should be repaired*
- ◆ *Action : I repair or have someone to repair broken and dripping taps*

All the items are framed in the same manner. Each item has three responses options – always, sometimes and never for action related part and completely agree, neither agree nor disagree and not agree for awareness part.

**Results and Discussion**

The results show 10 dimensions of awareness-action item in relation to twelfth grade students. It illustrates students' ideas about environmental services and their sensitivity or responsibilities towards environmentalism.

**Table 1 : The Awareness-Action item Related to Saving Energy**

Awareness Action	Agree	Neither Agree nor Disagree	Disagree	Total
Always	138	14	5	157
Sometimes	151	5	23	180
Never	18	12	33	63
Total	307	32	61	400

Chi-square=110.13/ P=0.000

Table 1 scores revealed that students' relationship between awareness and action towards saving energy was highly correlated. The results demonstrated that students' perception for saving energy was not only high but they also implemented it in practice hence they were aware of the utility of saving fossil fuels by reducing its use.

**Table 2 : The Awareness-Action item Related to Paper Saving**

Awareness Action	Agree	Neither Agree nor Disagree	Disagree	Total
Always	38	55	42	135
Sometimes	51	34	33	118
Never	48	52	47	147
Total	137	141	122	400

Chi-square=7.26/ P=0.12277

Findings from *table-2* indicated that there is no significant relationship between students' awareness and action. It signifies that students failed to save papers despite being aware of necessity of reducing use of papers which are mostly manufactured by felling of trees.

**Table 3 : The Awareness-Action item Related to Excessive Packaging**

Awareness Action	Agree	Neither Agree nor Disagree	Disagree	Total
Always	98	55	32	185
Sometimes	81	34	23	138
Never	48	12	17	77
Total	227	101	72	400

Chi-square=6.22/ P=0.1833

From *table 3*, it can be concluded that students' awareness-action link towards excessive packaging was low and not significant. Unnecessary packaging increases the amount of waste and therefore decorative packages mostly of plastics and non bio degradable materials must be avoided. But it seems that the students have failed to realize the importance of less packaging. Packages made of Styrofoam and plastics contaminate the food with harmful chemical and cause immense harm to environment. However, they are attractive and act as advertisement and the consumers are ready to pay higher prices for that. The school students included in the sample group may be aware of ill effects of excessive packaging but their behavior in this respect is not eco-friendly.

**Table 4 : The Awareness-Action item Related to Saving Water**

Awareness Action	Agree	Neither Agree nor Disagree	Disagree	Total
Always	161	11	6	178
Sometimes	153	13	5	171
Never	22	27	2	51
Total	336	51	13	400

Chi-square=85.96 P=0.000

According to the results of *table no-4* regarding saving water, it was reported that the relationship between students' awareness and action towards conservation of water was significant. The value of 'p' signifies the relation between the two variables is positive and moderate. Thus if awareness towards saving water is high it will lead to rise in practicing environmental friendly behaviours.

**Table 5 : The Awareness-Action item Related to Donate Old Clothes and Books**

Awareness Action	Agree	Neither Agree nor Disagree	Disagree	Total
Always	46	19	14	79
Sometimes	59	11	17	87
Never	171	29	34	234
Total	276	59	234	400

Chi-square=8.8/ P=0.063

From the table no. 5 it is evident that the students are aware about the importance of reuse of old clothes and books but donating these materials is something which they fail to practice. Hence there is a clear gap between awareness and action in respect of reuse of materials.

**Table 6 : The Awareness-Action item Related to Reuse Empty Glass and Jars**

Awareness Action	Agree	Neither Agree nor Disagree	Disagree	Total
Always	153	23	61	237
Sometimes	65	27	26	118
Never	26	8	11	45
Total	244	58	98	400

Chi-square=11.49/ P=0.0215

Observation of *table – 6* reveals that the ‘p’ value is 0.02 which is significant at 0.05 level. Table 6, however shows a different result pertaining to reuse of different types of materials namely glasses and bottles. The reuse of bottles is a very common practice which the students have observed and may be encouraged by their family members to do it whereas reuse of old clothes is not so common among the young students rather the mothers in the families are decision makers in this respect.

**Table 7 : The Awareness-Action item Related to Buy Second-Hand Books**

Awareness Action	Agree	Neither Agree nor Disagree	Disagree	Total
Always	127	47	46	220
Sometimes	63	12	14	89
Never	45	19	27	91
Total	235	78	87	400

Chi-square=9.89/ P=0.04232

*Table-7* showed that students’ awareness-action relationship towards reusing old or second-hand book was significant at 0.05 level.

**Table 8 : The Awareness-Action item Related to Buying Products Made from Recycled Materials**

Awareness Action	Agree	Neither Agree nor Disagree	Disagree	Total
Always	37	9	13	59
Sometimes	127	15	56	198
Never	92	18	33	143
Total	256	42	102	400

Chi-square=4.7 / P= 0.3194

Data from *table–8*, states that students’ theoretical knowledge about environment does not necessarily result in recycling behaviour patterns. Knowledge as well as attitudes is not enough to behave responsibly (*Kasapoglu and Turan, 2008*). Thus the relationship is weak and there is lack of sensitivity towards environment. However, it is to be admitted that the students can buy recycled materials only when they are easily available, which is not always the case in Indian market.

**Table 9 : The Awareness-Action item Related to Sorting Disposals**

Awareness Action	Agree	Neither Agree nor Disagree	Disagree	Total
Always	56	8	24	88
Sometimes	39	7	23	69
Never	177	14	52	243
Total	272	29	99	400

Chi-square=7.75 P=0.1011

Results from *table-9* illustrated that there is no significant relationship between students' awareness and action with regard to sorting waste disposal. As such practices is very rarely been carried out in India, therefore students of twelfth grade often lack the understanding of such concepts.

**Table 10 : Showing the Awareness-Action item Related to Use Rechargeable Batteries**

Awareness Action	Agree	Neither Agree nor Disagree	Disagree	Total
Always	63	14	17	94
Sometimes	56	6	13	75
Never	157	25	29	231
Total	276	45	79	400

Chi-square=2.89/ P=0.5763

From *table 10*, it was observed that the students' awareness and action relation to the usage of rechargeable batteries was not significant. This implies that students' sensitivity towards environment may not be low but practicing such behavior is not always possible due to various constraints in this case the high price of the rechargeable batteries.

**Conclusion**

From the findings, it can be concluded that the students' relationship between awareness-action regarding 3R's for sustainability were moderately correlated. Furthermore the results revealed that the scores of awareness and action were significantly correlated in terms of reduce and reuse items. Awareness often resulted in preserving and conserving the resources. In this respect, students



who were motivated to save water, energy, reusing empty bottles, etc. carry out a sustainable behaviour pattern. Results of some previous studies (*Kaiser et al, 1999*), postulated that there is a positive and significant relationship between environmental knowledge and energy consumption behavior. In contrast, the scores of awareness-action relation regarding recycling items reflected low and weak relationship. It is evident from the study that students are more concerned about environmental problems which they face quite frequently like saving fuel, reusing old books, bottles etc but somehow they fail to transform in to daily practice. The study implies that the current curriculum should be revised with more content from environment including recycling practices as one of the vital approaches to sustainable living. At the same times it must be admitted that traditional curricular transaction fail to motivate students to participate actively in matters pertaining to environmental issues. Environmental education should permeate the whole school life. *Conde and Sanchez (2010)* suggested that environmental education should be integrated with school life and the teachers and school authority should practice what they preach. They emphasized that every action in school must satisfy environmental criteria and there should be environmental monitoring by the eco vigilante.

### ***Implication***

The present study highlights the fact that teaching environmental education by traditional approach does not help to attain the objectives of the subject. The environmental awareness may increase but the students fail to translate the knowledge into environmentally significant behaviour. The school authority must introduce drastic changes within the school campus so that the students have enabling situation to practice 3Rs related to environmental action. It may be suggested that schools may incorporate the following policies as suggested by DEFRA in UK-

- a) ***Enable***–It signifies that barriers to sustainable practices are to be removed. The facilities for practices of 3Rs should be provided by the school authority. Education should give skill training and necessary information to the students.
- b) ***Encourage***–The students who demonstrate pro environmental behaviour should be rewarded and recognized. Social pressures are to be created on those who fail to reduce, reuse or recycle and in general behave in an unsustainable manner. Penalties and fines may be imposed for non cooperation.
- c) ***Engage***–The school can create community centers for environmental activities. The students may develop network with external organizations

active in environmental issues. The school can also organize media campaign regarding sound sustainable practices.

- d) **Exemplify**–Most importantly teachers and heads of the institutions must lead by examples. The school authority needs to introduce consistent environmental policies.

These 4 Es are essential conditions for turning the schools in to sustainable ones where students will learn to practice sustainable consumer behaviour.

The present study highlights the importance of introducing Environmental Education as a separate discipline in the school curriculum. Apart from imparting theoretical knowledge some practical oriented concepts like 3R's should be introduced. Thus teaching environmental education should be based on a coherent approach. Garcia (2000) stated that greening of curriculum can be ensured when environmental consideration is taken into account as an educational principle in decision making process. The contexts of green curriculum are preparation and use of appropriate teaching materials, motivating the students, improving their attitude and habits and adding more environment related contents in the curriculum (Conde and Sanchez, 2010). In other words the school ethos should reflect environmentalism whereby students will acquire courage, commitment and motivation to take active part in solving environment related issues.

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## **Awareness and Attitude of Students and Teachers of the Under Graduate College on the Use of ICT: A Case Study**

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*Rekha Nariwal\**

### *Abstract*

Technology awareness, motivation and changing learners' and teachers' behavior are prerequisites for successful implementation of e-learning programs. For the past three decades ICT has changed many aspects of our life but when one looks at education there seems to have been an uncanny lack of influence and far less change than other fields have experienced. Awareness goes along with attitude and 'positive attitude towards ICTs is widely recognized as a necessary condition for effective implementation. Present study focuses on awareness and attitude of students and teachers of the under graduate college on the use of ICT. 105 undergraduate girl students of the Humanities discipline and 21 teachers were randomly selected for the study. Teacher Educators Attitude towards ICT scale and Rating scale were used as tools. Percentage, Mean, S.D. and t- value were calculated. Qualitative analysis was also done.

**Key Words:** Information and Communication Technology, Awareness, Students', Attitude, Teachers', College, Developing Country, Kolkata

### *Introduction*

Globalization and technological change—processes that have accelerated over the last twenty years have created a new global economy powered by technology fuelled by information and driven by knowledge. The emergence of a new global economy has serious implications on the nature and purpose of educational institutions. As the half-life of information continues to shrink and access to information continues to grow exponentially, schools and formal institutions of education cannot just remain venues for transmission of a prescribed set of information from the teachers to the students over a fixed period of time. Rather schools must promote learning to learn, ie, the acquisition of knowledge and skills that make possible continuous learning over the lifetime. The illiterate of the 21st century according to futurist Alvin Toffler, will not be those who cannot

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read and write but those who cannot learn, unlearn and relearn. Concerns over educational relevance and quality therefore coexist with the imperative of expanding educational opportunities to those made most vulnerable by globalization—developing countries in general, low-income groups, girls and women, and low-skilled workers in particular. Global changes have constantly put pressure on all groups to constantly acquire and apply new skills and teachers or teacher education as a whole needs urgent and comprehensive reforms. The International Labour Organization defines the requirements for education and training in the new global economy simply as ‘Basic Education for All’, ‘Core Work Skills For All,’ ‘Life Long Learning For All’. Information and communication technology does not merely mean having radio, T.V and newer digital technologies such as computer and internet as powerful enabling tools for educational change and reforms but appropriately using them to expand access in education, strengthening the relevance of education to the increasingly digital workplace and raising educational quality by and among others and making teaching–learning an engaging active process connected to life. However the experience of introducing different ICTs in the classroom and other educational settings all over the world over the past several decades suggests that the full realization of the potential educational benefits of ICTs is not automatic. The effective integration of ICTs into the educational system is a complex, multifaceted process that not only involves technology, indeed given enough initial capital, getting the technology is the easiest part! but curriculum and pedagogy, institutional readiness and teacher competencies above all needs a greater convergence between professional preparation and continuing professional development for all stages of education in terms of level, duration and structure.(NCFTE2009). Education as an area of interdisciplinary knowledge is not merely an application of a few core disciplines but a praxis and a context where theories and practical wisdom are generated continuously. This primarily is intended to help policy makers in developing countries define a framework for the nation in consonance with the technological advancement. The rapid advances recently made in ICT particularly in internet has very important implication .Use of internet has increased rapidly from an estimated 3 million in 1990 to approximately 137 million in June, 2012 (Market Research firm IMRB and the Internet & Mobile Association of India (IAMAI)

Internet has therefore undoubtedly emerged as a powerful and effective tool facilitating the teaching process. It has become a useful resource for information, database along with user interaction and participation. It has complemented the traditional libraries and has shared the burden of students facilitating learning through e-journal thus helping universities with battling the inflation in the

printing material cost. No doubt during the second half of twentieth century as a result of knowledge explosion it has opened more avenues and opportunities to help learners find jobs, scholarships and educational opportunities for further higher studies.

Not alone for the college, the internet has proved its benefits in schools by enhancing and facilitating learning. Even a single computer in the classroom can bring about effective results has been proved in the study of Scaplen (1999). Today it is an integral part of schools, colleges and universities. It has facilitated information collection and storage. It has catered to different students and their personalized needs. It has also catered to the needs of the differently able students thus facilitating learning and accommodation in various learning styles. As we begin the 21st century it is almost impossible to imagine how ICT will be like by the end of the century. The advances in this field are already visible but in a developing country like India there is a long way to go. The Chinese proverb says—Tell me and I forget—Show me and I remember, Involve me and I understand is very apt in the present times of unprecedented change. The potential role of ICT may play an important role in revitalizing teaching to meet the growing aspiration of today's world. Teaching therefore is becoming one of the most challenging professions in our society where knowledge is expanding rapidly and much of it is available to students as well as teachers at the same time (Perraton, Robinson and Cree, 2001) As new concepts of learning have evolved, teachers are expected to facilitate learning and make it more meaningful to individual learners rather than just to provide knowledge and skills. Recent developments of innovative technologies have provided new possibilities to the teaching profession but at the same time has placed more demands on teachers, to learn how to use these technologies in their teaching (Robinson and Latchem, 2003) Globally too, educational systems are under pressure to adopt innovative technologies and to integrate new information and communication technologies in the teaching learning process to prepare students with the knowledge and skills they need in the 21st century. Apparently teaching profession is evolving from an emphasis on teacher centered, lecture based instruction to student centered interactive learning environment. Today New Information and Communication Technology (NICTs) is integrating the usage of technology seamlessly for educational processes like transacting curricular content, support based learning, research, evaluation, development of instructional materials international collaboration, networking in educational and professional development in developed countries. Video conferencing through multimedia delivery to websites is also being used to help the teachers meet the challenges they face today. In a developing country like India the educational

system therefore needs to come in real terms with these new challenges and take full advantage of these opportunities. If educational institutions have to ensure that their students leave the institutions as confident individuals capable of using new technology creatively and productively then their teachers should have the competence to integrate emerging technologies and digital content in all their operations. There is a profound gap between knowledge and skills students acquire in school and colleges and those required in the ever changing today's world of technology. The technology that has become so pervasive in our daily lives is still outside the comfort zone of our educational environment. The teachers are therefore facing immense challenges to overcome traditional ways and change pedagogical practices in the ways that reflect the changing social, political and economic landscape in which 21st century students learn. Therefore the educational system must understand and embrace the 21st century skills within the context of rigorous academic challenges.

The success of any program in education depends solely upon the awareness of the students' and support and positive attitude of its teachers'. Teachers are the steering engineers and therefore if they perceive that the introduction of technology will do no good to their students introducing technology with the best of infrastructure will be futile. Among the other factors that affect successful use of computers in the class room are teacher attitude towards computers (Huang and Liaw 2005) Attitude in turn constitutes various dimensions. Some examples of those perceived usefulness, computer confidence (Rovia and Childress, 2002) training (Tsitouridou and Vryzas, 2003) gender (Sadik, 2006) knowledge about computers (Yuen, Law and Chan, 1999), anxiety, confidence and liking (Yildirim, 2000)

In support of the importance of teachers attitude towards computer use Zhao, Tan and Mishra (2001) provided evidence to suggest that the attitudes of teachers are directly related to computer use in the classroom. For example, teachers often view the computer as a tool to accomplish housekeeping tasks, manage their students more efficiently, and to communicate with parents more easily. The success of student learning with computer technology will depend largely on the attitude of teachers and their willingness to embrace the technology (Teo, 2006) Gaining an appreciation of the teachers' attitude towards computer use may provide useful insights into technology integration and acceptance and usage of technology in teaching and learning. In many developed countries nearly all schools and higher educational institutions are equipped with infrastructure to conduct ICT mediated teaching and learning. Positive teacher attitude is therefore crucial if computers are to be effectively integrated into the school and

higher educational institutions. A major reason for studying teachers' attitude is that it is a major predictor for future computer use in the class room. (Myers and Halpin 2002).

Information and Communication technology (ICT) is indispensable and has been accepted as part of the contemporary world especially in the industrialized society. In fact, cultures and societies have adjusted to meet the challenges of the knowledge age. The pervasiveness of ICT has brought about rapid change in technology, social, political, global and economic transformation. However, the field of education has not been unaffected by the penetrating influence of information and communication technology. Unquestionably ICT has impacted on the quality and quantity of teaching, learning and research in teacher education in developed countries. Undoubtedly, ICT provides opportunities for students, teachers, academic and non academic staff to communicate with one another effectively during formal and informal teaching and learning (Yusuf 2005 b, pp. 316-321) In the same vein teachers need training not only in computer literacy but also in the application of various kinds of educational software in teaching and learning (Ololube, 2006) Furthermore, they need to learn how to integrate ICTs into their classroom activities and school and college structures. The quality of teachers is known in virtually all countries to be a key predictor of student learning (Ololube 2005a; 2005b). Therefore teacher training is crucial using ICTs because ICTs are tools that on the one hand can facilitate teacher training and on the other hand help them to take full advantage of the potential of technology to enhance student learning (UNESCO, 2003). Correspondingly, ICTs have introduced a new era in traditional methods of teaching and offering new teaching and learning experiences to both teachers and students.

The purpose of this paper is to address the issues of awareness of students and attitudes of their teachers' with regard to use of ICT in an under graduate college in Kolkata. The key assertion of this paper is that technology based learning should be provided to the teachers so that synergistic results will benefit the teachers in course of their transaction. Accordingly there is a need to design better teacher education programs—pre-service, in-service, refresher and orientation courses for unanticipated and unintended results that may confront them in the classroom. The curriculum according to the researcher should be absolutely built not only on the theoretical structure without the integration of ICT but amalgamating the two intensely. There is a myth between our curriculum and the expectations out of it. Accepting the fact that ICT is an integral part of teaching the study has proposed to examine the awareness of the college students and the attitude of their teachers respectively.



### ***Objectives***

1. To study the awareness of the students' of the first year undergraduate female students towards the use of ICT
2. To study the attitude of the college teachers' towards the use of ICT.

### ***Sample***

The present sample comprised of 105 undergraduate girl students and 21 teachers of the Humanities in an undergraduate college in Kolkata.

### ***Tools Used***

1. The study made use of two standardized tools (I) Rating scale developed by Magre and Sandhya Milind Khedekar of the University of Mumbai was employed to assess the awareness of first year undergraduate female students on the four dimensions of awareness which comprised of 48 items under 4 sub scales namely awareness about computer, awareness about internet, broadcasting technology and over all awareness of ICT. This scale was modified to suit this particular study. Community and income level were added in this tool.
2. For assessing the attitude of college teachers on the use of ICT the researcher used another research instrument namely 'Teacher Educators Attitude' towards ICT scale developed by Sharma 2010 was employed. This scale comprised of 40 items under six sub scales : Curiosity to use potential of technology, Comparative use of technology, role in improvement, innovativeness and overall attitude. There were 48 and 40 items respectively in both the scales. The items for both the standardized scales were scored as strongly agree = 5, Agree = 4, Not sure or Neutral = 3, Disagree=2 and strongly disagree=1. The overall scores yields students and teachers awareness and attitude towards the use of ICT respectively.

### ***Procedure***

The girl students belonging to the first year undergraduate level of the humanities discipline and 21 teachers of the same department were studied by the researcher. The standardized tools for both the students and teachers were distributed among the respondents' who were present on that particular day. The researcher tried to maintain objectivity as far as possible. The statistical measures used in the study are mean, Standard Deviation, t-test and percentage. The total scores of the items are 176.

**Results and Discussion**

**Table 1 : Community Wise Difference in Awareness of Students towards ICT**

Category	No. of Students	Percentage
Hindus	40	38.09
Muslims	16	15.23
Christians	42	40
Jain	03	2.85
Sikhs	01	0.95
Others	03	2.85
Total	<b>105</b>	<b>100</b>

The result showed that community wise mean and S.D. for Hindus was 102.09 and 6.50) for Muslims it was 98.31 & 4.55 for Christian it was 111.64 & 5.43 & for others (101.57 & 3.20)

The t value of Hindus and Christians was 9.82 (two tailed) and 4.91 (one tailed) which is significant at 0.05 level. The t-value of Muslims & Christians was 8.90 (two tailed) & 4.45 (one tailed which is significant at 0.05 level. Mean was higher for Christians than the other communities namely Hindus, Muslim and others and t-value (4.12) was significant at 0.05 level. So it may be concluded that Christians may have scored higher on a few dimensions of ICT assessed on awareness through the rating scales than all other communities. The researcher feels the Christian students' command over English could have been the contributory factor towards better awareness and understanding of computer and its better usage. Linguistic barriers therefore need to be addressed while teaching computers.

**Table 2 : Income Level and Difference in Awareness of Students towards Use of ICT**

Category		No. of Students	Percentage
No response		1	0.95
30,000 Earning Per Month	Middle income group	49	46.66
60,000 Earning Per Month	Upper Middle income group	38	36.19
Above 60,000 Earning Per Month	Higher income group	17	16.19
	Total	105	100

Mean and S.D score for middle socioeconomic status (MSES) was 116.89 and 7.77, upper socio-economics status (USES) was 108.78 and 7.67 and higher socio-economic status (HSES) was 107.64 and 5.60.

The t-test value between MSES and UMSES was 5.76 \* and between MSES & HSES was 5.36\* both significant at 0.05 and 0.01 level. The t value for UMSES and HSES was 0.53 which was insignificant at 0.05 levels. The research finding shows that awareness towards ICT is seen more among students belonging to the MSES category. The reason could be students belonging to this category may belong to a service background family and therefore they try and abreast themselves with the ever changing technology so that they can face competition and challenges ahead in life. It has been a tradition that the middle SES category of students have to seek employment and only then can they earn their living. They can't dare to ignore the changing world and its pressing demands. This is an interesting finding.

#### ***Awareness about Computer***

- ◆ 80% students have knowledge about computers.
- ◆ 45% have difficulty in using computer for the purpose of study since 'Computer' is a separate and optional subject. Hence students of Humanities discipline do not have it as a core subject. Hence difficulty in using it as an educational tool.
- ◆ 100% students do not know difficult programmes in computer.
- ◆ 48.5% students know word processing and use of computer to make power point presentation. Formal training has not been imparted to them in school but they learnt it through trial and error method since it is the requirement of the day. In a developing country like India computer science is a separate subject and only science students, teachers and policy makers believe should have knowledge about it.
- ◆ It is alarming that 100% students use the computers to play games.
- ◆ 100% strongly agreed saying that computers should be used to teach a subject as it will enable them to learn a difficult subject more easily. All students felt subjects should be integrated. They are all aware that computer increases their knowledge, helps them academically and improves their interpersonal skills.

#### ***Awareness about Internet***

- ◆ 95.8% students are aware of the immense potential of internet. The students use the internet for web-surfing, E-mailing, for accessing information and educational materials.

- ◆ 29.5 % students use the internet for making presentation if the teacher assigns a particular task to them.
- ◆ 100% students use the internet to download music or a movie.
- ◆ 98.5% students strongly disagreed using the internet to access an educational software.
- ◆ 99% students disagreed on the teachers giving assignments and quizzes online and were not even aware of any on-line course in education. Students use the internet to be connected to friends on face book, chatting etc.
- ◆ 97.5 students are aware that there is a method of video conferencing but they have never experienced this form of virtual exposure.

It can be therefore concluded that the students are aware of the use of internet but since internet is still a costly affair in India they feel accessing the net for long hours to search information would be secondary and their primary interest was to be connected to friends. The college in which the students are studying has a website where administrative and academic matters are uploaded to give them information.

***Awareness about Broadcasting Technology : Radios and Television***

1. 100% students were aware about the broadcasting technology (radio and television). They know this technology helps in transmitting, accessing and understanding information but they are not aware of its potential as an educational tool.
2. 100% students know that programs on education are broadcast but they never watch or listen to it. Radio and television for the students is an entertainment tool rather than an educational tool.

***Awareness about ICT (Overall)***

1. 92 % students strongly agreed that the use of ICT has changed their role as students. It has opened their gates to a vast sea of knowledge, Undoubtedly 100% students agreed that use of ICT helps them learn better and has a positive impact but since its usage is limited as teachers still use the chalk and the talk method nothing has really changed. Teachers appreciate the use of ICT for studies, just to surf information but a new beginning has to be made when computer technology will be integrated in teaching. There are great challenges ahead and to fulfill our dreams of integrating ICT needs a positive attitude not only of our policy makers and administrators but the teachers at large who are the makers of destiny and torch bearers of our nation. These finding corroborates the contention of the earlier study undertaken by (Mehra and Mital, 2007) that for example

in India, despite research and testimony that technology is being used by more faculty, the diffusion of technological innovations for teaching and learning has not been widespread nor has it become deeply integrated with curriculum. Low collaborative activities and the significant preference of print over virtual forms of presentation prove the prevalence of traditional dynamics of teacher-centered learning where there is one way communication flowing from teacher to learner and printed materials are distributed among the students (Allan, 2007, Kundi and Nawaz, 2010) Until there is a change in attitude of people involved in academics not only with academia, designers, policy makers, administrators and above all the teachers who are to actually implement it is the classroom, no transformation can be really seen with regard to its actual usage. To bring about change the teacher is really to be taken into confidence. Since technology by nature is disruptive and demands not only new investments in terms of time, money and space but changes in the way people think and do things, acquire new skills and so on (Aaron et al, 2004).

2. There is also great uncertainty among decision makers, managers' developers, trainers, learners and instructors about their new role as tutors and facilitators for learning process (Elhers, 2005)

The availability of technology itself will not instigate the aspired goals Cultural and pedagogic change should occur for the technology to be implemented to its full effectiveness and achieve the goals it was designed to fulfill (Allan, 2007). In some cases integrating the traditional "sage on the stage" to also being a "guide on the side" and student's role also changes from being passive receivers of content to being more active participants and partners in the learning processes (Mehra and Mital 2007; Nawaz and Kundi, 2010c).

### *Teachers' Attitude and use of ICT in Education*

**Table 3 : Mean value of Teachers scores with Respect to Sub-Scales of Attitude**

<b>Sub-Scales</b>	<b>Number (N)</b>	<b>Mean</b>	<b>S.D.</b>
Curiosity to use	21	4.06	0.47
Potential of Technology	21	4.07	0.49
Comparative Use of Technology	21	4.07	0.41
Role in Improvement	21	4.16	0.42
Innovativeness	21	4.01	0.33
Overall Attitude	21	4.20	0.49

The above table reveals that since the mean value of the scores lie in between

4 and 5 it implies that most of the teachers strongly agree or agree with the items given in the attitude scale. Overall attitude of the teachers was found to be positive towards the use of ICT. However 89% teachers felt they need to be formally trained towards the use of educational software. Not a single teacher questioned has registered for any online course or were even aware of any such courses like Khan Academy or COURSERA etc.

Though the college in which the study was conducted was Wi-fi connected but only 2% of the teachers who were in the administration could access the internet since the password was not available to all the other teachers. Students too had a similar fate and 98% teachers accessed the internet from their homes to send emails (first) followed by chatting (2nd) and www. (3rd). Students and teachers of the same college responded in a similar way. This finding highly indicates that teachers need to be trained to use ICT in education like accessing e-journals inflibnet database search etc.

### ***Conclusion***

ICTs have not permeated to a great extent in many higher educational institutions due to the attitude of its teachers who are not fully equipped to meet the ever-changing demands of the society. Integrating technology in India in higher educational institutions is still a big challenge the teachers are facing today and especially teachers of the Humanities discipline. The curriculum has not changed to a large extent in terms of greater information access, greater communication, synchronous learning, increased co-operation and collaboration, pedagogical improvement through simulation, virtual experiences integration of different subjects, graphic representation etc. Teachers therefore require special training to integrate computers in their respective disciplines. Developing countries are immensely facing these challenges in spite of the governments' initiative to fund for infrastructure. Challenges of integrating these technologies can only make a break-through when teachers' attitude towards its usage is positively and equitably distributed. During the last couple of years since 1990 the university libraries and other institutional libraries are coming under the impact of Information technology, since last two decades several initiatives have been taken by the Government of India for computerization and networking of Indian libraries. (Sinha and Satish, 2000). ICT should be identified as a game changer that can significantly strengthen India's higher educational system and propel the country to become a "Knowledge Power." For effective implementation there is a need to overcome linguistic barriers as well so that teachers and students can equally master English since knowledge of English is essential to master computers. Out of 368 million literate rural Indians only 17 % can speak English.

A survey of accredited colleges by UGC in 2008 revealed glaring IT infrastructure short comings. The average number of computers per college was only 6. Teachers, the researcher believes should assume a leadership role in transformation of education or be left behind in the swirl of rapid technological changes. Positive attitude no doubt is important for readiness but utilizing the computer in the right perspective is equally important. A new calibre of teachers with professional ability to handle the computer and its immense potential as an educational tool is to be inducted into the system and only then can they help their students do the same. This research endeavour might have made a considerable stride in terms of awareness of students with regard to their community and income level but further studies may be taken up to probe more parameters in terms of gender, age and types of institutions on the basis of medium of instruction etc. Further research may be undertaken to probe some of the parameters with a larger sample size as well.

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## Comparison of Socio-Economic Background of the Students of Distance Education and Regular Course

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### *Abstract*

The research was conducted to compare the socio-economic background of the students of distance education and regular course. Stratified random sampling technique was adopted. 250 M.A. students in History, Political Science and Education subjects of which, 163 in distance mode and 87 in regular mode students were taken as sample. Socio-Economic Background Schedule framed in consultation with the Kuppaswamy standardized Socio-Economic Scale, is used as tool. For quantitative analysis of data, percentage, Mean, Standard Deviation, Chi-square and t-test were applied and qualitative analysis was done. The study found that the number of married and aged students in distance mode particularly in Indira Gandhi National Open University was greater than the regular mode. The minority communities and female students were more in number in distance education mode than regular mode. In both the modes, distance and regular about 80 per cent students belonged in nuclear family. There was significantly better in socio-economic background particularly occupation and income level of the families of students in distance mode than that of regular mode. But in the case of educational background of students there was no difference in distance and regular mode.

**Key Words:** Distance Education, Uni-Mode University, Dual-Mode University, Socio-Economic Background

### *Introduction*

Distance learning is an idea or approach to education which has experienced an explosive growth in the last few years. Distance education is an educational mode supplementary, complementary and alternative to conventional/traditional

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system of education, depending on the situation it is practiced. The term distance education means the type of education that is liable to be organized and imparted keeping cognition of the distance factor. Who imparts such education and who receives it, both are separated by a common factor known as distance.

Distance education institution in any country are established with the main objective to democratize education as a resource and provide every citizen, irrespective of sex, caste and creed, easy and affordable access to quality education. Present day distance learning is based on ideology of creating human capital. It has moved to another level all together with objective of creating substantial work force that can aid in raising the economy of a country to newer heights.

In India, distance education is providing through open universities and dual-mode universities i.e. universities which offer both on and off campus education. The universities which offer only on or off campus education are known as uni-mode universities.

Today distance education has evolved into an independent system of education in our country. Recently, a large number of students have been entering in higher education through open education system in different universities. In a survey conducted by All India Survey on Higher Education 201-12, reveals that Distance enrolment constitutes 12.5% of the total enrolment in higher education. At Post Graduate level there were 1303864 students. Among them 772328 were male and 531536 were female. Enrolment in distance education has grown at an annual rate of 11% in the last three decades. (Twelfth Five Year Plan-2012-17). Naturally some questions arise in our mind that do the different universities perfectly satisfy the objectives of distance education through open and distance mode? Is there any difference in the student's background of distance and regular course among the universities? For obtaining answer, it is needed to study the socio economic background of the students of distance and regular course which has been done in this study. The main objective of the study is to find out the socio-economic background of the students of distance and regular courses including their demographic features, gender, marital status, age, communities, family pattern and family size.

### ***Hypotheses***

1. There is no difference in educational level of the family of the students of distance and regular mode.
2. There is no difference in occupational level of the family of the students of distance and regular mode.

3. There is no difference in monthly income of the family of the students of distance and regular mode.
4. There is no difference in regard to socio-economic background of students studying in regular or in distance mode of learning.

### ***Method***

It is survey type descriptive study.

### ***Population***

Students of different courses of arts faculty of distance education at the post-graduate level in the Rabindra Bharati University (RBU), Vidyasagar University (VU), Netaji Subhas Open University (NSOU) and Indira Gandhi National Open University (IGNOU) are considered as population for the study.

### ***Sample***

Stratified random sampling technique was adopted. (a) The Rabindra Bharati University and Vidyasagar University and (b) Netaji Subhash Open University and Indira Gandhi National Open University were selected as dual mode and uni-mode universities respectively. 250 students were chosen of which 163 were in distance mode and 87 in regular mode.

### ***Tool***

#### **Socio-Economic Background Schedule**

It was framed by the investigators in consultation with the Kuppuswamy standardized Socio-Economic Scale. It was finalized on the basis of the result of pilot study and opinion of the experts.

### ***Findings of the Study***

Both qualitative and quantitative analysis was done. For variables yielding quantitative results, percentage, mean, standard deviation, t-value and chi-square value were calculated.

### ***Demographic features***

To study the demographic features, gender, marital status, age, communities, family pattern and family size of 250 distance and regular mode students were measured.

**Table 1 : Gender of the Student of Distance and Regular Modes**

Sex	Distance Mode		Regular Mode		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Female	116	71.17	49	56.32	165	66
Male	47	28.83	38	43.68	85	34
Total	163	100	87	100	250	100

It is observed from the table 1 that out of 163 students in distance mode, 116 were female (71.17%) and 47 (28.83%) were male. In regular course data were collected from 87 students. Among them 49 (56.32%) was female and 38 (43.68%) was male students. It was also observed during visiting in different universities that the number of girl students both in distance and regular mode was greater in the faculty of arts in every university. The data collected about enrolment from different universities also support this fact.

**Table 2 : Marital Status of the Students of Distance and Regular Modes**

Sex		Distance Mode		Regular Mode	
		Number	Percentage	Number	Percentage
Female	Married	17	14.66	2	4.08
	Unmarried	99	85.44	47	95.9
	Total	116	100	49	100
Male	Married	5	10.63	0	0
	Unmarried	42	89.36	38	100
	Total	47	100	38	100
Total	Married	22	13.50	2	2.30
	Unmarried	141	86.50	85	97.70
	Total	163	100	87	100

The table 2 shows that the number of married students was greater in distance mode (13.50%) than that of the regular mode (2.30%). The number of married female students (14.66%) of distance education was more than the number of male student (10.63%). Age group of the students of distance and regular mode classified in the different universities is shown in Table 3 and age group of the students of distance and regular mode in all universities is presented in Table 4.

**Table 3 : Age of the Students of Distance and Regular Modes Classified in the Difference Universities**

Age Group (Years)	Indrira Gandhi	Netaji Subhas	Rabindra Bharati University		Vidyasagar University		Total
	National Open University	Open University	Distance Mode	Regular Mode	Distance Mode	Regular Mode	
20-23	4 (21.05)	12 (41.38)	30 (48.39)	36 (36)	31 (58.49)	48 (94.12)	161 (64.4)
24-26	2 (10.53)	4 (13.79)	27 (43.55)	0 0	11 (20.75)	3 (5.88)	47 (18.8)
27-29	5 (26.32)	7 (24.14)	4 (6.45)	0 0	6 (11.32)	0 0	22 (8.8)
30-32	1 (5.26)	4 (13.79)	0 0	0 0	2 (3.77)	0 0	7 (2.8)
33-35	3 (15.79)	0 (0)	0 0	0 0	2 (3.77)	0 0	5 (2)
Above 35	4 (21.05)	2 (6.90)	1 (1.61)	0 0	1 (1.89)	0 0	8 (3.2)
Total	19 (100)	29 (100)	62 (100)	36 (100)	53 (100)	51 (100)	250 (100)

Percentages are given in brackets

**Table 4 : Age of the Students of Distance and Regular Modes in All Universities**

Age group (Years)	Distance Mode	Percentage	Regular Mode	Percentage
20-23	77	47.24	84	96.55
24-26	44	26.99	3	3.45
27-29	22	13.50	0	0.00
30-32	7	4.29	0	0.00
33- 35	5	3.07	0	0.00
above 35	8	4.91	0	0.00
Total	163	100.00	87	100.00

From the table 3 it was found that in regular course most of the students belonged to 20-23 age groups (RBU-100% and VU-94.12%). But in distance mode, a section of students belonged to above 24 years of age group (Table 4). Even in the case of Indira Gandhi National Open University, out of 19 students, 04 (21.05%) belonged to above 35 years of age group (Table 3). So it may be said that in the regular course the age groups were more homogenous than distance mode. It was expected for distance education. Mean and S.D of age (years) of the students in Indira Gandhi National Open University, Netaji Subhas Open University, Rabindra Bharati University and Vidyasagar University are presented in Table 5 and t-value for the comparison of age of the students of distance and regular modes is given in Table 6.

**Table 5 : Mean and S.D of Age (Years) of the Student Classified in the Difference Universities**

Gender	Statistics	Indira Gandhi National Open University	Netaji Subhas Open University	Rabindra Bharati University		Vidyasagar University		Total
				Distance Mode	Regular Mode	Distance Mode	Regular Mode	
Female	N	16	21	41	27	38	22	165
	Mean	30.88	25.14	23.93	21.81	22.97	21.50	23.87
	S.D	10.86	4.13	2.94	0.83	1.92	0.51	4.75
Male	N	3	8	21	9	15	29	85
	Mean	33.33	28.63	23.81	21.67	27.67	22.41	24.58
	S.D	0.58	6.14	1.54	0.71	4.84	1.12	4.09

**Table 6 : t-value of Age of the Students of Distance and Regular Modes**

Mode of Education	N	Mean (Years)	S.D. (Years)	t-Value
Distance Mode	163	25.28	5.23	4.95*
Regular Mode	87	21.92	0.93	

It is observed from the table 6 that t-value (4.95) for the comparison of age of the students of distance and regular mode is significant at 0.05 level. So, it may be said that comparatively aged students were continuing their education through distance mode.

**Table 7 : Communities of the Student of Distance and Regular Modes**

Communities	Distance Mode	Percentage	Regular Mode	Percentage	Total	Percentage
General Hindu	101	61.96	57	65.52	158	63.2
Scheduled Caste and Tribes	27	16.56	19	21.84	46	18.4
Minorities including OBC	27	16.56	3	3.45	24	9.6
O B C excluding Minority	8	4.90	8	9.20	22	8.8
Total	163	100	87	100	250	100

From table 7 it is observed that the percentage of general Hindu in both regular and distance mode is greater than other community. The percentage of minority is greater in distance mode than regular mode. Family pattern and family size of the students of distance and regular mode are presented in Table 8 and Table 9 respectively.

**Table 8 : Family pattern of the Students of Distance and Regular Modes**

Family pattern	Distance Mode		Regular Mode		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Nuclear	129	79.14	71	81.61	200	80
Joint	29	17.79	12	13.79	41	16.4
Extended	4	2.45	4	4.60	8	3.2
Monk	1	0.61	0	0.00	1	0.4
Total	163	100	87	100	250	100

**Table 9 : Family Size of the Students of Distance and Regular Modes**

Number of family member	Distance Mode		Regular Mode		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
2	7	4.3	4	4.6	11	4.4
3	41	25.2	24	27.6	65	26
4	60	36.8	33	37.9	93	37.2
5	33	20.2	12	13.8	45	18
6	16	9.8	6	6.9	22	8.8
7	4	2.5	4	4.6	8	3.2
8	2	1.2	1	1.1	3	1.2
9	0	0	1	1.1	1	0.4
10	0	0	2	2.3	2	0.8
Total	163	100	87	100	250	100

From the table 8 it is observed that the number of nuclear family is greater in both distance and regular mode. The table 9 refers that majority of the family are consisted of four members both in distance and regular mode.

**Table 10 : Mean and S.D. of the Family Size of the Students of Distance and Regular Modes**

	Distance Mode	Regular Mode	Total
N	163	87	250
Mean	4.18	4.29	4.22
S.D.	1.19	1.59	1.34

From the Table 10 it may be said that there is no difference in the family size of the student of distance and regular mode.

**Table 11 : Physically Challenged Students of Distance and Regular Modes**

Mode of Education	Normal	Physically Challenged	Total
Distance Mode	163	0	163
Regular Mode	86	1	87
Total	249	1	250

From the table 11 it is found that only one student in regular mode of the collected sample is Physically Challenged.

***Income, Education and Occupation***

To assess the socioeconomic status (SES) of the students, their family’s income, education and occupation were measured and according to the basis of these it is classified into three groups. The socioeconomic status of students in distance and regular modes is shown in Table 15.

For ranking of education, occupation and economic level, Kuppuswammy scale was adopted and the data of 246 students were analyzed, as 4 students out of 250 undertaken as sample provided incomplete data. Education level of the families of the students of regular and distance modes is presented in Table 12. It is observed that in both the cases of distance and regular modes one-third of students belonged to level 6 category i.e. sound educational backgrounds. For comparing it between the regular and distance modes chi-square value (3.63) was calculated which was not significant. So, the hypothesis 1 which states that there is no difference in the education level of the students of distance and regular modes is accepted. Occupation and income levels of the families of the students of regular and distance modes are shown in Table 13 and Table 14 respectively.



**Table 12 : Education Level of the Families of the Students of Regular and Distance Modes**

Scores for Education Level	Regular		Distance	
	Number	Percentage	Number	Percentage
1	1	1.16	0	0
2	3	3.49	4	2.50
3	16	18.60	16	10.00
4	17	19.77	29	18.13
5	22	25.58	47	29.38
6	26	30.23	61	38.13
7	1	1.16	3	1.88
Total	86	100	160	100
Chi-square value	3.63			

**Table 13 : Occupation levels of the Families of the Students of Regular and Distance Modes**

Scores for Occupation level	Regular		Distance	
	Number	Percentage	Number	Percentage
1	10	11.63	41	25.63
2	28	32.56	22	13.75
3	1	1.16	2	1.25
4	3	3.49	9	5.63
5	37	43.02	76	47.50
6	6	6.98	4	2.50
10	1	1.16	6	3.75
Total	86	100	160	100
Chi-square value	16.43*			

From the Table 13 it is observed that the chi-square value (16.43) for comparing the occupational level between the regular and distance modes is significant. So, the hypothesis 2 is rejected. Thus it may be said that there is a difference on the occupational level of the family of distance and regular modes students.

**Table 14 : Monthly Income of the families of Regular and Distance Modes**

Income Range (Amount in Rs)	Scores for income	Regular		Distance	
		Number	Percentage	Number	Percentage
below 3000	1	14	16.28	6	3.75
3001- 6000	2	20	23.26	24	15
6001-10000	3	13	15.12	28	17.5
10001-14000	4	5	5.81	17	10.625
14001-18000	6	8	9.30	13	8.125
18001-34000	10	12	13.95	36	22.5
above 34000	12	14	16.28	36	22.5
Total		86	100	160	100
Chi-square value	17.82*				

It is found from the study that monthly family income of 40% of students in regular course were below rupees 6000/-. But in case of distance mode, 18.75% students belonged in this income category. Again, 30.23% of students in regular course belonged to top income categories i.e. above rupees 18000/-. On the other hand 45% students of distance mode belonged to these two top income categories (Rs 18001 to 34000 and above 34000). For comparison of monthly income of students' families, the chi-square value (17.82) is significant. Thus it may be concluded that there is a difference in the family income of distance mode students and regular mode students.

**Table 15 : Comparison of the SES of the Students between Regular and Distance Modes**

SES Groups	Distance	Regular
Low	41 (25.625)	29 (33.72)
Medium	41 (25.625)	29 (33.72)
High	78 (48.75)	28 (32.56)
Chi-square value	6.12*	

Percentages are given in the brackets

It was found from the study that in regular mode near about one-third, equal number, of students belonged to each of the SES group namely Low, Medium and High. On the other hand in distance mode, about half of total students

(48.75%) belonged to High socioeconomic group and other half belonged to Medium (25.75%) and Low (25.75%) groups.

The chi-square value (6.12) to compare the socio-economic background of students between the distance and regular modes is significant. So the null hypothesis no. 4 is rejected.

### ***Conclusion***

From the study conducted by the researcher the following conclusions can be drawn. There is a difference in socio-economic background of students of regular courses and distance mode. The income and occupation level of the families of the students of distance mode is better than that of regular mode. There is no difference in education levels of the families of distance and regular modes. While collecting data it is found that individual expenditure of the students in distance education is more than that of regular course. So it is more affordable for well to do families than poor families. The objective of distance education is to provide opportunity to those who have missed the opportunity of taking advantage of conventional mode of learning, equal educational opportunities for higher education through distance mode for a large segment of the population and it should be cost effective. It is cost effective from the part of the universities as they can cater education to a large number of students at a time, but it is not cost effective for individual students. Therefore the study recommends that governmental budgetary allocation should be increased for education through distance mode so that financial burden on the part of individual students can be reduced.

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## **Coping Strategies and Educational Aspirations of Higher Secondary Students**

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### **Abstract**

*The current study explores the relationship between proactive stress coping strategies against stress and educational aspirations of higher secondary school students. The target population of this study consists of the higher secondary school students of Kerala. The sample consists of 100 higher secondary students studying in two schools of Kottayam. Proactive Stress Coping Strategy Scale and Educational Aspiration Scale developed by Sibichen & Anisha (2013) were used. The current study suggests that there is a significant relationship between proactive stress coping strategies and educational aspirations of higher secondary school students. These findings have important implications for teaching and student learning.*

**Key Words:** Higher Secondary Education, Stress, Educational Aspiration, Proactive Coping Strategies

### **Introduction**

Life today is becoming increasingly complex, tension ridden and a great source of stress. Stress is the sum total of all nonspecific biological phenomena elicited by adverse external influences” (Sudha Gurubabu, 1999). Right from the time of birth till the last breath drawn, an individual is invariably exposed to various stressful situations. Stress spares none, not even those who advise how to prevent it (Shah & Kanwar, 1999). It is an inevitable part of life; it is part of one’s response to any challenge, any demand or any change. It mobilizes one’s untapped potentials. It can generate the impetus necessary to convert thought into action and can motivate an individual to accept a challenge. Thus stress not only aids man’s continued survival but also facilitates his growth. Stress helps in converting a “passive existence” into an “active business” of living

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by shaping one's life-styles, setting the tempo and determining the rhythm at which one lives. But stress is not the result of any individual factor. Rather it is the outcome of environmental factors like economic or technological uncertainty, mainly due to overpopulation that leads to competition for scant opportunities. In this process, one feels psychologically disturbed, emotionally drained and physically strapped out. One may even sweat heavily without being subjected to any physical exertion under stress (Shah & Kanwar, 1999). The consequences of these causes can show its direct or indirect impact on physiological symptoms and organizational factors, the consequences of which may give rise to psychological symptoms like sleep disturbances, depression and the individual factors leading to stressful situations for all. The present study therefore was planned to study the levels of adolescents' coping strategies.

### ***Proactive Coping***

According to Schwarzer's proactive coping theory (Schwarzer, 2000; Schwarzer & Taubert, 2002), an emphasis on the time perspective distinguishes reactive, preventive, and proactive coping. *Proactive coping* is defined as efforts to strive actively to seek new challenges, create new opportunities, and facilitate promotion toward challenging goals so that they will be less negative (Schwarzer, 2000). Proactive coping is based on challenge appraisal while preventive coping is based on threat appraisal (Schwarzer & Taubert, 2002). In proactive coping, individuals take more constructive and purposeful actions (Greenglass, Schwarzer, & Taubert, 1999), while in preventive coping, individuals employ more defensive and general strategies (saving resources for future needs). In short, proactive coping is "goal management" and preventive coping is "risk management" (Schwarzer & Taubert, 2002).

Theoretical inferences and empirical studies have demonstrated the positive impact of proactive coping on individual adjustment. Moreover, much research has reviewed the common areas of proactive coping (e.g., Greenglass, 2002). However, the relative importance of proactive coping and the mechanism of functioning has not been carefully delineated by the extant literature.

### ***Educational Aspiration***

Education is a human enterprise. It is a process and kind of activity in relation to human beings. It is a continuous effort to develop all capacities of the students to control their neighbouring environment and to fulfil their needs. Though education is a part of human life, it cannot help the pursuers unless they have the required amount of educational aspirations. The concept of level of aspiration was first introduced by Hoppe (1930) while making a reference to the degree of difficulty of the goal towards which a person is striving. Every

student has educational aspirations. It is a decision which the individual makes about what he wants to become in life and what course he wants to study.

### ***Significance of the study***

Apart from knowing the proactive stress coping strategies adopted by the students, the study can help the management, administration and counselling unit to recommend the appropriate counselling services for the students. This study will be a source of information for researchers, students and social workers. Teachers need to know much about and understand the students being taught in the classroom. Teacher needs to be well versed in different coping strategies commonly adopted by students. In general, proactive strategies are those behaviours that a teacher can use in order to lessen the likelihood of a child demonstrating inappropriate behaviour, and involve altering a situation before problems escalate (e.g., establishing rules, and praising appropriate behaviour Safran & Oswald, 2003). Proactive discipline plans can be conceptualised as being preventive and taking a positive approach to classroom management. Teachers are likely to use positive responses when students demonstrate appropriate behaviours (Little et al., 2002). A considerable body of research points to the value of using proactive approaches such as praise, enhancing the classroom environment and increasing student learning and on-task behaviour (Arthur, Gordon, & Butterfield, 2003; Porter, 1996). It has been argued that consistent use of these techniques will eliminate most problem behaviours, and maximize student attention to curriculum content and involvement in productive activities (Wilks 1996).

### ***Operational definitions***

#### ***Proactive Coping Strategies***

Proactive coping is defined as efforts to strive actively to seek new challenges, create new opportunities, and facilitate promotion toward challenging goals so that they will be less negative. Proactive coping strategy is a coping strategy that is multi-dimensional and forward-looking. Proactive coping integrates processes of personal quality of life management with those of self-regulatory goal attainment. It consists of efforts to build up general resources that facilitate promotion of challenging goals and personal growth. Among the different strategies of proactive coping, investigators use only two strategies namely proactive goal-oriented and proactive emotion focused stress coping strategies and skills.

#### ***Educational aspiration***

It is a concept referring to orientation towards educational goal, spaced in continuum of difficulty and social prestige and arranged in educational hierarchy

### ***Higher Secondary School Students***

Higher secondary school students refer to the students studying in the first year higher secondary (16-17 yrs) from Government /Private schools of Kerala.

### ***Objectives***

1. To find out the Proactive stress coping strategies of higher secondary school students of Kottayam District
2. To find out whether there is any significant difference between male and female higher secondary school students in their Proactive stress coping strategies against stress
3. To find out whether there is any significant relationship between proactive stress coping strategies against stress and Educational aspirations of higher secondary school students

### ***Hypotheses***

1. There is no significant difference between male and female higher secondary school students in their Proactive stress coping strategies
2. There is no significant relationship between proactive stress coping strategies and Educational aspirations of higher secondary school students

### ***Method used in the present study***

The method adopted in the present study is survey.

### ***Population***

The target population of this study consists of the higher secondary school students of Kerala.

### ***Sample***

The study involved randomly selected 11th standard adolescents. It consists of 100 higher secondary students studying in two schools of Kottayam. Among them 12 are male students and 88 are female students.

### ***Tools used***

Proactive Stress Coping Strategy Scale and Educational Aspiration Scale developed by Sibichen & Anisha (2013) were used.

Proactive Stress Coping Strategy Scale consists of two parts. Part one includes items related to Proactive goal-oriented stress coping strategies and part two includes items related to proactive emotion focussed stress coping strategies. The dimensions identified for Proactive goal-oriented stress coping scale for students are Individual responsibility, Self belief to face challenges, Persistence, Proactive Planning, Preventive Coping and Direct Action. The dimensions identified for

Proactive emotion focused stress coping scale are Emotional self-regulation, Readiness to take others' suggestions and Tendency to rely on others.

The investigator used 5 point scale for the construction of the tool for the variable Proactive stress coping strategies. It was prepared only after a thorough review of theories related with coping strategies, related studies, and with the help of experts. The statements were prepared by the project team. The statements were edited and finalized in consultation with various experts in the field.

In the present study the investigators used Split-half method to find out the reliability co-efficient. The reliability co-efficient is found to be 0.78. The final tool consists of 45 statements. The tool consisted of the following dimensions, namely individual responsibility, Self belief to face challenges, Persistence, Proactive Planning, Preventive coping, Direct Action, Emotional self-regulation, Readiness to take others' suggestions and Tendency to rely on others.

**Statistical techniques used**

Arithmetic mean, Standard Deviation, 't' test

**Data analysis**

**Table 1 : Proactive Coping Strategies Adopted by Higher Secondary School Students**

Dimensions of Proactive stress coping strategy	<i>Never</i>		<i>Sometimes</i>		<i>Always</i>	
	No	%	No	%	No	%
Individual responsibility	11	11	74	74	15	15
Self belief to face challenges	17	17	67	67	16	16
Persistence	15	15	72	72	13	13
Proactive Planning	15	15	71	71	14	14
Preventive coping	9	9	80	80	11	11
Direct Action	12	12	72	72	16	16
Emotional self-regulation	19	19	68	68	13	13
Readiness to take others' suggestions	12	12	73	73	15	15
Tendency to rely on others	14	14	77	77	9	9
Proactive stress coping strategy	14	14	74	74	12	12

It is inferred from Table 1 that 14% of the higher secondary school students never used the proactive stress coping strategies, 74% of them have sometimes used the proactive stress coping strategies and 12% of them have always used the proactive stress coping strategies.



**Table 2 : Difference Between Male and Female Higher Secondary School Students in their Proactive Stress Coping Strategies**

Dimensions of Proactive stress coping strategy	Male	Female	Calculated		Remarks	
	Mean	SD	Mean	SD	Value ofat 5% “t”	level
Individual responsibility	23.94	2.03	23.01	3.19	1.75	NS
Self belief to face challenges	24.88	3.01	23.88	3.20	1.51	NS
Persistence	23.88	3.01	23.19	3.72	1.03	NS
Proactive Planning	20.34	3.67	17.94	3.95	2.98	S
Preventive coping	24.41	5.50	23.51	5.37	0.76	NS
Direct Action	20.16	3.03	19.19	3.07	1.48	NS
Emotional self-regulation	18.28	4.02	17.74	3.52	0.66	NS
Readiness to take others’ suggestions	21.25	2.19	20.21	3.25	1.89	NS
Tendency to rely on others	23.69	3.15	23.41	3.54	0.39	NS
Proactive stress coping strategy	201.47	19.12	192.38	24.57	2.02	S

*Note.* At 5% level of significance the table value of ‘t’ is 1.96

It is inferred from the Table 2 that there is no significant difference between male and female higher secondary school students in their proactive stress coping strategies such as individual responsibility, self-belief to face the challenges, persistence, preventive coping, direct action, emotional self-regulation, readiness to take others suggestions and tendency to relay on others, but there is significant difference between male and female students in their Proactive Planning and Proactive stress coping strategy.

**Table 3 : Relationship between Proactive Stress Coping Strategies and Educational Aspirations of Higher Secondary School Students**

Proactive stress coping strategy	$\Sigma x$	$\Sigma x^2$	$\Sigma y$	$\Sigma y^2$	$\Sigma xy$	Calculated Value of ‘ $\gamma$ ’	Table Value of ‘ $\gamma$ ’	Remarks at 5% level
Educational aspirations	19529	3868351	21266	4626890	4196522	0.576	0.195	S

It is inferred from Table 3 that there is significant relationship between proactive stress coping strategies and Educational aspirations of higher secondary school students.

### **Findings**

Findings reveal that only 12% of higher secondary school students have always used the proactive stress coping strategies

1. Findings reveal that there is significant difference between male and female students in their proactive stress coping strategies
2. Findings reveal that there is significant relationship between proactive stress coping strategies and educational aspirations of higher secondary school students

In the present study attention has been focused on coping strategies and the ways in which they can alleviate stress levels and promote higher quality of life. Coping strategies play a critical role in an individual's physical and psychological well-being when faced with challenges, negative events and stress. In the past, coping was seen mainly as reactive, a strategy to be used once stress had been experienced, more recently coping is being seen as something one can do before stress occurs. Increasingly, coping is seen as having multiple positive functions.

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## Construction of a Five-Point Likert Type Scale to Measure the Perception of Teacher Educators about ICT

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### **Abstract**

*Based on the present scenario, it is essential to know and understand the level of ICT Perception of the present teacher educators. A five-point Likert type scale was constructed in English language and developed after an extensive review of related literature. After necessary investigation of relevant literature, the investigator was set the 'Dimensions and Sub-Dimensions' regarding 'Perception about ICT'. The number of total dimensions was four, and every dimension had four sub-dimensions. The initial tool was rated by three reputed educationists for validation of content. Here thirty two items, including sixteen positive and sixteen negative items were taken for final selection on the basis of their judgement. Necessary changes were made as suggested by them. 'The Inter-rater Agreement Model for Content Validity' (Gregory, 2012) was used to see the reliability of the three raters (i.e. experts). The range of Coefficient of Content Validity was (0.80 to 0.85). The average Content Validity was 0.825. The reliability of entire scale of thirty two items was measured by the Cronbach's Alpha. The sample for ascertaining the reliability of the above scale was collected from 280 teacher educators of 50 B.Ed. Colleges or B.Ed. Department under six different State University of West Bengal. The data were analyzed through SPSS 19.0 Version and reliability was found to be 0.846. A pilot test was also made on 45 teacher educators from three universities through the process of randomisation. On the basis of their responses, a few modifications were made in the construction of statements. After the entire standardisation process, the researcher developed a five-point Likert type scale which consisted of thirty two test items to judge the 'Perception of teacher educators about ICT.*

**Key Words:** Perception about ICT, Teacher Educators

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### ***Introduction***

In **1998**, **UNESCO** World Education Report on teachers and teaching in a changing world describes the radical implication of new Information and Communication Technology (ICT) for improving teaching learning process. Thus, ICT has induced a paradigmatic change in the field of teacher education program. **UNESCO (2002)** further reported that, “During the past decade there has been an exponential growth in the use of ICT which has made pervasive impact both on society and on our daily lives. ICT has become a principal driver of economic and social change worldwide. Within education ICT is seen as a way to promote educational, improve the skill of learners and prepare them for the global economy and the information society”. So there is a need to proper integration of ICT in Indian Teacher Education System. It is a challenging task and demands more of perfection on the part of Indian Government and also teacher educators. Several attempts on ICT integration in the field of teacher education system, are found in, ‘The Curriculum Framework for Teacher Education’ (**CFTE-2004**), National Curriculum Framework – 2005’ (**NCF-2005**), ‘National Knowledge Commission – 2006’ (**NKC-2006**) etc.

Specially, ‘The National Curriculum Framework For Teacher Education (**NCFTE**)-**2009**’ has emphasized, ‘teacher education needs to orient and sensitize the teacher to distinguish between critically useful, developmentally appropriate and the detrimental use of ICT. In a way, ICT can be imaginatively drawn upon for professional development and academic support of the pre-service and in-service teachers’. Moreover, the National Policy On ICT in School Education (**NPICSE, 2010**), Draft, Last revision: 23 March, 2012, wants “Teacher educators will be suitably oriented and trained to use ICT in their pre-service teacher training programmes”. They will also be expected to enable pre-service teachers to be sensitised to and practice the use of ICT. So, here lies the responsibility for teacher educators to promote, utilize and implement ICT in teacher education program in such a way that they can move from pedagogues to techno pedagogues. Therefore, the present teacher educators are expected to function as a facilitator for acquisition of knowledge through ICT. With the fast changing of the World Education Scenario, where the new technology, ICT has already built a strong bride of communication for knowledge society. Based on the present scenario, it is essential to analyze the perception of teacher educators about ICT.

Perception is a complex mental process and it is typically interpreted as a cognitive process, in contrast to sensation. **Holzman (1963)** said that “Its principal function is to carry information from the environment for integration with other psychological function, such as learning, memory, judgement, and

anticipation. ...Through perceiving we get information not only about external reality but also about the consequences of or actions on that reality". Thus the perception is the awareness of this or that objects with their qualities and it is also the result of previous experience of the individual, through his/her education, culture and other things.

Various previous studies already mentioned about the teachers, trainee teachers and student's knowledge, usage, attitude, awareness, competencies and perception on ICT. Some of them given here.

**Selwyn (1997)** developed a five-point Likert type scale with 21 items on four components, viz. affective, perceived usefulness, perceived control and behavioural. It was administered to 87 students for formal validation and both the test-retest reliability and internal reliability coefficient of (0.93) and (0.90) respectively. Selwyn used an independent criterion measure, 'computer usage', to test concurrent validity of the scale and performed spearman's rank order correlation to test the construct validity. **Carter and Leeh (2001)** designed a questionnaire to survey teachers' perception of their change in the use of ICT within their professional practice. 29 items under eight elements was presented in the instrument, including ability, values, information, circumstances, timing, obligations, resistances and yield. Cronbach's alpha coefficient of item reliability test were from (0.6163 - 0.8294) in Korea and (0.6449 - 0.8389) in England. The study revealed the different propensity of change in the use of ICT between two countries in age, career, education, and equipment and performance group comparisons between two countries. **Rathod (2002)** conducted a study on perception of B.Ed. students towards ICT in education. The study revealed that 53% of the students had internet awareness. **Goel et.al. (2003)** were conducted a study on the perception of B.Ed. students towards the course ICT in education, a compulsory course at B.Ed. level and to study the development of ICT skills in the learners through ICT in education course. The study has reported stream wise, medium wise and gender wise significant differences in the mean achievement scores. **Dhodi (2004)** conducted a study on the approaches adopted by the M.Ed. students (future teacher educators) for information gathering through World Wide Web and its utility for the M.Ed. programme. The study revealed that there was a felt need of developing 'Info-Savvy' skills, namely asking, accessing, analyzing, applying and assessing in the M.Ed. students such objectives could be realized by offering ICT literacy programmes. **Figgaiano and Fasano (2004)** conducted a project, 'Teacher's perceptions and usage ICT: An issue for Educators'. The study suggested that an adequate preparation is essential for teachers to cope with technology rich classrooms and to develop a more suitable and effective awareness of the usage

of ICT. **Kuo (2005)**, developed, a five-point Likert type Scale with 32 items, named 'The Perceptions of the Wireless Laptop Scale'. Construction of the scale was based on the conceptual framework, which refers to Rogers' five attributes of innovation (1995): relative advantages, compatibility, complexity, trailability, and observability. **Shah (2005)** found low degree of ICT awareness, Use and Need of Secondary and Higher Secondary Teachers of Vadodara city. **Dhamaji and Panda (2006)** found that the P.G. students have more favourable attitude towards the internet. There was no significant difference in the attitude towards internet among male-female, arts-science-commerce P.G. students. **Gay, et.al. (2006)** used a self-administered questionnaire to measure students' attitudes, experience and reasons for the use of ICT. The study showed that students were generally favourable towards ICT. University administrators need to address the gender and age differences regarding ICT usage. **Gulbahar & Guven (2006)** developed a three-point Likert-type scale with 78 items under (5) parts, named 'ICT Usage Survey'. The overall reliability was ( $\alpha = 0.84$ ). The results showed that although teachers were willing to use ICT resources. **Zayapragassararazan and Ramganesh (2007)** found that, only 61.25% of the college teachers had a favourable attitude towards making use of computer and ICT in the teaching-learning process. This study indirectly stressed the need to train teachers at all levels to become e-literate and tertiary level mathematics and science curriculum should also be enriched to use computers and internet. **Wong and Hanafi (2007)** developed a five-point Likert type questionnaire to measure the attitudes of Malaysian student teachers towards Information Technology. The questionnaire comprised of 23 items under 3 dimensions (viz. Usefulness, Confidence and Aversion). The reliability was found (0.87) by using the Cronbach Alpha test. The study showed no significant difference between male and female student teachers when the pre and post test mean scores were compared. **Wright (2008)** explored teacher perception of ICT in a secondary school of Samoa. It was found that teacher perceptions of ICT were mostly positive, but they were hindered by lack of ICT skill and insufficient techno-pedagogical knowledge in their classes. Teachers perceived several obstacles to effective integration of ICTs in classrooms. **Yasemin and Petek (2008)** conducted a study on ICT usage in Turkish higher education. It explained 61 percent of the faculties use ICT, with a good model fit. The faculty members make use of ICT most as a mean of communication and for searching information about the course through the internet. **Goktas, et.al. (2008)** developed the questionnaire to measure the ICT Competencies, usage, and perceptions. It includes 13 multiple choice items, 7 items under Likert type scale format and 4 open-ended questions. Questionnaire was developed through literature review, opinion of experts and pilot test. The Cronbach Alpha coefficient of reliability was (0.87). The results

indicated that most of the participants expressed positive perceptions about the integration of ICT into teacher education programmes. **Felix and Begum (2011)** in their study have found that scholars of teacher education have an increased level of awareness in the use of internet. For M.Ed. students, it is 08.47% and for M.Phil. Students the number goes up to 34.96%. The result revealed that the M.Ed. students have not acquired the skills to browse the e-resources when they have passed out of B.Ed. and M.Phil. Scholars have acquired skills comparatively more than M.Ed. students. **Kumari and Babu (2012)** conducted a study to assess the secondary school English language teachers' knowledge and use of ICT in their English language classrooms. Findings were revealed that the level of knowledge of ICT possessed by above teachers was poor and as such, they rarely use ICT in their instruction process.

With all previous studies in mind, it is essential to understand the nature of ICT perception of teacher educators. Present researcher was able to find only a **few sporadic works** in this field, especially in the Indian context. So a detailed investigation has been carried out for construct a scale to understand the perception of teacher educators of West Bengal about ICT. A study is therefore attempted in this respect and an objective is also set in this context. The investigator has therefore constructed a scale designed to identify the 'Dimensions and Sub-Dimensions' regarding 'Perception of ICT'.

### ***Objective***

To construct a five-point Likert type scale to measure the perception of teacher educators about ICT.

A short description of development and standardization process of ICT Perception Scale (ICTPS) discussed below.

### ***Identification of the dimension and sub-dimension regarding 'Perception of ICT'***

**Figgiano and Fasano (2004)** previously suggested that an adequate preparation (for experience) is essential for all teachers to cope with technology rich classrooms and to develop a more suitable and effective awareness of the usage of ICT. Therefore, the area of perception is determined by the perspective of the individual who perceives and perception varies according to individual's subjective and objective point of view/s. Actually perception is, "The way in which a person views his or her environment based on the sense, past experience, attitudes, awareness, current information and other personal variables" (**Bellingham, 2004**). From the above background, present investigator explored and identified the four (4) main dimensions for the development of the ICT Perception Scale (ICTPS). These were (1) Attitude towards use of ICT; (2)

Awareness about the development of ICT; (3) Scope of Using ICT; and (4) Impact of ICT. Here, each dimension had four (4) sub-dimensions.

**Gay, et. al. (2006)** measured students' attitudes, experience and reasons for the use of ICT through their self-administered questionnaire on 'Perceptions of information and communication technology' for the under graduate management students of Barbados. They adapted and modified the tool from **Dorup's (2004)** study of medical students in Denmark. Reflections of these four (4) dimensions previously presented in the 18 items in context of 'Perceptions about use of ICT' under the fourth part of **Gulbahar & Guven (2006)** study and also reflected in the study of **Oyedeko & Tella (2010)**. Now a short discussion is given below on the sub-dimensions.

#### *1st Dimension - Attitude towards use of ICT*

Attitude refers to predisposition or mental set to perceive feel or beliefs or behave towards specific objects in a particular manner (**Taneja, 2003** and **Bellingham, 2004**). **Wong and Hanafi (2007)** used three dimensions, Usefulness, Confidence and Aversion to measure the attitudes of Malaysian student teachers towards Information Technology. They were adapted these three dimensions from the studies of **Loyald & Gressard (1984)** and **Christensen & Knezek (1998)**. **Loyald & Gressard's** computer attitude scale was constructed by the components of computer confidence, liking, anxiety, and usefulness. **Wong (2002)** and **Davis (1989)** defined usefulness as the student teachers' beliefs in the enhancement of the quality of their academic or non-academic related work by using a specific system. Confidence and aversion were defined by the **Wong (2002)** as the student teachers' feelings of uncertainty and strong dislike respectively in using the internet, specific software applications, other general software applications, as well as the computer and IT in general for leisure or academic work respectively. **Selwyn (1997)** previously used 'perceived usefulness' as an important component in his computer attitude scale'. Then, 'Usefulness, Confidence and Aversion' were taken as first three (1 to 3) sub-dimensions under the first (1st) dimension. According to **Taneja (2003)** and **Bellingham (2004)** views on attitude, the fundamental element of human behaviour is belief. Human attitude very much depends on his or her belief towards specific objects or matter. Thus the Present investigator also considered 'Belief' as fourth separate sub-dimension under the first dimension. Therefore the four sub-dimensions were 'Usefulness, Confidence, Aversion and Belief' under first (1st) dimension.

#### *2nd Dimension - Awareness about the development of ICT*

Awareness about ICT means alertness, attentiveness, consciousness or



enlightened about ICT. But **Shah (2005)** found low degree of ICT awareness, Use and Need of Secondary and Higher Secondary Teachers. **Figgaiano and Fasano (2004)** already suggested in their study that an adequate preparation is essential for teachers to cope with technology rich classrooms and to develop a more suitable and effective awareness of the usage of ICT. They further said that in the next future “they (teachers) can also become aware of how to better make use of ICT as a resource to create an effective and meaningful learning environment”. To reach the future goals, the teaching community must increase their motivation level towards ICT, enrich their ICT consciousness, deep knowledge & understanding about present facts on ICT concerns and integrating capacity between theory and application on ICT related tasks. From the above background, the present investigator selected four sub-dimensions, which were Motivation, ICT Consciousness, Facts and Phenomena and Integration of theory and practice by ICT under second (2nd) dimension.

### ***3rd Dimension - Scope of Using ICT***

**Gulbahar & Guven (2006)** were composed 19 items regarding barriers that teachers faced during technology utilization in the teaching-learning process in the last part of the ‘ICT Usage Survey’. The study showed some limitations such as teachers’ lack of ICT usage skills and insufficient ICT infrastructure. Teachers were facing problems in relation to accessibility to ICT resources and lack of in-service training opportunities. The other main barriers to the implementation of ICT as perceived by the teachers were the mismatch between ICT and the existing curricula and the class-time frame. **Gulbahar & Guven (2006)** also said that ICT has vast potential in education but its effective use must be carefully tried out and planned by researchers, teachers and administrators who know what to do with it in the teaching-learning process of education.

Simultaneously, the present researcher wants to know the ‘Scope of Using ICT’ in curriculum transaction, in administration, in teacher educators’ profession, among teachers and learners. ‘The use of ICT impacts on both declarative and procedural knowledge to such an extent that clearly the current curriculum and models of teaching and learning were not designed to accommodate the increasingly rapidly expanding quantity of knowledge (**Riel, 1998**). The quantity of declarative knowledge is growing rapidly and it is widely fuelled by the ICT. ICT itself has added large quantities of declarative knowledge and there is great scope of various usages of them. According to **Riel (1998)**, ‘Students requiring specific bodies of declarative knowledge they require very flexible and general sets of procedural knowledge. These tend to involve conceptual understanding, problem-solving, personal interaction, and

using resources'. Scope of using ICT on both the 'what' and 'how' of the curriculum; **Riel (1998, p. 12)** provides an example of this dual aspect, "Students can use hypertext to organize their learning, but they can also use hypertext as a form of expression. Writing in hypertext is a new skill. It is conceptually different than sequential writing. It allows for a different form of interaction between author and reader and larger communities of people". Furthermore, application of ICT is very helpful for special learners. 'There are many case studies where children with physical disabilities may use adaptive technologies to maximise their successful use of ICT' (**Donegan, 1999**). In other side, "ICT gives teachers access to information to support them in trying new strategies, thinking, reflecting on practice, and engaging with new material (Committee on Developments in the Science of Learning, 2000). Now it is 'requiring more collaboration and more communication with teachers, administrators and parents' (**Cradler & Bridgforth, 2002**).

Thus the present researcher selected four sub-dimensions under the third (3rd) dimension were the scope of using ICT 'In Curriculum Transaction; In Administration; In Profession and Among Users (Teachers and Learners). Hence, it is necessary to promote the scope of using ICT in these selected areas. In spite of the importance to know that the teacher educators perceived characteristics in the scope of using ICT in these areas.

#### ***4th Dimension - Impact of ICT***

It is fact that there is a great impact of ICT on learners, on teachers, on teachers' profession, and on the larger community or society. Various research reviews are the basis of the above comment. 'While theoretical arguments can be put forward to provide a strong rationale for the use of ICT, the only real rationale is based on whether, in practice, it has a positive impact on learning, the learners, curriculum, teachers and their profession also' (**Newhouse, 2002**). **Newhouse (2002)** prepared a report on the impact of ICT on learning, students, the curriculum, teachers, schools, and school systems. The relevant connections between them were properly showed by a diagram, which acted as a theoretical framework of the report. The use of ICT in education should have a positive impact on learners in terms of supporting their learning and in particular addressing their individual learning needs. Researchers have found that typically the use of ICT leads to more cooperation among learners within and beyond school and a more interactive relationship between students and teachers (**Réginald Grégoireinc. et al., 1996**). The "use of ICT has consistently improved students' attitudes towards learning and their own self-concept" (**Sivin-Kachala, 1998**). The Committee on Developments in the Science of

Learning (2000) further stated that “it has great potential to enhance student achievement and teacher learning, but only if it is used appropriately” (p. 206).

The impact of ICT on teachers and their profession is very significant in education. A number of studies have found that, “Personal access for teachers to a computer for the purpose of preparation and planning is one of the strongest influences on the success of ICT training and subsequent classroom use” (Office for Standards in Education, 2002, p. 3). ICT is ‘providing greater access to information, leading to increased interest in teaching and experimentation (Cradler & Bridgforth, 2002). Teachers need to always active at updating their ICT skills and knowledge for their profession. It is in addition to their need to be up-to-date with content of curriculum and pedagogy. Thus the ICT ‘impacts on teaching strategies will lead to changes in the composition of the role of teachers. For example, high level access to computer support for learning tends to encourage teachers to use more cooperative group work and less teacher stand-up lecturing (Schacter, 1999). Therefore it is important now that the teachers may be supported very carefully in practical and motivating ways by educational administration. The “supportive, enthusiastic and visionary leadership has a positive impact on teachers’ attitudes and behaviours” (Becta, 2002) towards proper use of ICT. Thus the modern teachers are expected to upgrade their ICT knowledge and skills for successful execution of their duties. ICT has deep influences to construct the fast growing knowledge society. “Knowledge construction is a community activity where learning is enhanced from contact with the wider community” (Committee on Developments in the Science of Learning, 2000, p. 224). Riel (1998) explains that “this means that schools need to involve more heterogeneous grouping, community organization, collaboration, interdependent teamwork, and to allow input from a range of expertise”. Riel (1998) and others stress that learning and building knowledge is viewed increasingly as a community activity where schools in the past have tended to be isolated from the community. Thus the time has come to accept the challenge of globalization and incorporate the ICT for advancement of society.

On the basis of the above reviews the present researcher wants to investigate the impact of ICT on learners, on teachers, on teachers’ profession, and on the larger community i.e. society under fourth (4th) dimension.

#### ***Construction of Items of the ICT Perception Scale (ICTPS)***

Different sources were used for the construction of scale. Some important criteria for Survey Design given by Devellis (2012), Mertler & Charles (2012), were taken into consideration. Thus the researcher considered each Dimension and Sub-Dimension regarding ‘Perception of ICT’ from relevant literature and

then appropriate items (both positive and negative) were constructed for each sub-dimension. Here total dimensions were four (4) and every dimension had four (4) sub-dimensions. Therefore the scale had four dimensions and sixteen (4 x 4 =16) sub-dimensions which were given here. At first, the total items (42) were checked by a reputed language expert (former Professor of Viswa Bharati) and certain changes in the language of some items were made. Two items, one positive item and one negative item were omitted according to his suggestion. Rest of the items (40) were further checked and approved by an IT expert, because some ICT components were presented in the above Scale

**Table 1 : Details of Dimensions and Sub-Dimensions of ICTPS**

<b>Dimensions</b>	<b>Sub-Dimensions</b>	<b>Dimensions</b>	<b>Sub-Dimensions</b>
1. Attitude towards use of ICT	i) Usefulness ii) Confidence iii) Aversion iv) Belief	3. Scope of Using ICT	i) In Curriculum Transaction ii) In Administration iii) In Profession iv) Among users (teachers and learners)
2. Awareness about the development of ICT	i) Motivation ii) ICT Consciousness iii) Facts and Phenomena iv) Integration of theory and practice by ICT	4. Impact of ICT	i) On Teachers ii) On Learners iii) On Profession iv) On Society

**Content Validation**

The initial tool (consists of 40 items) were rated by three (3) reputed **Educationists** (leading Professor of Education under different Universities) for validation of content. Only those common items which were rated as quite relevant (QR) and very relevant (VR) items were selected. Here thirty two (32) items, including sixteen (16) positive and sixteen (16) negative were taken for final selection on the basis of judgement of the experts. Necessary changes were made as suggested by them. **‘The Inter-rater Agreement Model for Content Validity’ (Gregory, 2012)** was used to see the reliability of the three raters (i.e. experts). The range of Coefficient of Content Validity was (0.80 to 0.85). The average Content Validity was **0.825**

**Table 2 : Showing the Reliability of Three Experts**

	Expert 1	Expert 3
Expert 2	0.80	0.825
Expert 3	0.85	————

**Response Pattern**

Response and scoring process to each item was envisaged in a five - point Likert type scale pattern as follows:

**Table 3 : Showing the Response Categories**

Response Type	Scoring Key of positive item	Scoring Key of negative item
Strongly Agree (SA)	5	1
Agree (A)	4	2
Undecided (U)	3	3
Disagree (D)	2	4
Strongly Disagree (SD)	1	5

Having scored all of the responses from a particular individual, the sum total of the set (here 32) of item scores for that person was obtained. That total score provides the measure for that person. Here, each item maximum possible score is (5) and minimum possible score is (1). Score range of the above scale is (32 to 160).

**Instruction of the Scale**

A short instruction to the subject was written in top of the scale.

**Pilot Study**

A pilot test was made on forty-five (45) teacher educators from three universities (C.U., K.U. and B.U.) through the process of **randomisation**. Fifteen (15) teacher educators from each group (i.e. Language group, Social Science group, Science group) were taken as samples for the purpose of pilot test. On the basis of their responses, a few modifications were made in the construction of statements. Some minor alteration of wording was prompted in some statements in order to sharpen their focus. Total 32 items of entire Sub-dimension were remixed to each other before final development of the tool.

**Table 4 : Showing the requisite changes after Content Validation Process and Pilot Study**

Item No.	Nature of Item	Items Before Change	Items After Change
1	Positive	ICT <i>promotes</i> effective sharing of experiences among teachers	ICT <i>helps</i> effective sharing of <i>academic</i> experiences among teachers.
2	Positive	The <i>application</i> of ICT in the classroom <i>brings confidence</i> among teachers.	The <i>use</i> of ICT <i>makes</i> the teacher <i>confident</i> in the classroom.
3	Negative	Specific educational information is <i>hard</i> to find from the <i>Web</i> .	It is very <i>difficult</i> to find Specific educational information from <i>internet</i> .
4	Positive	ICT based teaching-learning <i>activities generate</i> interest among its users.	ICT based teaching-learning, <i>develops</i> interest among its users.
5	Positive	ICT <i>intervention</i> in the administration of teacher education makes it more <i>fruitful</i> .	ICT <i>provides wide scope</i> to make educational administration more <i>effective</i> .
6	Positive	There is a <i>paradigm shift</i> in entire teaching-learning system due to ICT innovations	There is a <i>great change</i> in the entire teaching-learning system due to ICT innovations.

**Data Collection for Reliability Test**

Stratified Random sampling technique was adopted for data collection. Six (6) Universities viz. Calcutta University (C.U.), West Bengal State University (W.B.S.U.), Kalyani University (K.U), Vidyasagar University (V.U.), Burdwan University (B.U.), and North Bengal University (N.B.U.) were selected. Then 50 colleges from among all B.Ed. colleges / B.Ed. departments of general colleges affiliated to above six (6) Universities, were chosen randomly. Teacher educators were taken from Language, Social Science and Science groups. The investigator visited the fifty (50) Colleges personally, after necessary permission was obtained from the College authority. At first, the teacher educators were given short instruction regarding the filling in of their responses. It was further assured to them that the response regarding personal information and other information would be kept secret and be used for research purpose only. After that, ICT Perception Scale (ICTPS) along with response-sheet was given to them and they required approximately 20 to 30 minutes completing. Completely filled

up response-sheets of eighty (80) Language teacher educators, one hundred ten (110) Social Science teacher educators, and ninety (90) Science teacher educators was considered for the reliability test.

**Reliability of the Scale**

The reliability of entire scale of thirty two (32) items was measured by the Cronbach’s Alpha. The sample for ascertaining the reliability of the above scale was collected from two hundred eighty (280) teacher educators of B.Ed. Colleges under different State University of West Bengal. It consisted of eighty (80) Language teacher educators, one hundred ten (110) Social Science teacher educators, and ninety (90) Science teacher educators. The data were analyzed through **SPSS 19.0 Version** and reliability was found to be **0.846**. Thus the reliability of the scale is high.

**Table 5 : Showing the Reliability Analysis of the Entire Scale**

No. of item	(Corrected) item-Total Correlation	Cronbach’s Alpha if Item deleted
i1	0.252	0.845
i2	0.363	0.842
i3	0.351	0.842
i4	0.454	0.839
i5	0.399	0.841
i6	0.355	0.842
i7	0.403	0.841
i8	0.386	0.841
i9	0.398	0.842
i10	0.317	0.843
i11	0.36	0.842
i12	0.301	0.844
i13	0.412	0.842
i14	0.448	0.839
i15	<b>0.114</b>	<b>0.848</b>
i16	0.444	0.839
i17	0.577	0.834
i18	<b>0.186</b>	<b>0.846</b>

*Table 5 Contd.*

**Table 5 : Showing the Reliability Analysis of the Entire Scale (Contd.)**

No. of item	(Corrected) item-Total Correlation	Cronbach's Alpha if Item deleted
i19	0.362	0.842
i20	0.327	0.843
i21	0.306	0.843
i22	0.313	0.843
i23	0.436	0.839
i24	0.385	0.842
i25	0.32	0.843
i26	<b>0.068</b>	<b>0.85</b>
i27	0.347	0.842
i28	0.396	0.841
i29	0.519	0.836
i30	0.308	0.843
i31	0.349	0.842
i32	0.352	0.842

Here total number of samples (N) was (280) and number of items was (32). Cronbach's Alpha Reliability Coefficient was (0.846). From the above table, we see that there was no **negative correlation** of any item. But there were differences in the correlations between individual items and the scale as a whole, ranging from 0.068 to 0.577. In fact, the three items, i.e. (i15), (i18) and (i26) has low correlations with the scale as a whole. It is seen that removal of (i15) and (i26) would cause the scale reliability to **slightly increase** and removal of (i18) would leave the reliability of the whole scale **unchanged**. Therefore, the researcher took decision that the three items (i15), (i18) & (i26) were **not** to be **eliminated** from the Scale.

Thus the total number of dimensions was four (4) and total number of sub-dimensions was sixteen ( $4 \times 4 = 16$ ). Each Sub-dimension had one positive item and one negative item. Therefore, total positive items were sixteen (16), total negative items was sixteen (16) and total items was thirty two ( $16 \times 2 = 32$ ). An overall view shown by the following table:



**Table 6 : Showing the Final Format of the Scale**

Sl. No.	Dimensions (D)	Sub-Dimension (SD)	No. of +ve items	No. of -ve items
1	<b>Attitudes towards Use of ICT</b>	a) Usefulness.	1	1
		b) Confidence.	1	1
		c) Aversion.	1	1
		d) Belief.	1	1
2	<b>Awareness about the development of ICT</b>	a) Motivation	1	1
		b) ICT Consciousness.	1	1
		c) Facts and Phenomena	1	1
		d) Integration of theory Practice by ICT.	1	1
3	<b>Scope of using ICT</b>	a) In curriculum Transaction.	1	1
		b) In Administration.	1	1
		c) In Profession.	1	1
		d) Among users (teachers-learners).	1	1
4	<b>Impact of ICT</b>	a) On Teachers.	1	1
		b) On Learners.	1	1
		c) On Profession.	1	1
		d) On Society.	1	1
		<b>Total (32)</b>	<b>16</b>	<b>16</b>

***The final form of the ICT Perception Scale (ICTPS)***

The final form of the ICT Perception Scale (ICTPS) was developed by this process. ICTPS was prepared in English version and it had two parts. The first part was provided to be filled in by the teacher educators, where in they had to provide some 'General Information', like name, gender, contact number, educational specialization, name of the institution serving and name of the affiliating University. The second part judged the 'Perception of teacher educators about ICT'. It was a five point Likert type scale and consisted of thirty two (32) test items.

***Delimitation of the ICT Perception Scale (ICTPS)***

The scale is quite suitable for secondary level teacher educators of the B.Ed. College, especially for West Bengal.

***Conclusion***

The above discussions show that the scale (ICTPS) may be taken as a valid and reliable tool to be used to measure the perception of teacher educators about ICT.

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### Appendix-I

An Essence of Dimension and Sub-Dimensions from the ICT Perception Scale (ICTPS)

Here **first** dimension (i.e. Attitude towards use of ICT) and its four sub-dimensions-usefulness, confidence, aversion and belief elaborately shown below as example.

Item No.	Dimension	Sub Dimension	Type	Statement
1.	<b>Attitude towards use of ICT</b>	Usefulness	P	ICT helps effective sharing of academic experiences among teachers.
2.		- Do -	N	The use of ICT in education prevents the teachers from being creative.
3.		Confidence	P	The use of ICT makes the teacher confident in the class room.
4.		- Do -	N	The challenge of applying ICT is not always suitable for the teachers.
5.		Aversion	P	Teaching through ICT is encouraging.
6.		- Do -	N	It is very difficult to find Specific educational information from internet.
7.		Belief	P	The application of ICT in education, improves the entire Teaching-Learning system.
8.		- Do -	N	ICT makes its users mechanical.

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## Embracing the Socially Isolates in the Classroom

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### Abstract

One of the major foci in the concept and practices of education in today's world is inclusive education. This is the high time to bring all children under one umbrella in spite of their all diversities. But the real scenario in the schools of India depicts different picture. The present system of education is structured mostly on the basis of the needs of average children. Sometimes extra attention and special arrangements are organised for the children who fall within the ambit of positive side of the distribution curve. But those children who can not learn at equal pace with other children are ignored and gradually become isolated in the class and society as well. Slow learners belong to this category. The output of inclusive education must be making them feel less stigmatised and more socially accepted as well as for developing the sense of self-worth in them. Subsequently, other children in the class will learn to value differences. Keeping this context in view, the present work attempts to study the effectiveness of an intervention programme in changing the social status of the slow learners among their classmates. The components of the intervention programme were 1) Participatory learning 2) Mixed Ability Grouping in the class and 3) Participation of all children in various co curricular activities as per their interest and ability. Participants were 54 slow learners of class I studying in Kolkata Municipal Corporation School. The total programme continued for ten months. A standardised Sociometric Scale was administered to all children in the class before and after intervention programme to appraise the social status of the slow learners. Data thus obtained was subjected to qualitative analysis and simple calculation like percentage and graphical presentation were also applied. Analysis of data shows substantive improvement in sociometric status of slow learners as a result of the intervention programme.

**Key Word:** Inclusive Education, Slow Learner, Social Status, Intervention Programme

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### *Introduction*

Education is not only simply making schools available for those who are already able to access them. It is about being proactive in identifying the barriers and obstacles learners encounter in attempting to access opportunities for quality education as well as in removing those barriers and obstacles that lead to exclusion (UNESCO Report 2010). The school experiences are always organised targeting the average children and sometimes the few who belong to the level of above average. The world is fascinated with the gifted and genius people and their innovative work but those who are lagging behind are ignored and humiliated by surroundings. Slow learners are one of those categories who belong to the later group. They are the students who learn more slowly than their peers, yet do not have a disability requiring special education (Griffin 1978). Unfortunately these children are often “overlooked” since they do not fall within the ambit of positive side of the distribution curve, neither even the central region of the curve. These learners, due to their histories of repeated failure at school, are likely to feel as through academic outcomes are beyond their control, thus perceiving themselves as less competent in all aspects than their peers (Ntshangase, Mdikana & Cronk, 2008). It increases the risk of social isolation, low self esteem and poor social development. They usually feel awkward to interact with teachers as well as classmates and remain isolated in the class leading subsequently to a feeling of rejection from their more able peer groups. It hampers their socialization which has an adverse impact on their personality development.

Inclusive Education must help children with differences to develop social skills which in turn will enable them to interact more effectively with increasing network of acquaintances, co-workers, family members and friends as the children grow older. (Fuchs and Fuchs,1998). Keeping this context in view, the present study aimed to explore the ways through which these students can be made more participative within and outside the boundaries of the school walls.

Exploration of a suitable “way” prompted the present researcher to visualise the total school experience of a child in terms of (1) Constitution of the class (leading to mixed ability grouping) (2) Academic Practices (leading to participatory learning activities) (3) Non academic practices (leading to participation of **all** children in various co-curricular activities outside and sometimes inside the classroom.

Mixed Ability Grouping is one of the important ways teachers can follow in the classroom. Mixed Ability Grouping process is based on the principle of Co operative Learning. It involves social interaction amongst the students (Salvin, 2009). Using social interaction and active experiences in learning helps children to feed knowledge to one another. Peer learning helps students to build effective listening and communication skill. (Harding 2009).

Participatory learning strategies also seem very significant for the advancement of the students in general and slow learners in specific. The academic achievement of the slow learners significantly depends on the teachers and interactive learning situation (Chaudhury A.Q. and Hussain M.A. 2012). It improves self-confidence, academic achievement, improves their attitude towards the subject matter and encourages greater persistence in completing tasks ( Ezenwosu S.U, 2013).

For the development of social inclusion and for enhancement of sociometric status, the role of co-curricular activity is worth mentioning. Recently the educationists and the administrators of different educational institutions started realizing that the co-curricular activities have positive influence on the skills enhancement and the academic performance of the students (Marsh& Kleitman,2002). Most of the co-curricular activities have found to be good in constructing and enhancing academic performance of the students (Marsh & Kleitman, 2002).

Thus the major objective of the present study is to explore whether the sociometric status of the slow learners can be improved with the help of above mentioned intervention programme.

### **Methods**

In the present study Quasi Experimental Research design was followed. Pre-test and Post-test design was applied to evaluate the effectiveness of the intervention programme on sociometric status of the slow learners in the classroom.

### **Sample**

The population for this study were the students of class I studying at Kolkata Municipal Corporation Schools. The sampling frame for the study was a list of names of all Kolkata Municipal Corporation Schools (Bengali Medium) published by the Kolkata Municipal Corporation. Eight schools were selected randomly from these schools. The numbers of participants were 277 students of class I. 53 children who were in the first quartile of the distribution of scores in the Criterion Referenced Tests on Bengali and Mathematics administered to them were identified as slow learners. The range of the score of first quartile was 1-26 and 3-21 for Bengali and Mathematics respectively. All the participants were matched in the criteria of academic performance, schooling background and socio economic background i.e underprivileged section of the society.

### **Tools**

#### *Two Criterion Reference Tests on Bengali and Mathematics*

It consisted 50 items for each under 10 categories. Each item carried 2 marks. The categories of Bengali were—Identification of the alphabet, Arranging in



order, Word making, Recitation, Pronunciation, Hand writing, Reading Skill, Writing Skill, Verbal language ability, Comprehension skill.

The criteria for Mathematics were—Identification of numbers, Writing numbers, Arranging in order Tally with counting, Counting, Conception of height, weight, Conception of symbols, Spelling of the numbers, Addition and Subtraction.

#### *A Standardised Sociometric Scale*

It was used to assess the social status of the slow learners among the classmates. Here, on the basis of the choice of other classmates the social status of a particular student is evaluated by calculating the Z score for “liked most” and “liked least”. In accordance with the score of ‘Social Preference’ and ‘Social Impact’ students are categorised under ‘Rejected’, ‘Neglected’, ‘Controversial’, ‘Average’ and ‘Popular’ category.

#### *Unstructured Interview Schedule for the students*

The main focus of this interview was to reveal the view point of the students including the slow learners regarding their classmates.

#### **Procedure**

For fulfilling the objective of the study, the first step was to identify the slow learners. In accordance with the mentioned need, Criterion Reference Test for Bengali and Mathematics were constructed by the researcher with the help of the subject teachers of sampled schools and experts. The test items were categorised under ten criteria, each consisted of 5 items and each carried 2 marks. The items were selected as per the syllabus of the pre primary level. At pre intervention stage these tests were applied on the total participants. On the basis of the distribution of the marks, 54 children who belonged to the first quartile were identified as the slow learners. To study their social status among classmates a Standardised Sociometric Scale was administered to all children in the class of the respective schools. With the consent of the concerned schools an intervention programme for the participants was scheduled for ten months.

The intervention programme consists of the following components:

##### **A] Mixed Ability Grouping:**

To form a mixed ability grouping students were divided into small teams comprising of 4-6 students with at least one students of each quartile. Students were asked to sit in groups. During the whole intervention period the sitting pattern of the students were made flexible as far as possible keeping in the mind the usual constraints of a regular classroom. The instruction was given group wise and the students were asked to complete the task collaboratively. They were encouraged to help each other, assuming the benefits of peer tutoring and co operative learning.

B) Participatory Learning:

The class instruction was organised in a way that induce maximum of students' activities. Behind this planning the main thought was not only to motivate the slow learners in teaching-learning situation but also to provide them scope for mixing up with other classmates. Moreover it accelerates the hidden skills of the slow learners. To be more specific to develop the comprehensive skill in Bengali language, dramatisation process was adopted. On the basis of the poem and prose of their syllabus the students were taught to enact which conveyed the meaning to them. Abacus was used for strengthening the concept of basic calculation. With the help of word game, the word construction capacity was developed. For giving a clear concept of counting the coloured beads and the game like ludo were used in the classroom teaching. Moreover for accurate pronunciation the recorded version of proper reading of the poems presented with the help of mobile phone and tape recorder. To make the slow learners and the whole class acquainted with the surroundings, many picture cards were made. Mainly the pictures of animals, birds, vegetables, flowers and other household's things were drawn in bright and attractive colour. Active participation made the class environment more enjoyable and slow learners started to participate in all the activities instead of sitting alone and isolated with a fear of punishment and humiliation.

Every week 8 hours as per convenience of the school

Month	Activity / Week			
	1st	2nd	3rd	4th
1	a) Recognition of the alphabets and numbers with the letter card and number card where these letters, number is written in single in bold and clear format.b) Proper pronunciation of each letter and number	a) Writing the letter and number on sand b) Individual assistance was given in writing with chalk and then pencil. c) In mixed ability group more competent students helped their slow peer in writing	Memorisation and Reproduction of the letter and number without any clue.	Revision Short test Feedback

Month	Activity / Week			
	1st	2nd	3rd	4th
2	Arranging the letters and numbers in order with the help of activities like making a queue in that order holding the number and letter in hand.	Fill in the blanks in proper order	Arranging the letters and numbers in smaller to larger and vice versa	Revision Short test Feedback
3	a) Word formation with punctuation b) Concept of double digit number	a) Matching the word with picture b) counting with tallies, beads	Writing the words with the help of hints	Revision Short test Feedback
4	Dictation of word and numbers	a) Recitation of poem with the help of tape recorder, mobile phone b) Counting numbers with drawing and colouring the pictures	a) Understanding the poem with the help of video, pictures b) concept formation of shape, height, weight	Revision Short test Feedback
5	a) Reading the words with meaning using word game b) writing the number in word	a) Hand writing b) table learning	Dictation	Revision Short test Feedback

Month	Activity / Week			
	1st	2nd	3rd	4th
6	a) Sentence making b) Addition with the help of pictorial presentation	a) sentence writing b) addition using Abacus	a) Handwriting b) Addition without pictorial help	Revision Short test Feedback
7	a) Reading small prose with the help of picture b) Subtraction with the help of pictorial presentation	a) dramatisation of poem and prose for understanding meaning b) subtraction using Abacus	a) Verbal skill development b) Subtraction without pictorial help	Revision Short test Feedback
8	a) Development of reading skill with expressing the meaning b) Application of the knowledge of calculation in practical life using ludo and other mathematical game	a) Comprehension skill development with verbal question answer b) Calculation from the question with the help of drawing the mathematical problem	a) Writing the question answer in comprehension form b) Calculation by understanding problem	Revision Short test Feedback
9	a) Making sentence by own observing surrounding or picture b) Writing the table	a) Sentence making with a word b) multiplication	a) Writing the poem from memory b) multiplication	Revision Short test Feedback
10	a) verbal and written description b) division	Evaluation of the Achievement of Bengali	Evaluation of the Achievement of Mathematics	Feedback to the teachers and parents

C] Co-curricular Activities:

One of the major components of the intervention programme was participation of the whole class in various co-curricular activities. Under these segment drawing class, cultural programme, health camp, environment awareness programme, competitions were arranged. The distribution of the above mentioned activities across time was presented in the following table:

Every week 4 hours as per convenience of the school					
Month	Week				
	1st	2nd	3rd	4th	End of the month
1	Drawing, Physical Education	Dance, Recitation	Drawing, Indoor Games	Physical Activities	Drawing Competition
2	Dance, Music	Drawing, Physical Activities	Recitation, Drama	Dance, Drama	Cultural Programme
3	Indoor Game, Music	Dance, Recitation	Physical Activities, Drama	Dance, Recitation	Recitation Competition
4	Clay modelling, Music	Drawing, Dance	Recitation, Drama	Clay modelling, Handicrafts	A small exhibition of drawing and handicrafts
5	Music, Physical Activities	Handi-crafts	Drama, Recitation	Physical Activities	Sports meet
6	Dance, Drama	Recitation, Music	Drama, Physical Activities	Drama	Drama Performance
7	Physical Activities, Music	Drawing	Handicrafts	Physical Activities	Environment Awareness programme
8	Dance, Drama	Music, Recitation	Drawing, Clay Modelling	Green Project	Health Camp
9	Dance	Music Dance	Recitation	Drama Dance	Cultural Programme
10	Drawing, Indoor games	Handicrafts Music	Physical Activities	Drama, Dance	Short Tour

After the intervention programme once again the sociometric scale was applied on them to evaluate whether there was any transition of the social status among classmates of the slow learners occurred or not.

**Result**

**Table 1 : The percentage of the Slow Learners under each category of Sociometric Scale at Pre and Post Intervention Programme**

No. of slow learners in the category of					
	Rejected	Neglected	Controversial	Average	Popular
Pre intervention stage	16 (30%)	11 (20.7%)	14 (26.4%)	6 (11.3%)	6 (11.3%)
Post intervention stage	4 (8%)	5 (9%)	6 (11.3%)	26 (49%)	12 (22.6%)

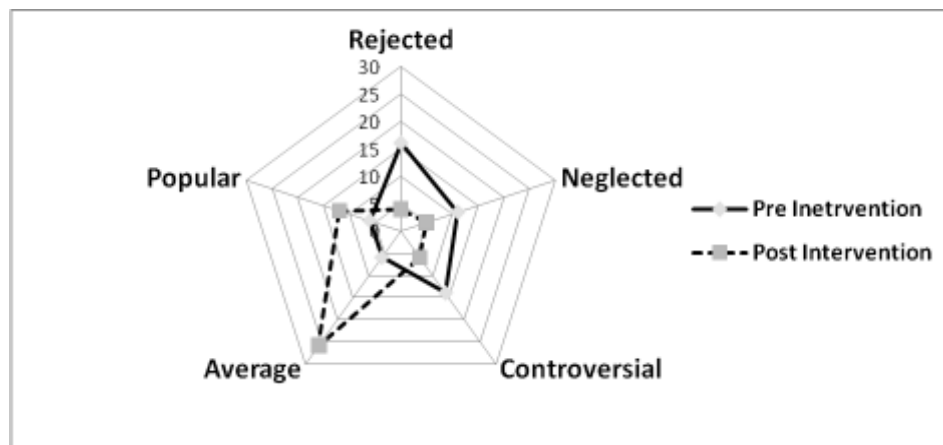


Figure 1. Graphical presentation of the categorisation of slow learners in sociometric scale before and after intervention

Table.1 and Figure 1 depicts that a remarkable change occurred from pre intervention categorisation to post intervention stage. The percentage of slow learners under ‘Rejected’, ‘Neglected’ and ‘Controversial’ category has been reduced from 30%, 20.7%, 26.4% to 8%, 9% and 11.3% respectively. The change under ‘Average’ and ‘Popular’ category is also worth mentioning, as it accelerates to double in Popular category and four times in Average category.

**Table 2 : Transition of the Sociometric Status of the Slow Learners among Classmates before and after Intervention**

	Roll No	Sociometric status at			Roll No	Sociometric status at	
		Pre Intervention Stage	Post Intervention Stage			Pre Intervention Stage	Post Intervention Stage
School : 1	7	Rejected	Average	School : 5	1	Popular	Average
	9	Neglected	Neglected		10	Rejected	Neglected
	11	Rejected	Average		11	Rejected	Average
	16	Rejected	Controversial		19	Controversial	Average
	19	Neglected	Average		24	Average	Average
	20	Controversial	Popular		4	Average	Popular
School : 2	6	Controversial	Average	School : 6	7	Neglected	Average
	12	Controversial	Popular		12	Neglected	Average
	17	Rejected	Average		14	Popular	Popular
	24	Rejected	Popular		17	Rejected	Popular
	27	Popular	Popular		18	Controversial	Rejected
	28	Controversial	Neglected		29	Controversial	Controversial
	33	Neglected	Rejected		30	Rejected	Average
	34	Neglected	Average		4	Popular	Average
School : 3	8	Rejected	Average	School : 7	12	Rejected	Neglected
	12	Rejected	Average		13	Rejected	Average
	16	Controversial	Rejected		19	Controversial	Average
	19	Neglected	Average		25	Average	Average
	24	Neglected	Average		3	Neglected	Average
	25	Average	Popular		11	Popular	Popular
School : 4	9	Rejected	Controversial	School : 8	12	Rejected	Popular
	10	Controversial	Average		16	Controversial	Rejected
	14	Controversial	Average		20	Controversial	Controversial
	19	Controversial	Neglected				
	31	Neglected	Popular				
	32	Average	Average				
	37	Average	Controversial				
	40	Rejected	Controversial				
	41	Popular	Popular				
45	Neglected	Average					

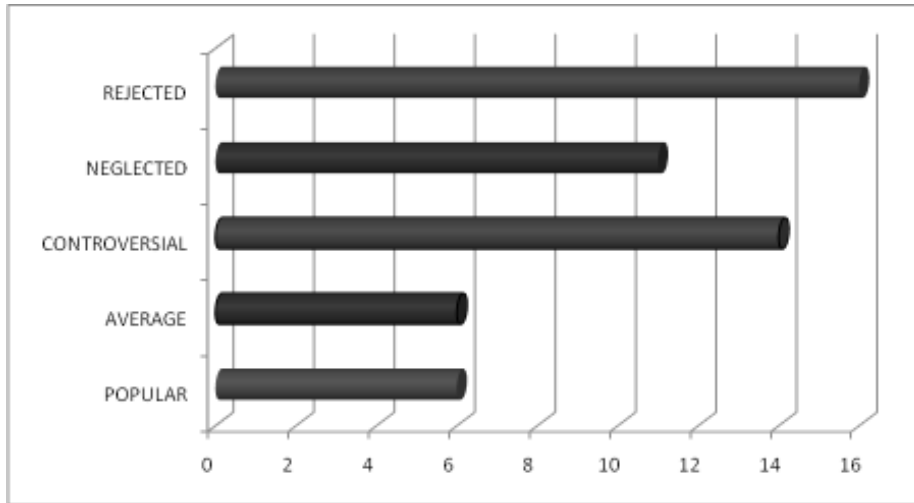
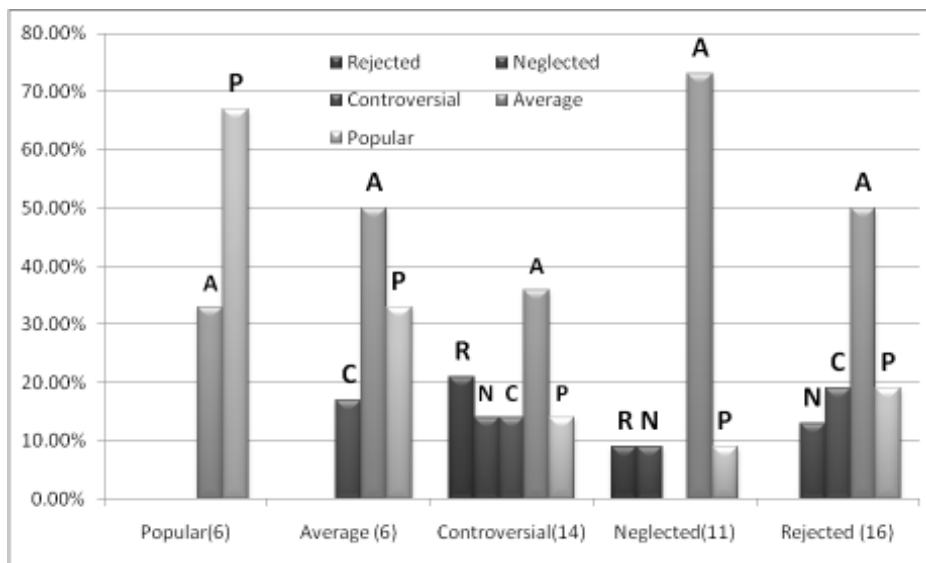


Figure 2 : Graphical presentation of categorisation of social status of the slow learners at pre intervention stage



\*P-Popular, A- Average, C-Controversial, N-Neglected, R-Rejecte

Figure 3; Graphical presentation of transition of the Sociometric status of the slow learners among classmates from before to after intervention

Table 2 and Figure 2 and Figure 3 show that 16 students were under ‘Rejected’ category at pre-intervention stage. But at post intervention stage out of 16 there was none in the category of ‘Rejected’. Majority of them (50%) were placed



in the category of 'Average'. Moreover three(19%) rejected slow learners were nominated as 'Popular' among the classmates.

The picture of the 'Neglected' category took a reverse mode. Out of 11 slow learners only 1 (9%) remained as neglected and 1(9%) was degraded as 'Rejected'. But 8(73%) were categorised as 'Average' and 1(9%) also elected as 'Popular'.

But for those who belonged to 'Controversial' category, transition was quite haphazard because out of 14, three (21%) and two(14%) slow learners were identified as 'Rejected' and 'Neglected' respectively. Though five slow learners were elected as 'Average'(36%) and two (14%) entered into the category of 'Popular'.

For the category of 'Average' and 'Popular' none was transferred to 'Rejected', 'Neglected' and 'Controversial'.

### *Discussion*

The whole intervention programme put a great impact upon the sociometric status of the slow learners in the sampled population. It was observed that the percentage of neglected, rejected and controversial category has been reduced remarkably and the percentage of Average & population category indicated the acceptance of the slow learners among classmates. It proved the positive influence of the intervention programme. Mixed ability grouping method was one of the major part of the intervention programme. With the help of this strategy, slow learners found a way to interact with other classmates who encouraged them feel a sense of integration. Beside other students of the class also started to accept the slow learners as a part of their group instead of leaving them isolated as they did earlier. Some interview data will corroborate this. S.L 15/S-6/F expressed in the interview during pre-intervention stage that she had been refused by her classmate when she wanted to sit with them or liked to participate in play. Everybody she used to get punishment and most of the classmates laughed at her, so she did not prefer to come to school. But this mixed ability grouping is based on the principle of peer tutoring and cooperative learning which provide the slow learners opportunity to learn from their friends and to ask them for support. SL15/S-4/F shared her view that one friend of her group taught her a poem and she enjoyed learning with friends. SL-8/S-4/M said that his friend helped to complete his home work of handwriting. From the classroom observation it can be said that majority of the slow learners felt comfortable with this strategy, as they usually hesitated to interact with teachers and to ask for any help.

Another significant component was participatory learning. In this method all the study materials were designed in such a way that the students would get

scope to participate activity, work together and to learn with practical experiences. This process enhanced the motivational level and succeeds to eradicate the unwillingness to learn which is very common among the slow learners. This learning procedure is very much supportive for skill development which may accelerates the level of self-confidence, positive attitude towards learning. From their direct account it was projected that participatory learning made the classroom situation enjoyers. Game based teaching aids were mostly greeted by the slow learners. Not only that, enhancement of self-efficacy led towards socialization.

Co curricular activities play a very worth mentioning role in intervention programme. For all round development of the child, there is a need of physical, emotional, social, moral enrichment. That is complemented and supplemented by co-curricular activities. In connection with its utility the case study of SL33/S-5/M can be mentioned. He was coming from a very poor economic and social background. He stays in a small room with six family members. His parents, siblings, neighbour, teachers, friends all complained that he was very mischievous in nature. During pre intervention he did not communicate at all in the time of interview. In school as well as in home he always got corporal punishment, but none was capable to motivate him to learn something or to convince him to lead a proper livelihood. During the intervention period, it was noticed that he was performing very well in physical activities and in sports events. Observing his efficacy he was made more engaged in these kinds of co curricular activities and rewarded after achievement. These circumstances brought a change in his attitude. He started to remain happy and his classmates also started to accept him in a praised manner. As an effect he began to plead with his friends for academic support his category was shifted from rejected to popular. In this way co-curricular activities identified many creative minds among the slow learners. Culture Programmes brought a fresh air to many. They shared each others thoughts and co-operates. S-41/S-6/F expressed great interest in learning dance. She seems very much communicative and active in the time of this kind of performance. Her group felt proud of her performance and she helped others to learn the dance pose. Her accomplishment shifted her from the category 'Average' to 'Popular' in Socio metric Scale. Moreover Drawing class benefitted S-52/S-8/F so immensely that pictorial presentation of study units geared up her academic standard which reflected in her social life too. Her acquired drove her to way to easy social cohesion with her classmates. Earlier she felt on intense sense inferiority. In home also she remained isolated as she felt all her siblings even the younger ones were superior to her. But capacity and interest of drawing and painting reshaped his status among friends. In Mixed-Ability-Grouping she used to give assistance to other members of the group in

drawing assignment. Not only personal enrichment, but also co-curricular activities mainly progress the fellow feeling, togetherness, co-operative attitude among the students. These findings and the case study of the slow learners made this a concrete thought that proper intervention programme in school enable to change in societal life of these slow learners. These processes slow the way to social inclusion o these slow learners. The findings of the present study are evidenced in several research works. It was observed that peer tutoring improves self confidence, attitude and encourages greater persistence in completing tasks (Roy Arora, 2015). The effectiveness of mixed ability grouping in the present study corroborated with the observations made by Mairead Dunne etal (2007) who concluded that co operative learning offers support to low achievers. Askew and Willian (1995) and Boaler et. al (2000) showed in their study that significant gains in achievement seen in the mixed ability group. They added more that homogenous ability based grouping produced slightly better result for higher attaining students, whilst lowering the results of average and below achievers. Elbaum, Schumm, Vaughn (1997) reported that mixed-ability formats provide poorer readers with help from better readers and an opportunity for all students to co operate. They pointed out that students with learning disability particularly appreciated the help that they were able to get when they encountered unfamiliar words in their reading. This finding goes very much similar with the case study, discussed earlier. The basic principle behind this grouping method is co operative learning in which all students are expected to communicate effectively, provide leadership for the group work, build and maintain trust among group members. (Johnson and Johnson, 1987). Present study also revealed the same benefits of mixed-ability-grouping, participatory learning process was also of great importance. Salvin (2004) pointed out in his research that participatory learning, claims students to learn to support, encourage and help each other, listen carefully to each others' ideas and settle disputes peacefully. In the present study use of dramatisation took a very significant which goes very much similar with the work of Alesaoy (2004). He showed that dramatisation in Language classes brought a significant difference in social skills among the mentally retarded children. Participatory learning is intimately related with co-curricular activities. In the present study some case studies focussed on the benefits of it. Students involved with co-curricular activities in the form of student organization can maximize students' learning in multi cultural competence. Ahmed (2011) has listed number of values of curricular activities like educational value, psychological values, development of social values, development of civic values, physical development values, recreational values and cultural values. Present study also revealed that slow learners were very much benefitted to be developed at a satisfactory level.

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## **Environmental Ethics among Higher Secondary Students of Bankura District**

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*Nandini Banerjee<sup>1</sup>, Amarnath Das<sup>2</sup> and Dibyendu Bhattacharyya<sup>3</sup>*

### **Abstract**

The study attempts to highlight the level of environmental ethics among the higher secondary school students of Bankura district in the state of West Bengal. Descriptive survey method was employed for the present study. Random sampling technique was used for selection of sample. The sample consisted of 300 higher secondary school students of six West Bengal governments aided higher secondary schools of Bankura. A Likert type scale for assessment of student's environmental ethics was developed and standardized for the study. The data was organized and statistically analyzed by using Chi-Square technique and it was found that there was no significant difference in environmental ethics among higher secondary school students in respect of their gender and academic stream. However, the analysis in respect of locality it was revealed that there was a significant difference in the environmental ethics between Rural and Urban students.

**Key Words:** Environmental Ethics, Environmental Education, Higher Secondary School, Gender, Locality, Academic Stream.

### **Introduction**

Environment means the surroundings or conditions in which a person, animal, or plant lives or operates. It includes air, water, land dynamically the inter-relationship that exists between these and human beings; other living creatures, plants, micro-organism and property. The word environment embraces the conditions or influences under which any organism or things exists, lives or develops. The environment in which we live is very important and it directly affects our lives. We cannot exist without environment. The relationship between

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the man and environment has been established in the early periods itself. Human being live in the kingdom of nature and interact with it constantly. The influence of nature in the form of the air he breathes, the water he drinks, the food he eats, and the flow of energy and information. Any change in the environment cannot only result in devastating effects, but can also pose a threat to the human race.

Today man is living in a world of crises. In recent decades, global problems relating to degradation of natural resources and pollution have increased dramatically. Natural resources are depleted by excessive use. Many efforts are being made to make people aware about environmental protection. The term environmental ethics has a broad meaning. It not only implies motivation about environment but also value and necessary skills to solve the environmental problem. Only education can make man aware, conscious and knowledgeable about environment and environmental problems. Environmental education with active participation in environmental activities is an important tool through which the goals of environmental motivation for higher environmental ethics can be achieved easily. This is the crucial time for inculcate the environmental ethics among the masses particularly among students.

Environmental ethics has given a new dimension to the conservation of natural resources and it is one of the major concerns of mankind. It is the discipline in philosophy that studies the moral relationship of human beings to, and also the value and moral status of the environment and its nonhuman contents. It is the examination and discussion of people's obligations towards the environment. It brings about the fact that all the life forms on Earth have a right to live. To take part in an environmental organization or voluntarily involve in various environmental activities is known as participation in environmental activities. We explore whether environmental motivation affects environmental behavior by focusing on volunteering. The environmental motivation has a strong impact on individuals' voluntary engagement in environmental organizations. A higher level of environmental motivation due to higher environmental ethics may lead to higher level of participation in environmental activities. To achieve the participation of the community, environmental ethics must be provided to the entire community through environmental education.

If we want to generate the environmental values in our students we have to show eco-friendly behavior. A number of research works have been taken up in this respect. But being a location specific issue, research on environmental ethics should be under taken in different parts of the country for developing a clear understanding and perspective of the issues involved.

It is pathetic to notice that younger generation of India is much behind in concern for environmental balance. Compulsory environmental education at all

level in education system as directed by Hon'ble Supreme Court is the most appropriate strategy towards environmental protection. That's why we are felt need to study environmental ethics of higher secondary students of Bankura district.

### *Justification of the Study*

One of the gravest situations in the present world is pollution and loss of natural resources. The district of Bankura is no exception to it. The rate of population of this district has increased to a great dimension during last some decades. Resultantly, the area of the town has enlarged. As a result, natural forest and resources is getting spoilt. So it has a significant effect on population, creatures, soil and atmosphere. The influence of industrialization has added fuel to it. Some industries that are polluting have been spread in various parts of this district. This pollution is gravely affecting soil and water, as a result of which it is affecting farming and health of human beings. The way of coming out of this problem is to create environmental ethics in every step of life. The first step of this will start from school. Because the future denizens are made from here. If the environmental motivation is increased to a great extent, the students will be able to attain the higher environmental ethics which may lead to higher level of participation in environmental activities that will help to grow this environment more beautiful. So the students of H.S. level from some schools of Bankura district are included in the present study.

### *Definitions of Some Important Terms*

- ◆ **Environment:** Environment means the surroundings or conditions in which a person, animal or plant lives or operates.
- ◆ **Environmental Ethics:** Environmental ethics is one's beliefs about nature, which are based upon but exceed science, have everything to do with beliefs about duty. Environmental ethics is the only ethics that breaks out of culture. It has to evaluate nature that mixes with culture and wild nature, and to judge duty thereby.
- ◆ **Environmental Education:** Environmental Education means a process of developing a world population, i.e. aware of and concerned about the total environment and its associated problems, and which has the knowledge, skills, attitudes, motivations and commitment to work individually and collectively toward solutions of current problems and the prevention of new one.
- ◆ **Students:** A volunteer participant chosen from the population of students from the higher secondary level of the schools of Bankura district.
- ◆ **Gender:** It means either sex, i.e. male and female.

- ◆ **Locality:** It includes some rural and urban areas of Bankura district.
- ◆ **Academic Stream:** The term means stream of Arts and Science of H.S. level.

#### *Objectives*

- ◆ To study the environmental ethics of higher secondary students of rural area of Bankura district in West Bengal.
- ◆ To study the environmental ethics of higher secondary students of Bankura town in West Bengal.
- ◆ To compare the environmental ethics of Boys and Girls students of higher secondary level.
- ◆ To compare the environmental ethics between students of Rural and Urban area of higher secondary level.
- ◆ To compare the environmental ethics between Arts and Science students of higher secondary level.

#### *Hypotheses*

- ◆ **H<sub>01</sub>:** There is no significant difference in the environmental ethics between Boys and Girls students of higher secondary level of Bankura district in West Bengal.
- ◆ **H<sub>02</sub>:** There is no significant difference in the environmental ethics between Rural and Urban students of higher secondary level of Bankura district in West Bengal.
- ◆ **H<sub>03</sub>:** There is no significant difference in the environmental ethics between Arts and Science students of higher secondary level of Bankura district in West Bengal..

#### *Methodology*

The method of the present study is a descriptive survey method.

#### **Sample**

A sample of 300 students of higher secondary level has been selected by adopting the random sampling techniques in the present study. The selected sample has been divided into three different groups on the basis of sex, locality and academic streams. All the students are from six Bengali medium higher secondary govt. aided schools situated in the district of Bankura.

#### **Tool Used**

On the basis of the objectives of the study the investigators developed a Likert type scale as tool for assessment of student's environmental ethics which was



standardized and used in the present study. The present test contains 20, all positive, statement each indicating one aspect of environmental ethics. The five response alternates are—strongly agree; agree; undecided; disagree; strongly disagree and scoring weights assigned are: strongly agree–5; agree–4; undecided–3; disagree–2; strongly disagree–1.

### Analysis of Data

The data have been analyzed by SPSS statistical software. Chi-Square test was the statistical techniques used for carrying out the analysis and interpretation of the data collected for measuring the environmental ethics of higher secondary students.

### Result

The major findings of the study have been presented and discussed.

**Table 1 : Showing the level of Environmental Ethics**

Environmental Ethics	Score Range
Low	0 – 35
Moderate	35 – 70
High	70 – 100

**Table 2 : Environmental Ethics of Boys & Girls Students of Higher Secondary Schools**

	Environmental Ethics		
	Low	Moderate	High
Boys	45(29.6)	51(33.6)	56(36.8)
Girls	39(26.4)	43(29.1)	66(44.6)
$\chi^2$		1.88	

Percentages are given in the bracket

After analysis of the data it is found that there is no significant difference between Boys and Girls students in regards of their Environmental Ethics. The calculated value of  $\chi^2$  with  $df = 2$  is 1.88 at 0.05 level of Significance is less than the table value 5.99 (Table 2). So, the null hypothesis is accepted. It is observed that majority of the Boys and Girls students had higher levels of Environmental Ethics.

**Table 3 : Environmental ethics of Higher Secondary School Students residing in Rural & Urban area**

Variable (Locality)		Environmental Ethics			$\chi^2$	df	P Value
		Low	Moderate	High			
Rural	Frequency	20	35	81	21.41	2	0.000022
	%	14.7	25.7	59.6			
Urban	Frequency	37	73	54			
	%	22.6	44.5	32.9			

\*Significant at 0.05 level of Significance

It is observed from the Table 3 that there has a significant difference between students residing in Rural and Urban area in regards of their Environmental Ethics. The calculated value of  $\chi^2$  with  $df = 2$  is 21.41 at 0.05 level of Significance is much greater than the table value 5.99. So, the null hypothesis is rejected. Rural students found to have higher levels of Environmental Ethics compared to Urban students.

**Table 4 : Environmental ethics of Higher Secondary School Students belonging to Arts & Science streams**

Variable (Academic Stream)		Environmental Ethics			$\chi^2$
		Low	Moderate	High	
Arts	Frequency	49	54	58	0.14
	%	30.4	33.5	36.02	
Science	Frequency	41	45	53	
	%	29.4	32.3	38.1	

After analysis of the data it is found from the Table No-4 that there are no significant difference between students belonging to Arts and Science streams in regards of their Environmental Ethics. The calculated value of  $\chi^2$  with  $df = 2$  is 0.14 at 0.05 level of Significance is less than the table value 5.99. So, the null hypothesis is accepted. It is observed that majority of Arts and Science students had higher levels of Environmental Ethics.

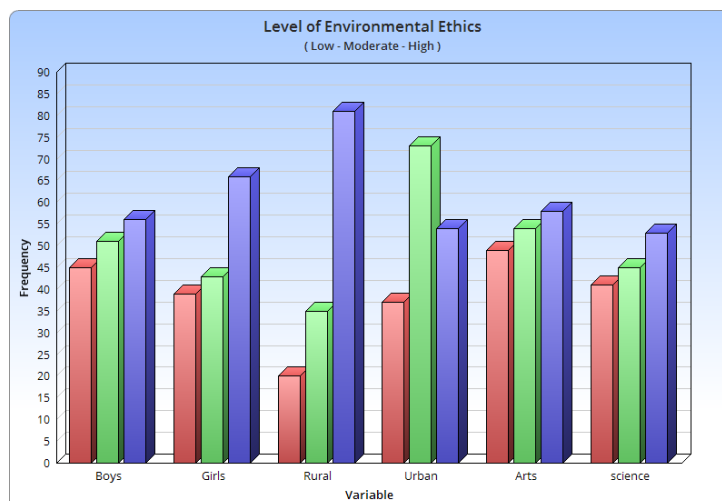


Figure : Level of Environmental Ethics in relation to Variables

**Conclusion**

On 22nd November, 1991 Hon’ble Justice of Supreme Court passed an order stating that Environmental Science ought to be included in the syllabus of all the Educational Board of State Governments and this should be made compulsory. As a result, this subject is taught in every school for some years. In our survey it is found that despite having differences in case of gender and academic streams, there are no significant difference in case of environmental ethics. From this point of view it may be said that the positive effect of environmental ethics has been created among learners by environmental education. That speaks of the learners’ environmental motivation due to higher environmental ethics. On the other hand as far as the locality is considered students in rural schools had better environmental ethics as compared to students in urban schools. The reason could be that rural students get more exposure to open nature than urban students. So, more emphasis should be given on development of Environmental Ethics through theoretical knowledge as well as project work, educational tour, debate etc. among the students of urban schools.

**Educational Implication**

In the perspective of environmental ethics two things are necessary. First of all one’s beliefs about nature and the other is its reflection in behaviour. So, along with theoretical knowledge project work, educational tour, debate etc. are to be inculcated with a view to having concrete knowledge of culture and nature

and if skilled teachers are included in it, the goals of environmental motivation for higher environmental ethics can be achieved easily. Not only students, but also other peoples like guardians, interested persons in education and social institutions are to be included and as such its total reflection will protect the society and environment. As a result, this earth will be a good habitat for all.

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## **Environmental Knowledge of Secondary School Students in West Bengal**

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*Bijan Sarkar\**

### **Abstract**

Industrial revolution transformed rural pattern of life. As many as 150 unique types of organisms are estimated to go extinct every day. In the present scenario, the urgent need for promoting change in knowledge, attitude and behaviour in relation to the environment can well be prioritized. The main aim of Environmental Education is to promote environmental knowledgeable concerning the bio-physical environment and its associated problems and also help to solve problems related to environment. Different conferences, commissions, committees, and summits have emphasized the need of Environmental Education and hereby environmental knowledge. The objectives of the paper are to find out the nature of secondary students' environmental knowledge and the differences in environmental knowledge strata wise (gender & locality). Researcher framed four null hypotheses. 622 students of class IX from three districts of Gangetic plane of West Bengal was considered as sample and purposive sampling was used for sample selection. Researcher developed a tool to measure environmental knowledge. The validity and reliability were estimated by applying Test-Retest, Cronbach alpha, Inter-dimension correlation. After collection of data, 't' test was applied for testing hypotheses. All null hypotheses were rejected, hence it was found that significant differences existed gender wise and locality wise among the secondary students.

**Key Words:** Environmental Education, Environmental Knowledge, Bio-Physical Environment.

### **Introduction**

Only a few hundred years ago, protecting the natural world was not crucial to the survival of humanity. But the Industrial Revolution of the 1800's transformed this overwhelmingly rural pattern of life. It wouldn't be an exaggeration to say that human activities have brought the earth nearer to its death. As many as 150 unique types of organisms are estimated to go extinct every day (Lamont 1995). In the present scenario, the urgent need for promoting change in knowledge, attitude and behaviour in relation to the environment can well be prioritized.

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As the present global trends indicate that we have failed to hold on to environment related values, attitudes, consciousness and awareness, we need an educational involving with man's relationship with his natural and man-made surroundings. This implies that Environmental Education (EE) is a necessity. EE is aimed at producing a citizenry that is knowledgeable about the bio-physical environment and its associated problems, is aware of how to help solve these problems and motivated to work towards their solutions. EE should make the individual concerned about the environment and its associated problems, and be equipped with the knowledge, skills, attitudes, motivations, and commitment to work individually and collectively toward solutions of current problems and the prevention of new ones (Stapp *et al.*, 1969).

The early 70s witnessed the initial impetus to a worldwide interest into formulating strategies of facing the crisis of environmental degradation. In 1970, the International Union for Conservation of Nature and Natural Resources Commission of Education emphasized the need of EE. In June 1972, the representatives of various nations of the world met at the International Conference on Human Environment at Stockholm. Subsequent to this came the Tbilisi Declaration, this is considered to be one of the most important seminal documents in EE. It was the world's first Intergovernmental Conference on EE, and was organized by UNESCO in cooperation with the UNEP which was convened in Tbilisi, Georgia (USSR) from 14 to 26 October 1977. Ten years later, the 'Tbilisi Plus 10' International Congress on Environmental Education and Training was held in Moscow in 1987. The UN Conference on Environment and Development (1992), known as the Earth Summit was held at Rio de Janeiro. It gave high priority in its Agenda 21 to the role of education in pursuing the kind of development that would respect and nurture the natural environment. The Johannesburg Summit (2002) broadened the vision of sustainable development and re-affirmed the educational objectives of the Millennium Development Goals. All these conferences and summits have emphasized the need of EE and hereby environmental knowledge.

Hungerford, Litherland, Peyton, Ramsey & Volk (1996) in their study 'Investigating and Evaluating Environmental Issues and Actions' had described the characteristics of an environmentally literate citizen as people with environmental sensitivity, knowledge of ecological concepts, knowledge of problems and issues, skill in identifying, analyzing, investigating, and evaluating problems and solutions, beliefs and values, knowledge of action strategies, skill in using action strategies, and internal Locus of Control.

Kumari, *et. al.*, (2006) in their study on 'Environmental Awareness, Environmental Attitude and Intentional Ecological Behaviour among Adolescents' tried

to find out the relationship among environmental awareness, environmental attitude and intentional ecological behaviour. The results indicated that majority of respondents fall in the category of high awareness level. That is 72% of girls and 66% of boys were found to have high environmental awareness levels.

Leeming *et al.* (1993) reviewed 34 studies published between 1974 and 1991 that showed changes in environmental knowledge, attitudes or behaviours. One half was categorised as classroom interventions and the other half as out-of-class interventions. For the former, nine out of 17 studies reported significant positive changes in environmental knowledge, attitudes or behaviours. Three of these studies revealed no significant changes and the rest showed either mixed or inconclusive results. Many of these studies involved classroom interventions with a duration less than eight weeks and students varying from 3rd grade (9–10 years old) to 12th grade (18–19 years old).

Palmberg (1997) in the research publication ‘Environmental Knowledge, Attitudes and Actions among Finnish Secondary School Pupils’ had examined the knowledge, attitudes and practical actions in environmental issues among 245 randomly selected 15-year-old pupils in seven Swedish-language secondary schools by using a questionnaire produced for this purpose. The level of the general knowledge about environmental problems was high, but the understanding of these problems, as well as, the pupils’ own roles in solving problems was unexpectedly low.

Frick (2004) in her thesis entitled ‘Environmental knowledge: Structure, relevance for attitudes, and behavioral effectiveness’ had started with theoretical models, which assumed that environmental knowledge was an important precondition for pro-environmental, or conservation, behaviour. Accordingly, a large part of EE relied on imparting knowledge as a means of promoting conservation behaviour. After considering these facts researcher considered the followings as the objectives of the study and framed the hypotheses.

### ***Objectives***

- ◆ To find out the nature of the environmental knowledge of secondary students.
- ◆ To find out the differences in environmental knowledge strata wise (gender & locality).
- ◆ To develop a tool for measuring environmental knowledge of secondary students.
- ◆ To measure the environmental knowledge of secondary students.

**Hypotheses**

- ◆  $H_{O.1}$ : There exists no significant difference in the mean scores of environmental knowledge between boys and girls
- ◆  $H_{O.2}$ : There exists no significant difference in the mean scores of environmental knowledge between rural and urban students
- ◆  $H_{O.3}$ : There exists no significant difference in the mean scores of environmental knowledge between urban boys and rural boys
- ◆  $H_{O.4}$ : There exists no significant difference in the mean scores of environmental knowledge between urban girls and rural girls

**Method and Materials**

This study was quantitative in nature and Descriptive Survey approach was applied for conducting the research.

**Variables:** Environmental knowledge of the secondary students of West Bengal was considered as the dependent variable and the independent variables are gender and location in this study.

**Sample:** 622 students of class IX from three districts of Gangetic plane of WB was considered as the sample and purposive sampling was used for sample selection.

**Tool used:** Researcher developed a tool to measure environmental knowledge. After item analysis 30 items were selected. The validity and reliability were estimated by applying Test-Retest, Cronbach alpha, Inter-dimension correlation and they were found sufficient for the study.

**Analysis and Interpretation**

After collecting the data researcher used different descriptive and inferential statistics. At first, the researcher confirmed the assumptions regarding using parametric test. Then the data were analyzed by applying t-test.

**Table 1 : ‘t’-test: Environmental Knowledge between Boys and Girls**

EK	N	Mean	SD	SEm	df	t
Boys	303	14.45	4.60	0.26	620	3.81**
Girls	319	13.07	4.37	0.24		

\*\*significant at 0.01 level

The ‘t’ value was found to be significant; therefore the corresponding null hypothesis ( $H_{O.1}$ ) was rejected. As such, it could be inferred that there existed



significant difference in the mean scores of environmental knowledge of boys and girls.

**Table 2 : 't'-test: Environmental Knowledge between Urban Students and Rural Students**

EK	N	Mean	SD	SEm	df	t
Urban	279	16.00	5.24	0.32	620	11.80**
Rural	343	11.91	2.72	0.15		

\*\*significant at 0.01 level

The 't' value was found to be significant, therefore the corresponding null hypothesis ( $H_{O,2}$ ) was rejected. As such, it could be inferred that there existed significant difference in the mean scores of environmental knowledge of urban and rural students.

**Table 3 : 't'-test: Environmental Knowledge between Urban Boys and Rural Boys**

EK	N	Mean	SD	SEm	df	t
Urban Boys	115	18.76	3.79	0.35	301	17.19**
Rural Boys	188	11.82	2.66	0.19		

\*\*significant at 0.01 level

The 't' value was found to be significant; therefore the corresponding null hypothesis ( $H_{O,3}$ ) was rejected. As such, it could be inferred that there existed significant difference in the mean scores of environmental knowledge of urban and rural boys.

**Table 4 : 't'-test: Environmental Knowledge between Urban Girls and Rural Girls**

EK	N	Mean	SD	SEm	Df	t
Urban Girls	131	14.10	5.81	0.51	317	3.17**
Rural Girls	188	12.37	2.78	0.20		

\*\*significant at 0.01 level

The 't' value was found to be significant; therefore the corresponding null hypothesis ( $H_{O,4}$ ) was rejected. As such, it could be inferred that there existed

significant difference in the mean scores of environmental knowledge of urban and rural girls.

### **Conclusion**

On the basis of the statistical analysis and interpretation the findings of the present study could be reiterated as below:

- ◆ Significant difference was found in the mean scores of environmental knowledge of rural and urban students, wherein the environmental knowledge scores were significantly higher in case of urban students.
- ◆ Significant difference was found in the mean scores of environmental knowledge of boys and girls, wherein, the environmental knowledge of boys was significantly higher.
- ◆ Significant difference existed in the mean scores of environmental knowledge of rural and urban boys, wherein; the scores were significantly higher in case of urban boys.
- ◆ Similarly, significant difference was found in the mean scores of environmental knowledge of rural and urban girls, wherein, the scores were significantly higher in case of urban girls.

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## **Factors Affecting the Subject Choice of Muslim Girls in Higher Education**

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*Fauzia Khan<sup>1</sup> and Ambreen Yusafi<sup>2</sup>*

### **Abstract**

The beginning of college education is a very important step in the life of a woman. The choices made at this stage form the basis of their career or future occupation. There are many factors that influence all the Indian women, particularly the most suppressed group among them, the Muslim women, while choosing their subjects and course. Thus the various sociological factors that influence Muslim women students in deciding their subjects at university level were considered to be an important research area. Thus the investigator formulated the research design for the given study. The study reveals that the subject choices of Muslim women students are influenced by many social factors. Family influence emerged as the major determining factor in decision of the girl student's choice of subjects at college/university. Medium of instruction, type of residence, study room, caste and type of the family, parent's education, occupation and income, type of education received, religiosity, moral support from relatives and teachers and socio-economic status are the other major factors.

**Key Words:** Subject Choice, Muslim Girls

### **Introduction**

Since the last few years, women education has got a paramount point in much of the discussion of educationists, policy makers, social activities and even general people. There have been discussions about the reasons to educate women, the type of education they should get and its purpose it would serve. Generally Indian society characterized as patriarchal. The general perception of people is that the females are inferior, weaker and less intelligent than men. They are not equal so they should not be given equal opportunities. Ironically, due to prevalent prejudices in the society, women themselves internalized this mindset and started to believe that they are not and can never be equal to men. The women are commonly considered for the role for domestic and reproduction purpose. Consequently it adversely affected the education of women. There are

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also other factors which keep the education out of reach of women like negative social attitude, restrictions, family pressures, etc.

After critically examining the related literature, the investigator found that many of these studies are comparative studies of perceptions of males and females, students of different streams, etc. in different prospects of education. There are some studies about vocational interests, occupational choices, factors affecting occupational choices, career organizations of the younger generation, particularly women. After critical and careful examination of the given studies and their findings, the investigator identified certain gaps which could be filled up with an empirical survey type study. The beginning of college education is a very important step in the life of a woman. The choices made at this stage form the basis of their career or future occupation. There are many factors that influence all the Indian women, particularly the most suppressed group among them, the Muslim women, while choosing their subjects and course. Thus the various sociological factors that influence Muslim women students in deciding their subjects at university level were considered to be an important research area. Thus the investigator formulated the research design for the given study.

The objective of this paper is to find out the reasons that influence Muslim girls to choose a particular course. The schools should acknowledge various sociological factors that influence a Muslim girl to choose her subjects at college level. These girls will then get proper understanding of various fields open to them and they will become more efficient to achieve their best opportunities and abilities. As in any other developing society, Indian society also has great gender bias in context of education. Being a minority community, Muslim girls are the most suppressed members to face this bias. The families of Muslim girls, their culture, traditions, society and even educational institutions play a very important role in influencing these girls for their subject choices. This study is limited to the Muslim girls studying in two central universities of Delhi i.e. Jamia Millia Islamia and the University of Delhi. Study is conducted in keeping the objective to find out whether Muslim women face any discrimination while making their subject choice as well as while in the process of choosing subject whether these girls have made for reasons other than their interests and aptitude. Our survey also focused on the special needs of a professional guidance and counseling while making subject choices. Consequently it helps us to examine the various factors affecting the aspirations of Muslim girls and to establish a relationship between perception of courses and variables of students like–Socio economic factors (residential conditions, parents' education and occupation etc.) or Socio-cultural factors (religion, caste, modernity, etc.).

**Sampling and Method**

A sample of 400 Muslim girl students in different courses at University of Delhi and Jamia Millia Islamia was taken for the study. Samples were basically derived from graduation class of education, science, arts and commerce and 30 students each from post-graduation of arts and science stream were taken. Numbers of sample were equally taken from both girls and co-educational colleges affiliated to the above mention universities. The procedure of sampling was random selection. The courses included in the study were Graduation Courses in Education, Science, Arts and Commerce and Post Graduate Courses in Science and Arts from Jamia Millia Islamia and different colleges of University of Delhi.

**Factors Affecting the Subject Choice**

The factors affecting the subject choice of Muslim girls in higher education are represented below.

**1. Medium of Instruction**

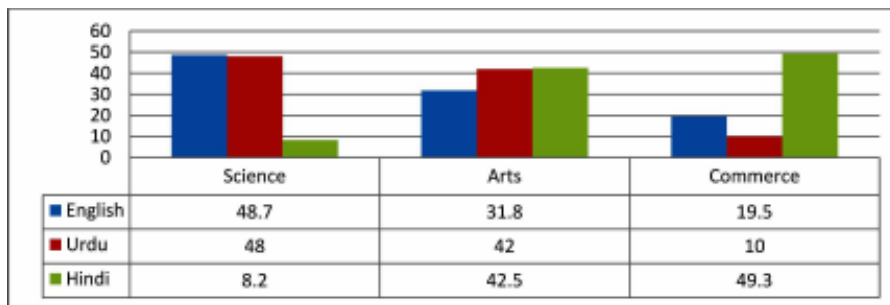


Figure 1 : Medium of instruction and subject choice of Muslim girls in higher education

Among the Muslim girls studied at English medium schools 48.7% are perusing science, 31.8% perusing Arts and 19.5% perusing commerce. Among those studied at Urdu medium schools 48% are perusing science, 42% perusing Arts and 10% perusing commerce. But, among those studied at Hindi medium schools 49.3% are perusing commerce, 42.5% perusing Arts and 8.2% perusing science. This shows that those students who have studied in English and Urdu Mediums Schools are more inclined almost equally towards science, while Hindi medium students favor commerce or arts.

2. *Nativity*

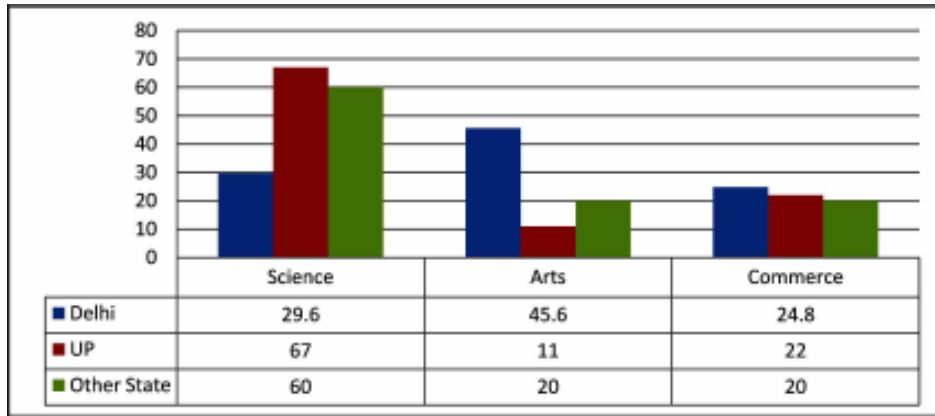


Figure 2 : Nativity and subject choice of Muslim girls in higher education

Among the Muslim girls of Native Delhi 45.6% are perusing arts, 29.6% perusing science and 24.8% perusing commerce. Among the Muslim girls of Native UP 67% are perusing science, 22% perusing commerce and 11% perusing arts. Among the Muslim girls of Native Other State 60% are perusing science, 20% perusing commerce and 20% perusing arts. Maximum number of students belonging to Delhi had opted for art subjects. It shows that Delhi based Muslim girls’ families do not give much importance to commerce and science stream. The reason may be that these families have settled in Delhi after coming from other places. The main objective for them remains to become settled rather than to go for education. Considering the case of Uttar Pradesh, it was observed that maximum percentage of students have opted for science, may be the parent of these girls are more practical and pragmatic in nature. They are aware that study of science is an important for survival in this technology-driven world. So they stress on study of science by their daughters. Same is the case of families belonging to other states. Here also, the maximum number of students has opted for science stream.

**3. Longtime Residents**

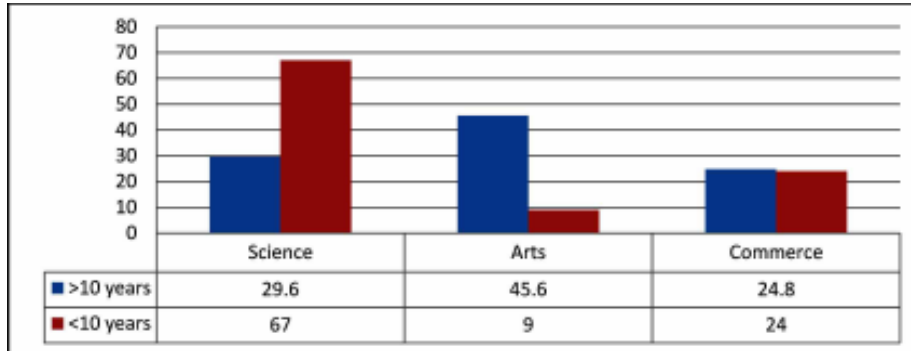


Figure 3 : Longtime residents and subject choice of Muslim girls in higher education

Among the Muslim girls of staying in Delhi more than 10 years 43.7% are perusing arts, 32.7% perusing science and 23.7% perusing commerce. Those who are newly in Delhi 67% are perusing science, 24% perusing commerce and 9% perusing arts. This shows that those students whose families had been living in Delhi for more than ten years have opted for arts stream. The girls who are in Delhi for less than 10 years have preferred Science stream. It indicates that there is change in attitude of people who have recently migrated to Delhi.

**4. Number of Rooms in Residence**

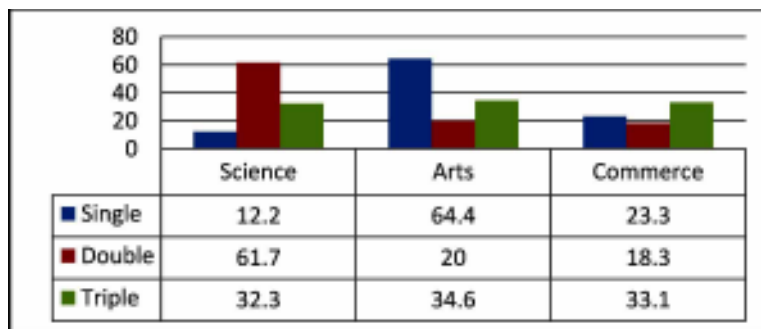


Figure 4 : Number of rooms and subject choice of Muslim girls in higher education

Among the Muslim girls those are staying in single room residents 64.4% are perusing arts, 23.3% are perusing commerce and 12.2% are perusing science. Among the double room residents 61.7% are perusing science, 20% are perusing

arts and 18.3% are perusing commerce. Among multi room residents 34.6% are perusing arts, 33.1% are perusing commerce and 32.3% are perusing science. This shows that those students having only single-rooms house mostly opt for art. The reason for this may be that lack of separate room with privacy compelled them to opting comparatively easier course. The students who live in a two room house mostly opt for science. The reason may be that they have separate space to study where they can concentrate on their studies. So they can give more attention to difficult subject like science. Those having a three room are almost fairly equally distributed in science, arts and commerce.

**5. Separate Study Rooms**

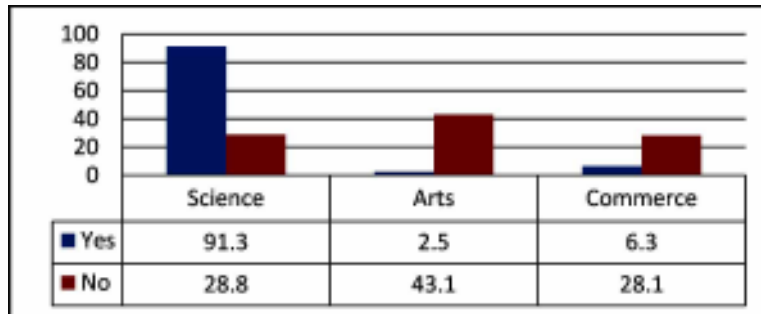


Figure 5 : Study room and subject choice of Muslim girls in higher education

Among the Muslim girls those who have separate study room 91.3% are perusing science, 6.3% are perusing commerce and 2.5% are perusing arts. Among those not have study, 43.1% are perusing arts, 28.8% are perusing science and 28.1% are perusing commerce. This shows that those girls who did not have a separate study room mostly opted for arts. The girls who have a separate room tend to study science.

**6. Caste**

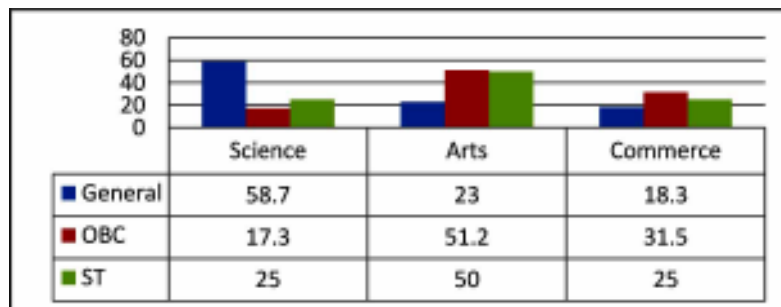


Figure 6 : Caste and subject choice of Muslim girls in higher education



Among the general category Muslim girls 58.7% are perusing science, 23% are perusing arts and 18.3% are perusing commerce. Among OBC 51.2% are perusing arts, 31.5% are perusing commerce and 17.3% are perusing science. Among the ST 50% are perusing arts, 25% are perusing commerce and 25% are perusing science. This shows that OBC students have mostly opted for arts stream followed by commerce and science. The students from general category have mostly opted for science followed by in arts and commerce.

**7. Family Type**

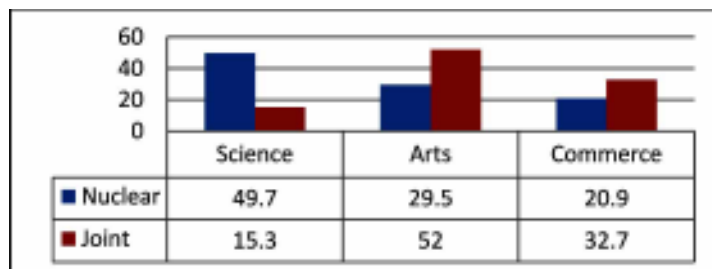


Figure 7 : Family type and subject choice of Muslim girls in higher education

Among the Muslim girls from the nuclear family 49.7% are perusing science, 29.5% are perusing arts and 20.9% are perusing commerce. Among joint family 52% are perusing arts, 32.7% are perusing commerce and 15.3% are perusing science. This shows that from nuclear families majority opted for science, followed by arts and commerce. The reason may be that these girls live in small families, so they find enough time and space to study science. Girls, who live in joint families, mostly opt for arts.

**8. Education of Parents**

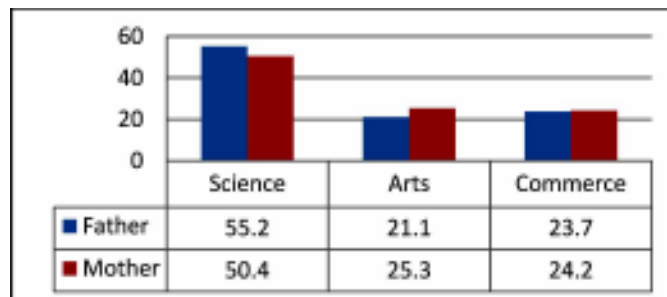


Figure 8 : Education of parents and subject choice of Muslim girls in higher education

Among the Muslim girls whose fathers are highly educated 55.2% are perusing science, 23.7% are perusing commerce and 21.1% are perusing arts. Among those students whose mothers are highly educated 50.4% are perusing science, 25.3% are perusing arts and 24.2% are perusing commerce. This shows that among highly educated parents tend to opt for science, followed by commerce. This reveals that if parents have higher qualifications, their daughters are strongly influenced by it and they tend to opt for science streams. The students who had less educated parents, mostly opted for arts.

**9. Occupation of Parents**

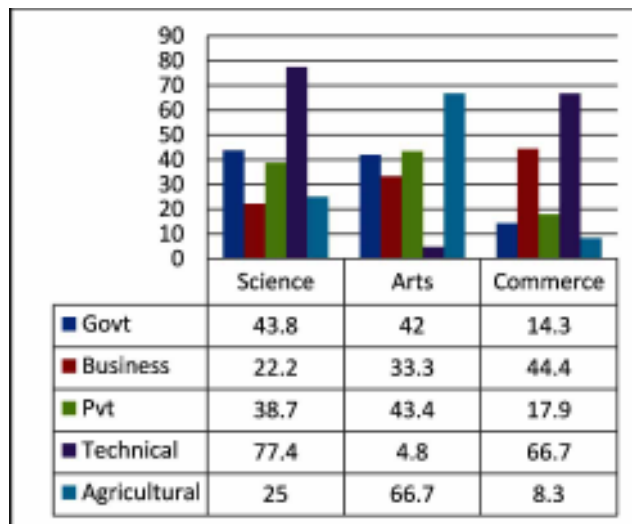


Figure 9 : Occupation of father and subject choice of Muslim girls in higher education

Among the Muslim girls whose fathers are government employees 43.8% are perusing science, 42% are perusing arts and 14.3% are perusing commerce. Among the students whose fathers are businessmen 44.4% are perusing commerce, 33.3% are perusing arts and 22.2% are perusing science. Among the students whose fathers are working in private sector 43.4% are perusing arts, 38.7% are perusing science 17.9% are perusing commerce. This shows that the students whose fathers are in government and private jobs nearly equally distributed in science and arts streams. The girls from business families show more inclination in commerce than in arts or science. Another trend observed is that girls whose fathers have technical or professional jobs, these girls mostly opt for science subjects. Majority girls from agricultural families opted arts stream.

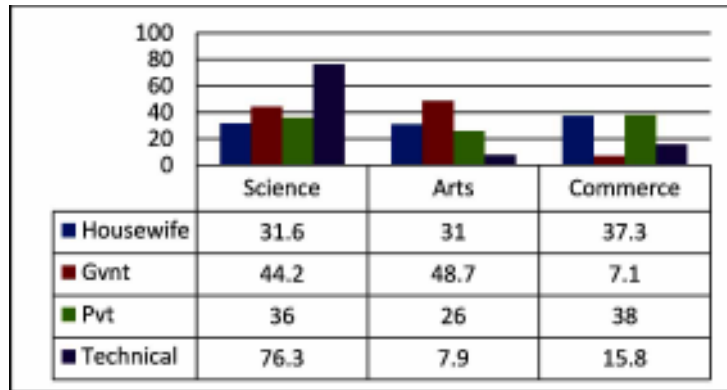


Figure 10 : Occupation of mother and subject choice of Muslim girls in higher education

Among the students whose mothers are working as housewife 37.3% are perusing commerce, 31.6% are perusing science and 31% are perusing arts. Among the students whose mothers are working as government employees 48.7% are perusing arts, 44.2% are perusing science and 7.1% are perusing commerce. This shows that the mothers who are in government jobs, their daughters tend to be more inclined towards arts, closely followed by science. The reason may be that as the mothers have stable jobs, they are more relaxed and tend to encourage their daughters for taking up science or arts. The mothers who are in private jobs, their daughters are equal in number in commerce and science i.e. they are care more about the trends of the world and send their daughters into complex and competitive fields like commerce and science. The professional or technical mothers send their daughter maximum into science, with very small number into commerce or arts.

**10. Family Income**

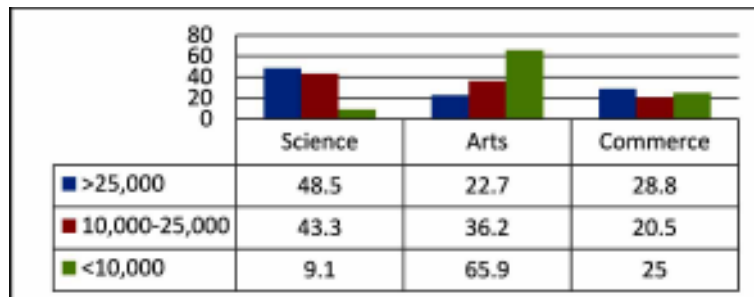


Figure 11 : Family income and subject choice of Muslim girls in higher education

The Muslim girls Students whose family income are 25,000 or above 48.5% are perusing science, 28.8% are perusing commerce and 22.7% are perusing

arts. Students whose family income level are 10,000-25,000 43.3% are perusing science, 36.2% are perusing arts and 20.5% are perusing commerce. Students whose family income level are 5,000-10,000 65.9% are perusing arts, 25% are perusing commerce and 9.1% are perusing science. This shows that students fall within the income group of between 10,000-Rs.25000, opted for science, followed by commerce. Maximum number of students of income group 'above Rs. 25000' opts for science. This is because science is comparatively expensive to study, so higher income group girls favor it. The students from the lower income group selected arts more than commerce or science, as it is inexpensive and does not require much fees.

**11. Type of Education**

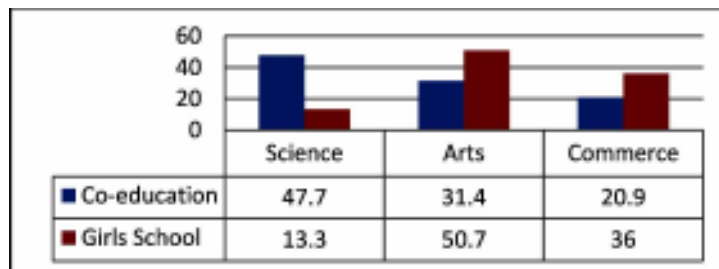


Figure 12 : Type of education and subject choice of Muslim girls in higher education

Among the Muslim girls who passed out from co-education 47.7% are perusing science, 31.4% are perusing arts and 20.9% are perusing commerce. Among those passed out from girl's school and girls colleges 50.7% are perusing arts, 36% are perusing commerce and 13.3% are perusing science. This shows that most of the co-ed girls had opted for science stream. The reason may be the feel more competitive when students of both the sexes are present. On the other hand, in girls colleges, there is only a single sex i.e. girls, so the competitive spirit is somewhat lost, as most the girls of girls colleges had chosen arts stream, followed by commerce stream, with very small number of girls in science stream.

**12. First Choice**

Among the Muslim girls who got their first choice subject 46.6% are perusing science, 31.4% are perusing arts and 22% are perusing commerce. Among those who didn't get their first choice subject 63% are perusing arts, 37% are perusing commerce. This shows that all the students of science stream had their first choice in school, while 82% of commerce students only got their first choice

and 78% of arts students only got their first choice. This indicates that most of the students who could not get their first choice in school are in the arts stream. The main reason for this was found to be parental pressure, followed by financial reasons. The parents did not want their daughters to study science and moreover science was comparatively expensive to study than arts due to high fee structure of the courses in science after senior secondary. Although all of the science students said that they got their first choice, but still many were there as they could not get admission to medical or engineering so they joined B.Sc. The students of arts and commerce who could not get their desired stream in college were mostly influenced by their friends' choice, followed by parental pressure. Thus it was found that girls mostly decide their subjects according to their friend's choice or their parents and family. Maximum changeover was observed in arts students where many of arts students had changed their streams from school to college. The students either studied science or commerce at school level, but had to take up arts at college level. Some of commerce students had changed their streams, these were earlier science students in school, but they took up commerce in college. The researcher tried to find out the reasons for the changeover, and main reasons were either friends' choice or financial reasons or parental discouragement to study science.

### **13. Counseling**

The Muslim girls those received counseling 75% are perusing science, 25% are perusing commerce. This shows that students who did not receive any guidance or counseling in their school to choose their subjects, used to discuss their choice of subjects with their parents, elder siblings or tuition teachers. Most of the girls felt the need of professional guidance and counseling for selection of career, course and college.

### **14. Gender Stereotype**

Among the Muslim girls who are coming from gender stereotype background 51% are perusing arts. Many students did not consider their gender before choosing the stream. Most of these girls were science students. It shows the changing mindsets of people towards education of girls. Out of those girls who did keep their gender in mind before opting for a course were arts students. This indicates that there still exists some sort of gender bias in some families. They do not want their daughters to study science or commerce, so they chose a comparatively 'safe' course for their daughters i.e. arts.

### **15. Friends in Similar Stream**

The Muslim girls who selected subject due to their friends' studies in similar stream 49.6% are perusing arts. This shows that many arts students had the

course as taken by their best friend. In those students whose best friends had chosen dissimilar course than them, most of them belonged to science, followed by commerce. This reveals that science students are least influenced by their friends choice followed by commerce students.

**16. Satisfaction**

Among the Muslim girls who are satisfied at present course 59.4% are perusing science, 32.3% are perusing commerce and 8.3% are perusing arts. Among the dis-satisfied students 88.9% are arts students. This shows that among the satisfied mostly are science students followed by commerce students. In the moderately satisfied group, most of the students belong to arts stream. Among students are dissatisfied with the course they are pursuing and most of them are from arts group.

**17. Moral Support**

Among the Muslim girls who are getting moral support from relatives 40.8% are perusing science. Among those who are not getting moral support from relatives 91.7% are perusing arts and 8.3% are perusing commerce. In most of the cases it is either the parents or elder siblings who keep a watch over the students. Most of these students are science students. In case of commerce students, tutors keep a watch over the progress of their students. Still there is one category where no one takes care of the girls’ studies, most of them belong to arts stream.

**18. Parents Interaction**

The Muslim girls those who have parent’s interaction in education majority are perusing science and those who are not having parental interaction majority are perusing arts. Majority of parents interacted with their daughters occasionally i.e. twice or thrice in a week. These students were almost equally distributed in science and arts. Among parents daily interacted, these are mostly from science stream. Among parents never interacted mostly are from arts.

**19. Future Job Planning**

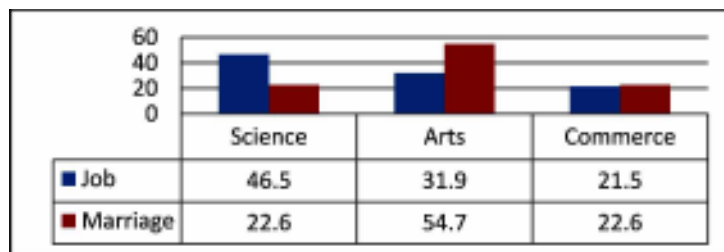


Figure 13: Future planning and subject choice of Muslim girls in higher education

Among the Muslim girls those are planning for job 46.5% are perusing science, 31.9% are perusing arts and 21.5% are perusing commerce. Those who are planning for marriage preference 54.7% are perusing arts, 22.6% are perusing science and 22.6% are perusing commerce. This shows that among those want to join job after the course, mostly are from science, followed by arts and commerce stream. Most of the students wanted to establish a career and most of them belonged to science. The students who wanted to become housewives were all arts students. Those who want to be teaching jobs maximum numbers of student are from Science, those who want to be research scientist, maximum come from science. Those girls, who want to be computer experts or business women, mostly are from commerce stream. Among the girls who want government jobs or administrative jobs are almost equally distributed in all the three streams. When asked about reasons to choose this particular career, half percent of students cited this was their own decision, some took this decision under family influence and others cited financial reasons. All the students who wanted to be housewife belonged to arts stream. The main reasons comes out to be marriage preference followed by own choice and family reasons.

**20. Religiosity**

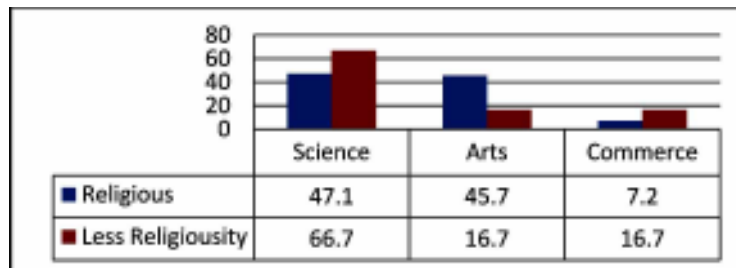


Figure 14 : Religiosity and subject choice of Muslim girls in higher education

Among the Muslim girls from highly religious family 47.1% are perusing science, 45.7% are perusing arts and 7.2% are perusing commerce. Among those from no religious family 66.7% are perusing science, 16.7% are perusing arts and 16.7% are perusing commerce. This shows that highly religious girls mostly have taken either science or arts. Moderately religious families have maximum number of students in commerce, where there are mostly science students belonging to not religious families.

**21. Socio-Economic Status**

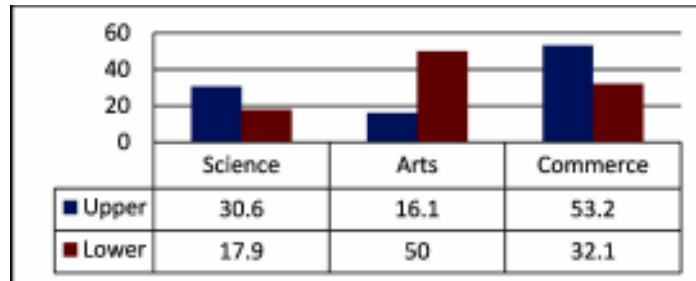


Figure 15 : Socio-economic status and subject choice of Muslim girls in higher education

Those Muslim girls who are from upper class 53.2% are perusing commerce, 30.6% are perusing science and 16.1% are perusing arts. Among those who are from lower class 50% are perusing arts, 32.1% are perusing commerce and 17.9% are perusing science. Upper class families, majority chose commerce followed by science. Most of the girls belonging to lower middle class chose arts.

**Summary of Findings**

The study reveals that the subject choices of Muslim women students are influenced by many social factors. Family influence emerged as the major determining factor in decision of the girl student’s choice of subjects and college/university. More than one-third of girls chose arts stream under family influence. Similar number of girls chose science stream. One-third of girls chose their college according to their family wishes. The type of family i.e. nuclear or joint also plays an important role. About half of girls of nuclear families opted for science, and half number of girls of joint families opted for arts. Father’s and mother’s education and occupation also played an important role. High qualified parents tend to encourage their wards to take up science. Working mothers are more aware about the education of their daughters.

Women are certainly discriminated on the grounds of various socio-economic status. While selecting their courses, very few girls considered their gender. Their families tried to push them in the so-called safe-streams and safe-careers. While selecting a course, about one-fourth girls had responded that they had taken the present course to become a teacher and one-third of these girls gave the reason that teacher’s profession is best for girls. Thus for most of the Muslim women, college education still remains confined to conventional thinking about the various courses. Moreover, they also have to pass the various barriers for gender biasness to get the college for higher studies.



Socio-economic status also plays an important role in choice of subjects. Among the upper class girls, more than half of them chose commerce stream. In the sample, most of the girls were belong to upper middle class. Out of these girls, majority chose science and only some chose arts. On the other side, girls opted for the arts were mostly from lower middle class. Somewhere, although in small amount, Interest is also a deciding factor for choosing subjects. About one-third of girls chose their course according to their interest and about one-fourth of girls chose their college according to their interest. Among the total factors influencing a girl to choose her subject, interest comes first in case of science students, and comes second after family, in case of arts and commerce students.

A majority of girls feel the needs of professional guidance and counseling in schools to guide them for their career and choice of courses. The girls responded that due to insecurity and uncertainty at that time, they often took wrong decisions which later on affected their satisfaction levels. About one-fourth of girls were moderately satisfied and few were totally dissatisfied by the course being pursued by them. So they feel that there should be provision of professional guidance and counseling at school level also. One of the interesting factors that come out is 'own decision'. Due to the changing mindsets of people, girls are also becoming more confident about what they want to do in their future. About half of girls said that the decision for choosing this particular was career their own. Out of these girls, majority are from the science stream followed by commerce and arts stream. Another factor which determines the career choice of Muslim girls is, as expected, their family. About one-third of girls are influenced by their families while choosing their careers and most of them are from science. Financial conditions are also emerged as an important reason in the choice of streams. Low income Muslim student often choose arts as their subjects.

When the relation between perception of course and occupational choice was calculated, it was found that both are inter-related. The perception of course was directly related to the occupational choice of Muslim women students. Most of the girls were those who wanted to take up a job after completion of the present course. Out of these girls, one-third of them want to become teachers and some want to get a government job or administrative job. Few girls wanted to get married after completion of the course. Most of these girls belonged to arts stream and expressed their desire become housewives. However, very small percentage of girls wanted to study further. Out of these, most of them wanted to be teachers. Some wanted to do research or to get government jobs.

### ***Conclusion***

There are many restrictions on Muslim women students. The major restrictions

come from family and society. Majority of girls said they feel restricted due to family, society and cultural issues. Some girls said that their parents do not allow them to study in co-educational institutes. Some parents do not allow their daughters to far off colleges; some girls want to go to other universities, while some girls are not allowed to do professional courses. There were certain girls who felt restricted due to the pressure of wearing hijab. The perception of course is inter-related to the socio-economic status of the girls. The upper class students mostly wanted to study further. They do not have any tension for resources as they tend to be more luxurious in getting education. The lower middle class students mostly want to improve their financial condition, so they want to do job after completion of the course. Some of the girls also want to get married so that they do not have to worry about the resources. On the hand, upper middle class students mostly opt for science and most of them want to do job after the completion of the course.

The perception of course is also related to socio-cultural factors. The students who have been living in Delhi for more than ten years are more practical and pragmatic. More than half of the girls want to do job after completion of their courses. The girls coming from nuclear families are more confident than those coming from joint families. Out of these girls, about half want to take up a job after their courses. The girls of working mothers also want to become career women. Most of them want to be teachers, some want to be government employees and a negligible number of girls also want to be businesswomen. Parental interaction is also a factor for the same. The girls whose parents regularly interact with them are more confident and career-oriented than their counterparts. The moderately religious families allow girls to go for career along with not-religious families. Modernity of the family also plays an important role. The orthodox families do not allow their girls to get a career, while all of the modern and advanced families and most of the average families had daughters who aspire to be career women.

**Educational Implications:** Educational implications can be summarized as education for social upliftment of women, redesigning curriculum, provisions of professional guidance and counseling, and education for change in attitude.

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## **Inculcating a Culture of Reflection in Pre-Service Teacher Education**

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*Ravneet Kaur\**

### *Abstract*

Reflection is claimed as a goal in teacher education programmes, but its definition and meanings are interpreted in numerous ways. NCF-2005 and NCFTE-2009 have highlighted the need for reflective teaching, yet how it might be fostered in pre-service teachers remains a matter that requires further attention. This paper explores the concept of reflective teaching; positions the concept of reflective teaching within teacher education and suggests the need for a learning environment that fosters reflective thinking in student-teachers. Student-teachers who are educated in a 'culture of reflection' are more likely to become reflective practitioners. In this particular article the author interprets reflection in form of bridging theory-practice gap, understanding of self and others, analysing linkages between education and the larger society in terms of inherent values, ideologies and power relations, acceptance of multiple perspectives and so forth. Keeping these at centre, this paper presents the insights gained through the reflections of B.El.Ed student-teachers on a field exposure. Based on these, the last section proposes that experiential learning through field exposures provides opportunities to student-teachers to think and reflect.

**Key Words:** Reflection, Teacher Education

### *Introduction*

The notion of reflection is not new and has been around for centuries. It has been assigned a multitude of meanings and interpretations. The review of these meanings and interpretations done in this section is in no way exhaustive but sets the stage to understand reflection in teacher education.

In Dewey's seminal book 'How We Think' (1933), the question of reflection was raised. According to him, reflection begins in a state of doubt and perplexity which for teachers begins when they encounter difficulties and challenging situations; when things don't go according to plans or don't fit with their theoretical frameworks. When a problem is not solved, a teacher moves into a critical thinking process and reflects to find answers. In addition, reflective

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thinking also involves value-based thinking, foresight and planning. Further, Dewey identifies open mindedness, responsibility and wholeheartedness as characteristics of reflective teachers.

Schon (1983) developed the ideas of 'reflection-in-action' (reflecting while you are doing it) and 'reflection on action' (reflecting after you have done it). While teaching, a teacher needs to be constantly aware and monitor the session as it develops. This awareness allows her to 'think on feet' and make necessary changes as per the demand of the situation. Post the session, she can reflect on, analyze and evaluate the learning and teaching. This then informs the subsequent planning and preparation leading to a cycle of continuous improvement.

Schon also makes a distinction between *technical rationality* and *tacit knowledge*. He explains that although teachers may acquire theoretical knowledge (technical rationality) of their subject yet there could be gaps between the practice of teaching and learning; to simply state he highlights the theory-practice gap. Real life experiences are important as from real life experiences teachers develop for themselves, tacit knowledge—a synthesis of theory and practice. Further, theory is of use when it is applied and developed in practice. In reflective teaching, theory is applied, tested and evaluated.

Pollard (2008) suggests that when teachers start analyzing the relationship between individual, education and society, this serves as a step in becoming reflective practitioners. In order to reflect on their teaching, it is essential for teachers to review and examine classrooms, where issues pertaining to values, aims and commitments, classroom relationships are manifested. Further, Solomon (1987) suggested that reflection is a social process and articulation of ideas with others is crucial to the development of reflective practice.

In India, according to Gandhi, the ultimate aim of education is to develop the whole person-body, mind and spirit; develop character and draw out the latent talents of students. For Tagore, the highest education is that which does not merely gives information but makes our life in harmony with all existence (Tagore, 1921). In the Krishnamurti tradition, teachers are geared towards reflective practice. This can be achieved through self-awareness (Krishnamurti, 1953). The aim of reflection is to look within, inward and backward at the same time seeking to make sense of the past, recent and ongoing experiences. It is a unique tool to develop a new and true perception of oneself and the surrounding and enables one to deal with life situations effectively. Reflection also helps us identify our strengths and weaknesses, goals and mission of life, thus enhancing the development of the self.

Self-reflection involves examining how one's beliefs and values, expectations and assumptions, family imprinting, and cultural conditioning impacts oneself

and one's learning (Larrivee, 2005). It entails deep examination of values and beliefs, embodied in the assumptions teachers make and the expectations they have of students. Self-reflective learning promotes an understanding of oneself in the workplace and provokes questions about one's identity and the need for self-change (Nikolou-Walker and Garnett, 2004). It helps people to open their hearts and minds to the experiences of others, to acknowledge their wisdom and understand their resources, strengths and needs (Reed and Koliba, 1995). Through reflections, teachers take the responsibility of their own learning and become critical to their own beliefs and teaching (Hamlin, 2004). On the other hand, unless teachers engage in critical reflection and ongoing discovery they stay trapped in unexamined judgments, interpretations, assumptions, and expectations (Larrivee, 2000). Functioning as a reflective practitioner not only requires specific skills but also specific attitudes (Broeder & Stokmans, 2012).

Hence, as presented above, throughout literature the term reflection and by extension, reflective practice is being used to describe practices ranging from analyzing aspects of teaching-learning process to considering the ethical, social and political implications of teaching practice; the practitioner being central to the learning process.

### ***Reflection and Teacher Education***

The need to prepare professionals who will be reflective practitioners has gained wide acceptance and the concept of reflection has been widely used in teaching and teacher education. Reflective teaching forms an important component of teacher education curriculum and is considered to be significant for authentic, valuable and continuous professional development of teachers.

As mentioned above preparing teachers for reflective teaching has been the goal of many teacher education programmes, but how each of these conceptualise the meaning of reflection and reflective practice within teacher professional development may differ. It may also differ on how a particular programme fosters reflection in student teachers. Reflection in education is not just commonsense self-indulgent thinking but here we take it a step further and reflect on our actions and make plans to do things differently. It is much more deliberate, purposeful, requires linking theory and practice and about change. In this particular article the author's focus on reflection comes through bridging theory-practice gap, understanding of self and others, analysing linkages between education and the larger society in terms of inherent values, ideologies, power relations and acceptance of multiple perspectives and so forth.

The National Curriculum Framework (NCF) envisions that schools should be places where "children and teacher share and reflect on their individual and collective experience without fear of judgement" (NCF 2005, p 24). The National

Curriculum Framework for Teacher Education (NCFTE) envisages humanistic and liberal teacher education programmes with reflective practices as the central objective. Its ultimate aim is to prepare humane teachers who are thinking professionals. It envisions that, “Teacher education programmes at all stages should provide opportunities to the would-be teachers for understanding the self and others, develop sensibilities, the ability for self-analysis and the capacity to reflect” (NCFTE 2009, p. 64).

However, NCFTE acknowledges the limitation that current teacher education programmes provide little scope for student teachers to reflect on their experiences. Despite the enormous role and importance of reflection in teacher development, teachers seem unable to engage effectively in reflective practices. As per Nikolou-Walker and Garnett (2004), the concept of reflection is confusing for teachers and it takes time for teachers to understand the process and get used to the practice. Further, the spirit of Right to Education cannot be implemented without teacher empowerment.

According to Batra, NCF evades how can a teacher, who has not been through such a process herself, inculcate critical thinking and meaning making among children (the aim of the NCF). She suggests that in order to demystify the dominant culture, it is important for teachers to develop a critical social perspective (Batra, 2005). Teachers, who develop an appreciation of social realities, are able to confront their beliefs and supposedly develop deeper knowledge and reflective understanding.

Just as there are multiple interpretations of reflection, similarly educators debate the most appropriate and effective ways of promoting novices’ reflective attitudes. Most teacher education curricula are premised on the idea that after acquiring knowledge of subject matter, student trainees will be able to apply this automatically to their teaching (Lewin & Stuart, 2003 cited in Batra, 2005). In actuality, this cannot take place on its own unless student trainees are provided with meaningful ‘educative’ experiences necessary to create interface between theoretical concepts/frameworks and practice. This necessitates ‘experiencing’ the real, larger social realities and engaging in reflection on these experiences. The spaces for such opportunities should form an essential part of the design of any teacher education programme and within each area of study. This involves “positioning of areas of study in a manner that allows an easy flow from experience to theory and further to field experience” (Batra, 2009). The manner in which learning tasks and the learning environment for student teachers are structured facilitates the preparation of teachers who are reflective about their work.

One strategy to make student-teachers, ‘reflective’ is to provide them a

stimulating environment by taking them on field visits. Field based assignments help the student teachers to establish connections between different courses under study. Through these, they are able to construct meanings through interdisciplinary and scientific ways of understandings. Facts are not seen as isolated tit-bits of information but are situated in a larger whole, which is much more meaningful and coherent. As a B.El.Ed faculty, in the following part of the paper I shares insights from one such exposure visit. The data is based on the reflections (both written and verbal) shared by the B.El.Ed IVth year student-teachers on an exposure visit. It tries to highlight how field visits can be used as a platform to develop inter-linkages among various subjects under study as well as develop reflective learning in student teachers.

### ***Field Exposures as Opportunities for 'Reflection'***

As stated in the earlier sections, to develop reflective thinking in pre-service teachers, it is important to expose them to opportunities where guided and deliberate reflective thinking can take place. In this direction, the design of the B.El.Ed programme ensures provision of learning spaces to develop connections through a mix of practicum and field based units of theoretical study. Given the importance of experiential learning in reflective teaching, most practicum are structured and supervised to support student teachers to learn effectively from an array of experiences-both in schools as well in community. Assistance is also extended to help them reflect upon these experiences. Here, reflection is not seen as an end in itself, but a process of becoming a reflective practitioner and inculcating a 'culture of reflection' becomes the goal of all reflective exercises. The programme acknowledges the significance of 'reflective thinking' and in a bid to help student teachers become reflective teachers and human beings, courses such as Self-Development Workshops and Theatre become an integral part of the programme. Throughout the programme, theories that help understand the learner and the larger socio-cultural, political, economic, familial and personal 'contexts' in which, the learner grows up are discussed.

### ***Brief Background of the Visit***

The Department of Elementary Education (B.El.Ed), Mata Sundri College for Women in collaboration with Nehru Memorial Museum and Library (NMML), under the Yuva-Yatra programme of NMML organised an Exposure Visit for the B.El.Ed IV Year students in 2011. Yuva-Yatra is a rural exposure programme which mandates to provide first-hand experience to urban youth through exposure to rural lifestyles in different parts of the country and to address critical issues like sustainable development, livelihoods, environments etc. This Yuva Yatra was planned to Tehri Garhwal with 'Beej-Bachao Andolan' based



community group working on farmer's rights, sustainable agriculture, forest regeneration and so forth.

The field visit had components like visiting village communities and organic farms, meetings with local youth leaders, engaging with village schools etc. The emphasis was to make this visit useful for young student teachers so that it could provide them with an opportunity to work with rural community and transform their experience into teaching at schools. It was envisioned that this experiential learning will help student teachers to draw linkages between theory and practice, understand self and others, analyse relationships between education and the larger society and so forth.

In the next section insights based on the written and oral reflections shared by the participants during the trip are shared.

#### ***Student teachers' Reflections during the Field Exposure***

The participants regularly wrote their reflections and learnings throughout the visit. These reflections were not written for evaluation purpose but only as an exercise to encourage reflective thinking—a value that must be inculcated in young teachers. The following points that emerged from the same substantiate that field visits are powerful enough to provide spaces for reflection.

#### ***Bridging Theory-Practice Gap: Analysing Linkages between Education and Society***

As the student teachers got exposed to the people who got affected by the construction of the Dam, they understood government policies through an objective lens. They critically thought and analysed the consequences of these on people's lives. They reported that as read in textual sources, they thought that as dams generate electricity, they bring prosperity and development for a particular area in which they are constructed. But it was only after coming to Tehri that they were able to understand the flipside of it—how more than 150 villages got submerged in the dam and another set of villages seemed on the verge of submersion. As reported by the community, people lost their ancestral lands, their relatives and social networks got affected as some of the village men were given lands in inaccessible locations; trade got affected and people were not given right compensations, landless workers who used to sow tomatoes along the river got displaced and were left with no source of livelihood; the government could not take stock of the animals and birds that used to inhabit these areas; counting the cattle and animals who got submerged and died was difficult; monkeys who used to live in these areas were now intruding into people's territories; use of dynamites while making the dam has eroded the soil of the area and so forth. Here, the students listened to people's voices and were

able to understand the ecological and sociological fallouts of any policy. They also understood the governmental constraints in dealing with all these challenges. So they were able to learn through interfaces and bridged theories with practical realities.

Furthermore, the participants conducted a village survey, which helped to bring out interconnections between the various aspects under study-socio-political, economic, education, financial and so forth. The role of women stood out as especially important as they work hard all through the day-may it be on bringing firewood, doing household chores, grazing the cattle, bringing water, working on the fields or so forth.

Such opportunities helped student teachers to revisit concepts (such as 'Vikas') and challenge the seemingly sacrosanct projected social realities. They were able to engage in deep dialogue and critically analysed the situations. They learnt the grassroot level realities and questioned the 'received' ideas, institutions and practices. This enabled them to understand how society is structured, managed and governed in terms of inherent values, ideologies and power relations. They also examined the forces that transform and redirect society in various ways. According to Kolb and Fry, effective learning entails the possession of concrete experience, reflective observation and abstract conceptualisation and active experimentation in the learner (Kolb and Fry, 1975, 1984). Exposures like this provide scope for the above to happen.

*"..Bahut padha hai chipko andolan ke bare main parantu use jude jeevant logo se milna aur itihaas ki hi zabaan se sunna, ek sunehra pal tha. Prerit to hum hote hain, jab baatein sunte hai lekin aaj mujhe laga ki wo dil se dil tak wali baat hai iss wartalaap mein. Aandolan ka arth bhi aaj mere liye thoda badal gaya, joki wartalaap mein hua..".*

– Student 14

Students often read about people's movements in isolation and are hence unable to relate to it. In case of urban students, they feel these movements are rare and distant and divorced from their everyday realities. They see leaders of these movements as people who are different from the rest of the population. But when they met them in person and understood that 'these' are real persons, who had courage, motivation, selflessness and willingness to work for others, they got motivated to instil these values in themselves also. When the student teachers interacted with local leaders and got to know about community participation and the community taking full responsibility for regeneration of the forest-they were able to draw parallels with their own city life. They generated critical arguments regarding how much they contribute to their own city and how these people are protecting their environment.

Kaur

Further, they were able to draw linkages between what they study in their curriculum and actual practical realities. This is evident from the following excerpt–

*“...hum apne chauthe varsh ke pathyakram mein Gender and schooling ke tehet feminism padh rahe hai aur maine adhiktar western feminists ke bare mein padha hai. Bhartiye feminists ke bare mein bhi padha hai par sudesha ji mujhe iska sateek udhahran lagi. Apni baat ko sabhi logo ke samne rakhna, nariyon ke adhikaaro ke liye ladna aur sabse acchi baat adhikaar se pehle kartavya ko nibhana, koi sudesha ji se seekho...”.*

– Student 17

From the above reflection, it stands clear that they were able to draw parallels between what they study and how it finds expressions in from real life. They were able to acknowledge women's participation in people's struggles. The course on 'Gender and Schooling' and feminist theories seemed much more real and situated in the Indian scenario. Student teachers were able to critically examine gender inequalities in society using feminist theoretical frameworks. National Position paper also focuses on making perspective of women integral to any historical or contemporary concern (National Focus group on Teaching of Social Sciences, 2005). Hence how gender can be taught through integrated approach came to fore.

#### ***Opportunity for Understanding Self and Others***

Self-reflection is not restricted to any activity directed from the outside, but becomes an integral part of one's own thinking-learning and meaning-making process. Through the following excerpts it can be clearly seen how student teachers reflectively thought through the exposure. One can appreciate 'self-awareness' and knowledge of one's 'being' and 'becoming' that came to light.

*“....doosre din jab main pahad ki sankari aur choti sadko par chal rahi thi to mujhe aisa laga ki hamara jeevan bhi aisa hi hai. Humein har kadam par savdhani aur dherya ki aavyashakta hai...”.*

– Student 17

*“....main pehli baar akele ghar se door reh payi. Maine apna saara kaam bhi khud hi kiya, jaise apna bhaari saaman uthana aadi. Isse mujhe yeh pata chala ki sharirik aur bhavnatmak, dono roop se main bahut strong hoon...”.*

– Student 8

*“.....kehne ko to bahut kuch hai parantu wo sab meri sway ki soch ko disha dene ke liye. Jise main akele mein apne liye hi sochna chahti hoon...iske bare mein aur aage vistaar se sochna chahti hoon...”.*

– Student 11

As evident from above comments, the exposure visit served as a platform to explore one's own strengths, potentials and limitations. It also brought-forth the need for internal dialogue and space for oneself in today's fast-paced life. According to Rogers, experiential learning is equivalent to personal change and self-growth (Rogers, 1969).

*“...shayad meri zindagi ke pichle do din, sabse zyada yadgaar ho. Mujhe aisa lagta hai ki meri wo shahari dikhawati zindagi mujhe mere liye, meri pasand ke liye samay hi nahin de payi. Par pichle guzre hue do din bahut sari cheezein samajhne, unme sambandh sthapit karne, vatavaran ko karreb se janne, saath hi mujhe mere bare mein batane main bahut sahayak rahe hai...kamm lagne wala samay, yahan paryapt lag raha hai. Saath hi kary karte samay baar baar ghadi dekhne ki avyashakta nahin hui aur iska karan shayad, mera dil se karya karna hai, jisme kary karte karte weh sway hi nirdharit samay par samapt ho jata hai...”.*

– Student 19

In the above excerpt, the participant points to the need to understand oneself, critique one's lifestyle and plan for oneself. She was also able to reflect that when we are deeply engaged in any work we tend to do it well.

*“...agar main apne vyavhaar mein parivartan lane ki baat karu to jo main dilli jate hi sabse pehle karne wali hoon, wo hai time utilization. Dilli mein bina padhe, bina ghar ka koi kaam kiye apna din barbaad kar deti hoon aur mera kaam aise hi padha rehta hai...yahan maine sabse mahatvapoor baat jo seekhi wo yeh ki hum ek din mein itne saare kaam kar lete hain. Aaram bhi kar sakte hai aur phir bhi sfurti rehti hai shareer mein.”*

– Student 10

In the above excerpt, one can see the participant engaging in a meta-cognitive self evaluation and understanding the dynamics of working effectively. She pointed to the fact that when we are completely engrossed in the task, then our self-efficacy increases (Bandura, 1962). When all faculties of the mind and body are involved in the task, it is much more motivating for the learner to sustain the activity. The natural flow of the task ensures self-discipline on part of the learner. Here, the need for time-management is also highlighted.

*“...itne bade samuh ke saath rehna, tatha zimmedariyo ke saath rehna, ek sukad aur gyanwardhak ehsaas hai...”.*

– Student 4

*“...yahan aane se pehle yeh tha ki wahan ke pahad kaise honge. Aane*

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*se pehle yeh lag raha tha, ki wahan theek se reh payenge ya nahin, wahan par sardi kitni hogi. Mann mein bahut saare sawal bhi aa rahe the. Lekin yahan aakar bahut accha laga ki sach mein batane ke liya shabd bhi nahin hai....sab ke saath rehna, khana, sona, ek-dosre ki madad karna, group mein rehna, bahut accha laga.....”.*

– Student 11

Such trips expose people to nurture life skills such as preparation for group-life. Participants nurture soft skills like tolerance, helping each other in a group, caring for each other, sharing responsibility and so forth. It also forces one to come out of one's comfort zone and push one's limits.

*“...NCF 2005 mein ek uddesh paryavaran addhyan ke dauraan likha hai ki vidyarthi ko vatavaran ke prati samvedansheel karna, lekin yahan aakar mujhe laga ki abhi to main khud hi purntaya samvedansheel nahin hui. Ab unn sabhi paksho ko sachne ki aavshakta hai...”.*

– Student 4

There is a need to sensitise the coming generations to care for the environment. But here, the above student teacher herself acknowledged the need to sensitise teachers and accepted that she herself has to become more sensitive. Hence, field exposures provide space for inner dialogue and reflection.

#### ***Acceptance of Multiple Perspectives: Nurturing Sensitivity and Respect for Various forms of life***

Some of the student teachers reflected that despite being from a village, they were completely divorced from village life. They did not regard and respect village life but this trip sensitised them to respect the roles and responsibilities that villages and rural India plays in our 'urbanised' lives. They were able to draw meaningful connections between rural and urban India. Perhaps this will catalyse a positive outlook, behaviour and attitudes in them.

*“...Main swayam gaon se hoon, parantu mera mann hamesha shehar mein rehne ka karta tha. Main chahti thi ki main bas shehar mein sab sukh suvidhaaon ke saath rahu, taki kahin jana ho to yatayat suvidha, samaan kharidna ho to bazaar ki suvidha, ghoomne ke liye mall aur cinema ghar ki suvidha ho. Mujhe kabhi gaon, khet, kheto ki sabziyaan wa phal, gaayein-bhainso ke dhoodh ka mahtva nahin laga. Lagta tha ki yeh to hum khareed bhi sakte hain, isme gaon mein rehkar pareshaan hone ki kya zaroorat hai. Kabhi organic khane ki mehatvata ko nahin samjha. Hamesha shehar mein rehna hi accha aur zaroori samajhati thi.... Parantu yahan aane ke baad gaon ke mahtva ko aur kareeb se*

*jana, samjha ki har cheez apne aap mein anoothi hai-hariyaali, khet, janwar aur bina shor-gul ka jeevan. Garv mehsoos hota hai ki main gaon se hoon aur mujhe iss tarah ka jeevan mila hai. Bazaar, yatayaat, manorajan ke sadhan hi sukh ke sadhan nahin hai-asli sukh to wo hai jahan apne apko jaanane, samjhane ka, shanti ke saath rehane ka mauka mile. Jahaan sukoon mile. Yahan aane par main har chhoti chhoti cheez ke mahatva ko samajhane lagi....”.*

– Student 1

A theme of concern today is that people from urbanised settings are largely getting alienated from their habitat. For the urban child and sometimes teachers, the 'environment' seems an alien concept. They are unable to find the missing link as to 'How they are linked to the entire environment and are affected by the rapid changes in the macro environment'. Understanding the different facets of environment and the fact that every action has a consequence is a concept that learners find difficult to understand. There is a need to equip them with skills appropriate for a rapidly changing world (Position paper on Habitat and Learning, 2005). Exposures like these help see such causal connections, build a vision, respect and sensitivity towards rural life. One could see student teachers acknowledge rural India as much a partner in nation building and also in urban India.

Understanding the world happens best through first hand experiences and direct engagement with the environment (Dewey, 1938). Actual observations of ecological systems are of vital importance in becoming acquainted with the empirical facts about environment. The National Curriculum Framework strongly proposed that sensorial and practical activities should form the basis for learning and curriculum content (National Curriculum Framework, 2005).

*“... hum logo ke liye jungle kitna mahatv rakhta hai. Pehle mujhe nahin pata tha ki jungle ki kya zaroorat hai.agar yeh anubhav nahin milta to shayad jungle ke mahatv ko kabhi samajh nahin pati. Aksar TV mein Discovery Channel mein jungle tatha prakriti ke bare mein batate hai. Isse kuch seekhne ko mila par jo pratyaksha roop se jo anubhav mila hai, wo sabse mazboot seekh mili hai. Yeh seekh kabhi nahin bhulegi.....”.*

– Student 12

This exposure provided first-hand experiences to student teachers and they were able to contrast this place with their own villages. They were able to appreciate the diversity and multi-plurality of the Indian culture. This brought awareness about social diversity, which is of special significance for teaching tolerance and inculcating attitudes of peace in multicultural contexts.

### ***Conclusions***

It flows from the section above that exposure visits provide student teachers with opportunities to establish meaningful linkages and critically reflect on theoretical frameworks and methodological approaches, appreciate social contexts and develop sensitivity and understanding towards life in relation to environmental concerns. It also questions our role in the development process and gives spaces for self discovery. Reflection is much deeper when supported by hands-on experiences and thus field visits provide spaces for connecting with oneself and social issues. This has implications for teaching learning situations. It builds a culture of self-reflection among teachers. Therefore, I suggest that such initiatives should be encouraged and should become an integral part of all teacher-education programmes.

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## **Influence of the Practicum of the B.Ed. Course of West Bengal in Developing Favourable Attitude of Secondary School Teachers towards Inclusive Education**

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### ***Abstract***

*This paper remains a humble attempt at exploring the efficacy of the prevalent B.Ed. Course on the teachers of West Bengal in developing a favourable attitude to inclusive education. The study has been conducted on 400 secondary school teachers, both trained and untrained, from ten districts of east, west, and north and southern parts of West Bengal. The findings of the study reveal significant factors like personal experience with children with special needs as crucial that must be taken cognizance for developing teachers with a favourable attitude towards education of the children with special needs in regular classrooms. The study points out the importance of such factors that may develop teachers through a revised form of the Practicum that allows trainees an exposure to children with special needs and a revised evaluation system that assesses the teacher's competencies of addressing diversity in the class.*

**Key Words:** Inclusive Education, Teacher Education, Attitude, Practice.

### ***Introduction***

With the major changes proposed for quality enhancement in teacher education, the B.Ed. course is about to undergo major curricular changes in West Bengal, but how far the prime concern of developing teachers for inclusive settings will be taken into cognizance and in what form remains a largely gray area that needs to be explored. Increase in duration with scant regard for revision in the prevalent nature of practicum and evaluation in West Bengal is unlikely to ensure quality in preparation of teachers fit for addressing diversity in modern society. The present system followed in West Bengal has prepared teachers for years now with inclusive Education” as a theoretical part of the curriculum, but how far it has succeeded in developing confident teachers with a favourable attitude towards the children with special needs inducted into their regular classrooms under RTE, remains a gray area till date. Inclusive education has increasingly become a focus of debate in discussions about the development of educational

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policy and practice around the world (Farrell and Ainscow, 2002; Lindsay, 2007). Scholars like Pijl et al., (1997) have described inclusive education as a 'global agenda'. Inclusive education, therefore, is now seen as central to human rights and equal opportunities and a priority policy objective of liberal democracies including India where Right to Education is constitutionalized. The Right to Education Act 2009 has granted the issue a central significance and inclusion has emerged as 'an appropriate philosophy and a relevant framework for restructuring education' (Thomas et al., 1998, p.4), with attempts at transforming the mainstream to enhance its capacity for responding to diverse learners (Ainscow, 1999). However, what emerges as a crisis largely unaddressed till date is the development or preparation of teachers' attitude in creating a truly inclusive class in a mainstream school. The Ministry of Human Resource Development, Govt. of India, too voices the emerging concern with the current status of teacher education and the urgent need for "the changes in the teacher education curriculum from the perspective of inclusion of children with special needs (CWSN)". The nature and adequacy of the training imparted, remain problematic and must come under the scanner for effective inclusion in the educational institutes of India, specifically West Bengal. Most of the children with special needs, due to prolonged social inequity, privations and handicaps subsist in less conspicuous and less verbalized mode of existence and the teachers' role in aiding their sudden exposure to the mainstream world of cognitive, articulatory and information explosion to be "included", is crucial. The teachers exposed to the traditional B.Ed. curriculum and the practicum in West Bengal reveals a colossal knowledge gap. They are often apprehensive about such inclusive classes and of the RTE Act 2009 and reportedly lack confidence in handling children with special needs. The B.Ed. course in the prevalent form in West Bengal offers only a theoretical paper on special and inclusive education, which is believed to be sufficient to train teachers for effective inclusive practices in real life inclusive classes. Most universities in West Bengal like Calcutta University and West Bengal State University have made this paper on Special Education compulsory instead of its earlier optional status, whereas it remains an optional paper in most other universities like Jadavpur University. The paper proposes to explore how far the B.Ed Course of West Bengal is relevant or adequate in generating in the teachers an attitude conducive to inclusive education. There are a few teachers with B.Ed. degree in Special Education in some schools of West Bengal, but they were left out of the ambit of this study since the scope of this study is limited to the efficacy of the regular B.Ed Course of the state in fostering favourable attitude among the teachers towards education of challenged children in regular classrooms.

***Objectives of the Study***

- i. To find out whether there is any significant difference in attitude towards inclusive education between teachers with B.Ed.with experience of practice teaching under supervision and those without B.Ed.and thus without any experience of practice teaching under supervision.
- ii. To find out whether there is any significant difference in attitude towards inclusive education between trained urban and rural teachers who have undertaken practice teaching under supervision.
- iii. To find out whether there is any significant difference in attitude towards inclusive education between trained male and female teachers who have undertaken practice teaching under supervision.
- iv. To find out whether there is any significant difference in attitude towards inclusive education between teachers who had done practice teaching for twenty days or more and those who got only a week for practice teaching.
- v. To find out whether the supervision done during the practice teaching sessions included advice on practical modalities of teaching children with special needs.
- vi. To find out whether the supervision done during the practice teaching sessions influenced the trainees' attitude towards teaching children with special needs.
- vii. To find out whether there is any relation between a teacher's personal experience with challenged children and his/her favourable attitude towards inclusive education, irrespective his/her B.Ed. degree.

***Hypotheses***

- H<sub>01</sub>:** There is no significant difference between teachers with experience of practice teaching under supervision and those without B.Ed and hence without experience of practice teaching under supervision.
- H<sub>02</sub>:** There is no significant difference in attitude towards inclusive education between trained urban and rural teachers who have done practice teaching under supervision during their B.Ed.
- H<sub>03</sub>:** There is no significant difference in attitude towards inclusive education between teachers who had done practice teaching for twenty days or more and those who got only a week for practice teaching.
- H<sub>04</sub>:** There is no significant difference in attitude towards inclusive education between trained teachers who had been supervised daily and those who had been supervised at intervals during their practice teaching sessions.

- H<sub>05</sub>:** There is no significant difference in attitude towards inclusive education between trained teachers who had found children with special needs and those who had not found children with special needs in their classes during their practice teaching sessions.
- H<sub>06</sub>:** There is no relation between a teacher's personal experience with challenged children and his/her favourable attitude towards inclusive education, irrespective his/her B.Ed. degree.

### ***Method***

#### ***Sample***

400 secondary school teachers, consisting of both trained and untrained teachers were selected randomly from secondary schools from Kolkata, North 24 Parganas, South 24 Parganas, Hoogly and Howrah districts in the southeastern part of West Bengal, Purulia and Bankura in the Western part of the state, and Malda, Siliguri and Jaipauri in the northern part of the state. It was not possible to cover each and every district of the state and so representative districts from east, south, west and northern parts were selected for the study.

#### ***Tool and Technique***

A standardized tool TASTIE –SA [Teacher Attitude Scale towards Inclusive Education] developed by Sood & Anand of Harprasad Institute of Behavioral Studies was adopted for the survey. Certain modifications of the scale were made on the basis of need of the present study after in-depth analysis of previous research studies and critical discussions with experts. The tool thus modified had 48 questions with two options 'yes' and 'no'. Values of 2 and 1 were ascribed to the options 'yes' and 'no' respectively. The five broad areas of the attitude scale so developed are:

- i. Psychological/Behavioral Aspects of Inclusive Education: This comprised of statements reflecting predispositions of teachers with respect to influence of inclusive education on the pupils. These are mainly related to the perceived effect of various inclusive education strategies on students' cognitive and affective characteristics.
- ii. Social and Parents-Related Aspects of Inclusive Education: This area includes the statements concerning teachers' attitude towards influence of inclusive education on development of social values among school children. It also covers statements related to teachers' perception of social and parental support for promoting inclusive education in general educational institutions.
- iii. Personal Experience and Exposure related Aspects of Inclusive Education: This area includes statements concerning the teachers' personal experience and exposure to challenged children.

- iv. Curricular and Co-curricular Aspects of Inclusive Education: This area has statements related to teachers' perception about teaching methodologies adopted to impart education in inclusive settings, and various curricular and co-curricular activities organized in schools by them to promote inclusive education.
- v. Administrative Aspects of Inclusive Education: This area has statements that reflect the teachers' disposition towards various governmental provisions, infrastructural facilities, provision for teacher development/training as well as commitment of administrative machinery for promoting inclusive education in schools.

The modified self-administering and self-reporting questionnaire with these aspects was a two point scale. The questions were translated into Bengali for the benefit of the teachers and a few questions were added. The tool was tested for reliability and validity. The preliminary draft of the attitude scale was administered on a sample of 250 secondary school teachers of Kolkata and suburbs in West Bengal. The selection of these teachers was made from 35 secondary and higher secondary schools by employing multistage stratified proportionate sampling technique.

*Reliability:* The reliability of the scale was established by– (a) Test-retest Method and (b) Internal Consistency of the scale. The sample of 250 secondary school teachers, consisting of both male and female school teachers was tested twice with a gap of two months between testing and retesting. The product moment correlation 'r', that is the reliability index, was 0.82. Thus the scale was found to be reliable. The internal consistency of the scale was judged by computing the coefficients of correlation between total score on the scale and score on each of the five areas of the scale. The values so deducted established the reliability of the scale.

*Validity:* The validity of the scale was ascertained on the basis of content validity, cross validity, Item validity and Intrinsic validity. The aspects of inclusive education used in the modified scale has been substantially supported by literature available in the area of inclusive education and the views and suggestions sought from various experts at the time of preparing preliminary draft of the scale. Thus the scale can be said to possess adequate content validity.

Each sample of the sample teachers selected for carrying out the item analysis was different entirely from one another in order to avoid the chance of errors of carry over effect and thus it may be said that cross validity of the scale has been ensured.

Item validity was established since only those items with t-value of 1.75 or above were retained in the final form of the scale. The intrinsic validity

for the scale was ascertained by ensuring internal consistency of the scale through product moment correlation method. The test retest reliability coefficient of 0.82 established the intrinsic validity of the scale.

**Procedure of Data Collection**

The tool was applied in person and also sent by mail to teachers in some cases. Sufficient time was given to the teachers before collecting their feedback so that the responses were well thought over and not perfunctory. Questions were explained in cases where it was needed by the respondents.

**Analysis of data**

Table 1 shows analysis of data obtained to show whether there is any influence of B.Ed degree [and hence with exposure to supervised practice teaching] on a teacher’s attitude towards inclusive education.

**Table 1 : Attitude of Teachers with B.Ed. degree and Teachers without B.Ed. degree**

	Teachers with B.Ed. degree	Teachers without B.Ed. degree	Total
Teachers with favourable attitude	32	20	52
Teachers with unfavorable attitude	259	89	348
Total	291	109	400

$\chi^2$  Test was applied to test null hypothesis at 5% level of significance.

$\chi^2$  value, computed based on the above data after applying Yate’s correction for continuity

$$= \left[ \frac{|32 \times 89 - 20 \times 259| - 400/2}{2} \right]^2 \times 400 / (32 + 20) \times (259+89) \times (32 + 259) \times (20+89)$$

$$= 3.790 \text{ (rounded to 3 decimal places)}$$

Tabulated value of  $\chi^2$  with Degrees of Freedom 1, at  $\alpha$ -level 0.05 = 3.841

Since the computed  $\chi^2$  value is less than the tabulated value at 5% level, the null hypothesis is accepted and we have no reason to believe that B.Ed. degree with planned supervised practice teaching has any influence on a teacher’s attitude towards inclusive education. Thus hypothesis  $H_{01}$  is accepted.

Table 2 shows analysis of data obtained to show whether there is any significant difference between trained urban and rural teachers [having undergone supervised practice teaching] in their attitude towards inclusive education.

**Table 2 : Trained Urban and Rural Teachers in their attitude towards inclusive Education**

	Urban teachers with experience of Practice teaching under supervision	Rural teachers with experience of Practice teaching under supervision	Total
Teachers with favourable attitude	66	29	95
Teachers with unfavorable attitude	79	117	196
Total	145	146	291

$\chi^2$  Test was applied to test null hypothesis that 5% level of significance.

$\chi^2$  value, computed based on the above data after applying Yate's correction for continuity

$$= \frac{[ \{ |66 \times 117 - 29 \times 79| - 291/2 \}^2 \times 291 ]}{(66+29) \times (79+117) \times (66+79) \times (29+117)}$$

$$= 0.003 \text{ (rounded to 3 decimal places)}$$

Tabulated value of  $\chi^2$  with Degrees of Freedom 1, at  $\alpha$ -level 0.05 = 3.841

Since the computed  $\chi^2$  value is less than the tabulated value at 5% level, the null hypothesis is accepted and we have no reason to believe that area has any influence on a teacher's attitude towards inclusive education. Hypothesis  $H_{02}$  is thus accepted.

Table 3 shows classification of data obtained from the survey questionnaire to show whether there is any significant difference between male and female teachers in their attitude towards inclusive education.

**Table 3 : Male and Female Teachers in their attitude towards inclusive Education**

	Male teachers with experience of Practice teaching under supervision	Female teachers with experience of Practice teaching under supervision	Total
Teachers with favourable attitude	28	24	52
Teachers with unfavorable attitude	151	88	239
Total	179	112	291

$\chi^2$  Test was applied to test null hypothesis that 5% level of significance.

$\chi^2$  value, computed based on the above data after applying Yate's correction for continuity

$$= \left[ \frac{|28 \times 88 - 24 \times 151| - 291/2}{2 \times 291} \right]^2 \times \frac{291}{(28 + 24) \times (151 + 88) \times (28 + 151) \times (24 + 88)}$$

$$= 0.029 \text{ (rounded to 3 decimal places)}$$

Tabulated value of  $\chi^2$  with Degrees of Freedom 1, at  $\alpha$ -level 0.05 = 3.841

Since the computed  $\chi^2$  value is less than the tabulated value at 5% level, the null hypothesis is accepted and we have no reason to believe that gender has any influence on a teacher's attitude towards inclusive education. Hypothesis  $H_{03}$  is thus accepted.

Table 4 exhibits classification of data obtained from survey to show whether there is any significant influence of workshops on inclusive education for in-service teachers conducted by Sarva Siksha Mission on the teachers' attitude towards education of challenged children in their regular classrooms.

**Table 4 : Teachers attitude according to their attendance of days in Practice Teaching**

	Teachers with 20 or more days of practice teaching	Teachers with 10 days or less of practice teaching	Total
Teachers with favourable attitude	29	23	52
Teachers with unfavorable attitude	123	116	239
Total	152	139	291

$\chi^2$  Test was applied to test null hypothesis that 5% level of significance.

$\chi^2$  value, computed based on the above data after applying Yate's correction for continuity

$$= \left[ \frac{|29 \times 116 - 23 \times 123| - 291/2}{2 \times 291} \right]^2 \times \frac{291}{(29 + 23) \times (123 + 116) \times (29 + 123) \times (23 + 116)}$$

$$= 0.168 \text{ (rounded to 3 decimal places)}$$

Tabulated value of  $\chi^2$  with Degrees of Freedom 1, at  $\alpha$ -level 0.05 = 3.841

Since the computed  $\chi^2$  value is less than the tabulated value at 5% level, the null hypothesis is accepted and we have no reason to believe that SSA



Training has any influence on a teacher's attitude towards inclusive education. Thus hypothesis  $H_{04}$  is accepted.

Table 5 shows classification of data collected from survey questionnaire to find out whether there is any significant difference in attitude of those trained in-service teachers who had studied the Special Education Paper which is their only exposure to inclusive education on the present teacher education system of West Bengal, in their B.Ed. course and those trained in service teachers who had not studied this paper, the paper being optional in their university that conducts the B.Ed. Course.

**Table 5 : Attitude of Trained in-service Teachers**

	Teachers who did practice teaching under daily supervision	Teachers who had supervision at intervals during practice teaching	Total
Teachers with favourable attitude	21	11	32
Teachers with unfavorable attitude	123	136	259
Total	144	147	291

$\chi^2$  Test was applied to test null hypothesis that 5% level of significance.

$\chi^2$  value, computed based on the above data after applying Yate's correction for continuity = 3.747 (rounded to 3 decimal places)

Tabulated value of  $\chi^2$  with Degrees of Freedom 1, at  $\alpha$ -level 0.05 = 3.841

Since the computed  $\chi^2$  value is less than the tabulated value at 5% level, the null hypothesis is accepted and it may be inferred that the Special Paper does not have any influence on a teacher's favourable attitude towards education of challenged children in their regular classrooms.

Table 6 shows how individual experience with children with special needs influences a teacher's perception, understanding of and attitude towards inclusive education irrespective of his or her formal teacher education degree in West Bengal. Only those teachers with a favourable attitude to inclusive education were taken for the analysis to find out the impact of personal experience behind this positive attitude and to see how far the formal teacher education program in form of the prevalent B.Ed. course in West Bengal has any influence in developing a favourable attitude towards inclusive education.

An Analysis of Variance (ANOVA) was conducted to examine whether personal experience with differently abled children, and having B.Ed degree, has any influence on a teacher's favourable attitude towards inclusive education. 52 teachers, whose survey response have been 'favourable', were categorized as follows:-

	Teachers with personal experience	Teachers without personal experience	Total
Teachers with B.Ed.	25	7	32
Teachers without B.Ed.	18	2	20
Total	43	9	52

ANOVA calculations are as follows:-

Sum of squares of raw values = 1002

Correction Factor =  $(52)^2 / (2 \times 2) = 676$

Total SS (Sum of Square) =  $1002 - 676 = 326$

SS due to Degree =  $[(32)^2 + (20)^2] / 2 - 676 = 36$

SS due to Personal Experience =  $[(43)^2 + (9)^2] / 2 - 676 = 289$

SSE (Sum of Squares due to Error) =  $326 - 36 - 289 = 1$

F values are computed as follows:

Factors	Degrees of Freedom	Sum of Square	Mean Square	Observed F
B.Ed. Degree	1	36	36	36.00
Personal Experience	1	289	289	289.00
Error	1	1	1	

Tabulated value of F with Degrees of Freedom 1,1 at  $\alpha$ -level 0.05 = 161.4

Thus we observe that:

F value for the factor 'B.Ed. Degree' < tabulated F value.

F value for the factor 'Personal Experience' > tabulated F value.

Hence the Analysis of Variance indicates that personal experience with differently abled children has a positive influence on a teacher's favourable attitude towards inclusive education. But no such conclusion can be drawn for B.Ed degree.

It was found that there is no significant difference between trained and untrained teachers in their attitude to inclusion of children with special needs in regular classes. It was also found that there is no significant difference between teachers who had not studied the Special Education paper, that being optional in their B.Ed course and those who had studied the paper as a compulsory subject in their B.Ed. Course in their attitude to inclusion of children with special needs in regular classes.

### *Discussion and Future Implications*

From the study conducted it is found that in the present structure of the B,Ed,Course in West Bengal, the only exposure to inclusive education is through a paper on Special education that carries 50 marks in some universities and 100 in some others. Again in some other universities this lone paper is optional and hence all trainees are not exposed to it. There is no scope of practice teaching in essentially inclusive settings as all schools in the state do not have challenged children and the prime concern while sending trainees to schools for Practice teaching remains the school's proximity to the teacher education institute, with absolutely no concern for the fact that they may not get to teach in inclusive settings. There is also scant scope for systematic workshops on inclusive education by experts as a part of the B.Ed. Course or visit to inclusive institutes to observe strategies of addressing the special needs of the challenged children. There is no scope for any collaboration between regular teacher education and special teacher education courses in the state. The practical examinations simply assess the general teaching abilities and skills of a teacher and there is absolutely no marks or assessment scheme for teaching skills needed to address diversity in inclusive classes. A trainee, therefore, even after systematic teacher education, remains in dark about inclusive settings and necessary skills and competencies. The workshops conducted by SSA too may impart some knowledge to the teachers, but fail to give them hands on experience in dealing with challenged children in regular classrooms and hence, as the study reveals, such workshops are inadequate to generate confidence and a positive attitude towards inclusive education among the in-service teachers already burdened with regular workload and pressure to finish the examination oriented syllabus on time. Gender too, as revealed by the study, is not a significant factor in this regard. What is indeed interesting is the finding that personal experience in any form is a significant factor in developing a positive or favourable attitude towards teaching children with special needs in regular classrooms. It is seen that among the teachers with favourable attitude towards inclusive education, formal B.Ed. degree is not so much a significant factor as is personal experience with such children with special needs. This finding is crucial especially when the present B.Ed. Course

in West Bengal practically has no scope of providing the trainees any form of experience in teaching in inclusive settings or providing any scope for honing skills necessary for addressing diversity in the class. The trainees are in fact granted no scope of any practical exposure to the children with special needs in the prevalent teacher education system in the state, and nor are they evaluated on their ability to teaching inclusive settings. The study reveals the significance of personal experience in developing a positive attitude towards teaching children with special needs in regular classrooms and development of true empathy instead of sympathy. Thus the findings of this study point out to the need of reconsidering the teacher education system in the state with more emphasis of planned and systematic exposure to and evaluation of skills needed to effectively address diversity in a regular classroom and to foster essentially inclusive settings. The teachers would be more confident and would be able to contribute to the development of a truly inclusive society as a necessary aftermath.

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## Inter Relationship between Self Esteem and Happiness

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### **Abstract**

*Self esteem can be described as an evaluation of one- self by the person himself on the basis of others opinion about him as well as his own assessment about his worth as an individual in the society. Happiness on the other hand means state of well-being. This paper attempts to critically investigate whether any relationship exists between happiness and self esteem. National and international journals, project reports, government documents, doctoral thesis, seminar/ conference proceedings and research articles have been consulted in this regard as secondary source of information. Various study reveals that no significant gender differences exists in self esteem in regard to parental educational level, rate of literacy among family members, father's occupation and social support.*

**Key Words:** Happiness, Self Esteem.

### **Introduction**

According to James (1890), self esteem is a product of perceived competence in domains of important aspect of mental health. This means self esteem is derived from thinking. We are good at things that have significance to us, but not those we don't personally value. Charles Cooley, a sociologist proposed that findings of self worth also stem from the 'looking glass' self concept i.e. our perception of how we appear in eyes of others. Harter (1999) opined that self esteem is often impacted more powerfully by the opinion of acquaintances than close others which means that the foundation of self esteem can be vague and ill-formed. As a social psychological construct, self-esteem is attractive because researchers have conceptualized it as an influential predictor of relevant outcomes, such as academic achievement or exercise behaviour. In addition, self-esteem has also been treated as an important outcome due to its close relation with psychological well-being. Psychologists usually regard self-esteem as an enduring personality characteristic ('trait' self-esteem). Synonyms or near-

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synonyms of self-esteem include: self-worth, self-regard, self-respect and self-integrity. Thus, self-esteem is how we value ourselves; it is how we perceive our value to the world and how valuable we think we are to others. It affects our trust in others, our relationships, our work and nearly every part of our lives. Positive self-esteem gives us the strength and flexibility to take charge of our lives and grow from our mistakes without the fear of rejection. Frey, D & Carlock, J. (2009) believes that self esteem is an interpretation of the emotional, intellectual and behavioural aspects of the self. While according to Baron & Byrne (1991) self esteem is an individual's attitude about him or herself involving self evaluation along a positive/negative dimension. Malbi & Reasoner (2000) stated that self esteem is the sense of personal significance and capability that persons correlate with their self concepts. Self-esteem is based on three essential sources: (i) messages of love, support and approval from others; (ii) specific attributes and competencies; and (iii) the way one regards these specific aspects of the self, both in comparison with others and in relation to one's ideal self. Self-esteem is also associated with depression, anxiety, motivation and general satisfaction with one's life. Given these associations, children and adolescents who lack self-esteem may be more dependent on their parents and have lower academic and vocational goals. Moreover, the belief is widespread that raising an individual's self-esteem (especially that of a child or adolescent) would be beneficial for both the individual and society as a whole. Thus, it can be said that self esteem is composed of two distinct dimensions, competence (efficacy based self-esteem) and worth (worth based self-esteem).

Webster's dictionary defines happiness as "a state of well being characterized by emotion ranging from contentment to intense joy and pleasurable or satisfying experience". Philosophers and religious thinkers often define happiness in terms of living a good life. The two components of the Greek word Eudaimonia, translate as happiness, or used in virtue ethics are 'eu' meaning well and 'daimon' meaning spirit or divinity. Sonja Lyubomirsky (2007) a researcher of positive psychology in her book, **The how of happiness**, describes happiness as "the experience of joy, contentment, or positive well-being, combined with a sense that one's life is good, meaningful, and worthwhile." Ruut Veenhoven on the other hand describes happiness as "the degree to which an individual judges the overall quality of his life-as-a-whole favourably." Jonathan Freeman affirms that "people generally agree about what they mean by happiness. It is a positive, enduring state that consists of positive feeling including both peace of mind and active pleasures or joy". According to Kesebir & Diener (2008) it is a mental state of well-being described by positive emotions ranging from contentment. Diener, et.al (1999) stated that happiness is one of the most important and major dimension of human experience and emotional life. It is a common observation



that happy person have a tendency to feel positive about themselves and those individuals who have low self value and self worth are usually miserable and unhappy (Lyubomirsky, et. al. 2005). Happiness can increase well-being, health, work performance, warmth, altruism, creative thinking and problem solving and reduce stress (Argyle, 2001). Thus, happiness can be defined as an emotional or mental state of well being. It is a living of good or flourishing life. It is an experience of joy, contentment or positive well being, combined with a sense that one's life is good, meaningful and worthwhile. It is an overall feeling of satisfaction with life that pervades and abides over longer time periods.

### ***Philosophical Perspective of Happiness***

The philosophy of happiness is an umbrella term for the various philosophical approaches in explaining the nature of happiness, as well as how to attain it. Both the classical western as well as the eastern philosophy since its inception dealt with the subject of happiness. The great western philosophers like Socrates, Aristotle, Plato, Epicurus, all tried to define the term happiness in their very own way. In the Nicomachean Ethics, Aristotle stated that happiness is the only thing that human desires for its own sake. He observed that men sought riches, or honour, or health not only for their own sake but also in order to be happy. Thus, to him happiness is an activity rather than an emotion or a state. Plato said that science (the philosophy of happiness) should be the centre of any happy society. According to Epicurus, one will feel happy when one constantly trains positive thinking. Therefore, one should think about the meaning of life and reflect it again and again towards his positive goals. Inner happiness comes only from inner peace. So, when a person calms down, inner happiness appears. According to eastern philosophy 'Ananda' (Sanskrit: आनन्द) literally means bliss or happiness. In the Hindu Vedas, Upanishads and Bhagavad Gita, 'ananda' signifies eternal bliss which accompanies the ending of the rebirth cycle. Those who renounce the fruits of their actions and submit themselves completely to the divine will, arrive at the final termination of the cyclical life process (samsara) to enjoy eternal bliss (ananda) in perfect union with the God. The tradition of seeking union with God through passionate commitment is referred to as bhakti, or devotion. Meaning of happiness as defined by different eastern philosophers are as follows: According to Sri Aurobindo, happiness is the natural state of humanity, as he mentions in his book the 'Life Divine' it is all about the delight of existence. According to the Vedanta school of Hindu philosophy, ananda is that state of sublime delight when the 'jiva' becomes free from all sins, doubts, desires, actions, pains, sufferings and also all physical and mental ordinary pleasures. According to Ramana Maharshi, happiness is within and can be known only through discovering one's true self. He proposes that 'ananda' can be attained by inner enquiry, using the thought "Who am I?" Within the various schools of Hindu thought, there are

different paths and ways of achieving happiness. The main four paths are Bhakti yoga, Jnana yoga, Karma Yoga and Raja Yoga. According to Buddha, there are four stages of deeper concentration called Dhyana: The first stage of concentration is one in which mental hindrances and impure intentions disappear and a sense of bliss is achieved. In the second stage, activities of the mind come to an end and only bliss remains. In the third stage, bliss itself begins to disappear. In the final stage, all sensations including bliss disappear and are replaced by a total peace of mind, which Buddha described as a deeper sense of happiness.

There are a number of mechanisms through which religion may make a person happier, including social contact and support that result from religious pursuits, the mental activity that comes with optimism and volunteering, learned coping strategies that enhance one's ability to deal with stress, and psychological factors such as "reason for being." However, the links between religion and happiness are always very broad in nature, highly reliant on scripture and small sample number. To that extent "there is a much larger connection between religion and suffering" (Lincoln 1034).

Today's philosophy of happiness is strongly influenced by 'happiness research'. It is the quantitative study of happiness, positive and negative effects, well-being, quality of life and life satisfaction. The field has grown substantially since the late 20th century. Joseph Murphy, Dale Carnegie, Norman Vincent Peale, Wayne Dyer, Marianne Williamson, Oprah Winfrey and the Dalai Lama are all well known personalities in this regard. Arthur Schopenhauer, a German philosopher explains happiness in terms of a wish that is satisfied, which in turn, gives rise to a new wish. The absence of satisfaction is suffering, that results in an empty longing. He also links happiness with the movement of time, as one feels happy when times moves faster, and feels sad when time slows down. John Stuart Mill represented, that cultural, intellectual and spiritual satisfaction also own a qualitative happiness value. Michel de Montaigne (\*1533, †1592) wrote, "The enjoyment of life requires a deliberate handling with it. He enjoys his life twice as much as the others." "Philosophy makes those who are devoted to her, happy and cheerful." Bentham's ethics of happiness is "The greatest happiness for the greatest number".

### ***Psychological Perspective of Happiness***

To psychological researchers, happiness is life experience marked by a preponderance of positive emotion. Feelings of happiness and thoughts of satisfaction with life are two prime components of subjective well-being (SWB). The scientific pursuit of happiness and positive emotion is also considered as the first pillar of the new positive psychology. This was first proposed by Martin E.P. Seligman in 1998 in American Psychological Association's Presidential address.

He coined the term 'positive psychology' to describe the scientific study of happiness. He referred to the good life as "using one's signature strengths every day to produce authentic happiness and abundant gratification." In his book "*Authentic Happiness*" (2002), he described happiness as being based on three lives - the pleasurable life, the engaged life and the meaningful life. An individual leading a life of pleasure can be seen as maximizing positive emotions, and minimizing negative emotions. One leading a life of engagement constantly seeks out activities that allow him/her to be in a flow (a state of deep, effortless involvement). It occurs most frequently when we concentrate our undivided attention on activities that are moderately challenging to us. When one is in flow, it may seem that one's sense of self vanishes and time stops. Seligman recommends that in order to achieve this '*flow*', one must first of all identify one's own strength, or strengths that are deeply characteristics of one's own self, and then learn how to practice them. On the other hand an individual leading a meaningful life belongs to and serves something that is bigger than him. These larger entities could be family, religion, community, country, or even ideas. According to him the better each of these lives is lived, the happier the person will be. Jonathan Freeman affirms that "people generally agree about what they mean by happiness. It is a positive, enduring state that consists of positive feeling including both peace of mind and active pleasures or joy." Ruut Veenhoven described happiness as "the degree in which an individual judges the overall quality of his life-as-a-whole favourably." Sigmund Freud believed that man is doomed to chronic unhappiness. Theodor Adorno believed that happiness is a mere temporary mental escape from misery. The words, "the good life" are derived from speculation about what holds the greatest value in life, the factors that contribute the most to a well-lived and fulfilling life. Several humanistic psychologists such as Abraham Maslow, Carl Rogers, and Erich Fromm also developed theories and practices pertaining to human happiness.

### ***Objectives***

1. To assess whether any relationship exists in regard to happiness and level of individual's self esteem.
2. To assess whether any gender difference exists in regard to happiness and level of individual's self esteem.
3. To study various aspects like life satisfaction, social support, level of parental education, humour style, academic achievement, social domain, self efficacy in relation to happiness and self esteem.

### ***Observations***

To satisfy the above stated objectives secondary information has been used for

the study. For this purpose national and international journals, project reports, doctoral thesis, seminar and conference proceedings, websites and research articles have been consulted.

*Happiness, self esteem and life satisfaction*

Life satisfaction is an overall assessment of one's feeling, attitude, and behaviour by own self. It may range from positive to negative. The personality variables tapping interpersonal relationship and social axioms tapping perceptions of social contexts were significantly related to overall life satisfaction (Chen, et.al, 2006). In another study it was found that lower life satisfaction and lower self esteem were associated with high levels of depressive symptoms. Female students were reported to have higher level of depressive symptoms than male students (Al khatib, 2013). However, self esteem was found to be positively correlated and associated with life satisfaction. It was also found that boys scored higher than girls in case of both self esteem and life satisfaction (Moksness, K.U & Espnes, A.G, 2013). On the other hand study reveals that older women have lower life satisfaction, self esteem and happiness than man (Pinquart, M. & Sorensen, S., 2001). Tiefenbach, T. & Kohlbacher, F. (2013) in their study indicated that house hold income affects happiness & life satisfaction equally for men and women. However, Kagegama, J. (2009) found that on national level as average happiness increases, the gender difference in life expectancy decreases. Thus, it can be said that happiness is significant on explaining the differences in the life expectancy gap between countries. Mansfield (2012) in his research finding indicated that male and female participant experienced low levels of body esteem and body dissatisfaction as a result of media playing a powerful role. Lyubomirsky, et.al (2002) "Maximizing versus satisfying: Happiness is a Matter of choice" in their research examined that maximizers were less satisfied than non-maximizers regarding consumer decisions, social comparison and bargaining game. Thus, study reveals that self esteem and life satisfaction are positively correlated. It was found that male students score higher in self esteem and life satisfaction than female student. Men and women are equally affected by household income in happiness and life satisfaction. Happiness and gender difference in life expectancy gap were found to be negatively correlated.

*Happiness, self esteem and gender inequality*

In general by gender inequality is meant unequal treatment or perceptions of individuals based on their gender. It arises from differences in socially constructed gender roles as well as biologically through chromosomes, brain structure, and hormonal differences. Research on gender inequality reveals various interesting findings. Bhardwaj & Agrawal (2013) in their research found no gender differences in the overall self esteem in the pre-adolescence period

in relation to social, academic, and parental self esteem. Rafei (2008), Ahmad et.al (2013) in their study also had similar findings. Srivastava & Joshi (2009), in their study found that there is no significant differences in regard to self esteem of adolescents those who are living in rural and urban region. However, Farid & Akhtar (2013) in their study found that there is a gender difference in self esteem of overall students. Urban student showed higher self esteem than rural students. Students pursuing science subjects were found to have greater self esteem than those students pursuing arts subject. Ahmad et.al (2013) in their study indicated that there is a significant gender differences in the domains of personal, social, and academic self esteem. Prajina. P.V. & Prem Singh, G.J. (2014) in their research indicated that the self esteem among female is greater than male. However, Kanus (2013) in his study found just the opposite i.e. the males had a higher self esteem than the females. Srivastava & Joshi (2009), in their study also found that boys scored significantly higher than girls in regard to self esteem. In another study Nicksic & Ducharme (2004) found that women have lower self esteem than men. However, Acharya and Deshmukh (2012) in their study found that there were significant differences in regard to self esteem among male and female students. Rafei (2008) in his study found that significant difference exists between males and females in the personal self esteem. Wanjiru & Gathogo (2014) in their study on orphans found that self esteem is greatly influenced by gender factor which in turn influences the educational and job aspiration. Schwalbe & Staples (1991) identified that women attach greater importance to reflected appraisals than men, where as the men attach greater importance to social comparisons than women. No significant difference was however found in self perceived competence. Prajina. P.V. & Prem Singh, G.J. (2014) in their study found that there is no significant difference in the level of self esteem in respect to age, father's occupation & birth order. Prajina. P.V. & Prem Singh, G.J. (2014) in their study "Self esteem-its influence & structural changes in the lives of tribal students of Kannur, Kerala" noted that majority of the tribal students show normal level of self esteem. McMullin & Cairney (2004) in their study found that self esteem and gender are similar across age, class and group. Kumru, et.al (2007) in their study identified that high self esteem adolescents perceived higher maternal & parental closeness monitoring, peer approval & maternal support. The result also indicated that high self esteem adolescents believed that their mother, father and teachers were reliable secret holders and honest and their peers were promise keepers more than low self esteem adolescents. Similarity, Chen, F.Y. (2005), in his research "gender and self esteem for supportive peer relations: the mediating of cooperative goals" found that gender similarity was positively while self esteem was negatively related to the cooperation & the relationship quality of the peer members. Patton

et.al (2004), in their research “Gender differences for optimism, self esteem, expectations and goals in predicting career planning & exploration in adolescents” found that the stable person inputs of optimism and self esteem would predict career planning & career exploration through the variables of career expectations and career goals differentially for young males and females. There are also other factors which influences individual self esteem. Kanus (2013) in his research, “Effects of Gender on students’ self esteem scores and parental alcohol abuse in Kosirai division, Nandi north district, Kenya” emphasized the importance of a conducive home environment in promoting high self esteem of students. However, Ratliff & Oishi (2013), in their study “Gender differences in implicit self esteem following a romantic partner’s success or failure” found that men had lower implicit self esteem when their partner did well at a ‘social intelligence’ task & implicit self esteem is negatively influenced by thinking about a romantic partner’s success both when the success is relatively & when it is not. In another study Omarsson (2013), “Effects of sport participation on self esteem & body image” found that participants who practice sports on a weekly basis have significantly higher self esteem & body image than participants who do not. Again, it was found that participants who practice individual sports have significantly higher self esteem than participants involved in team sports. In happiness research Lyubomirsky, et. al. (2005), in their study found that happiness & self esteem are highly correlated. However, in contrary to this Mostafael et.al (2012) in their research found that there is no correlation between age, education, and happiness. Again, in another study conducted by Cesare & Amori (2003) it was found that the highest educational level is positively correlated to happiness. However, Joshanloo & Weijers (2013) in their study found that linear relationship exists between gender inequality, happiness and life satisfaction. Mi Yu, et.al (2013) in their research also showed that adolescent’s happiness was significantly correlated with developmental assets, peer support and the appearance satisfaction factor. However, Stevenson & Wolfers (2008) in their study indicated that women’s, happiness has declined to men. Masaaki (2013) in his study concluded that females in general feel happier than males. However, Perez (2012) in his research found that gender differences exists in happiness in regard to spiritual experience, father relation-ship, peer relationship autonomy, positive relation with others and purpose in life. Arrosa & Gandelman (2013) in their research found that happiness among female is much favourable than men in regard to geographic regions and country income groups. In another study Cesare & Amori (2003) revealed that the civil status, health, interpersonal relationship, religiousness, area of residence & income have strong effect on individual’s happiness. Mostafael et.al (2012) in their research found that there is significant difference between orphan and non-orphan

children in regard to positive & negative emotion. Marcelli & Easterlin (2005) in their research suggested that significant gender differences exist in life cycle happiness. However, Mi Yu, et.al (2013) in their study indicated that significant gender differences exist in case of happiness, empowerment, social competence, and social support. In another study Choden (2012) found that there is significant gender gap in children's happiness particularly among those who were going to school, aged six to sixteen in Bhutan. It was also found that there is no robust evidence of a gender gap in the allocation of health expenditure on children aged less than sixteen. However, Yan Liu, et.al (2012) in their study revealed that happiness, human diversity index, gender empowerment measure, are all negatively associated with gender gap in life expectancy. In another study Masaaki (2013) also found that a gender equal society affects the happiness gender gap. However, Sironi & Mencarini (2013) in their study found that gender gap exists in education and political power. However, no significant gender difference was noted in regard to social, academic achievement and parental self esteem. No significant gender difference was found in regard to self esteem of pre-adolescent and adolescent students living in urban and rural setting. Boys were found to score significantly higher in self esteem than girls. No significant difference in self esteem level was found in regard to age, father's occupation, birth order. No significant difference in happiness was found in regard to age, positive or negative effect, relationship with mother and personal growth. Female were found to be much happier than male in regard to geographical location and income group level. Significant gender difference exists in happiness in regard to spiritual experience, father relationship, autonomy, peer relationship, positive relation with others, and area of residence, civil status, health, income, empowerment, social competence & social support. Study reveals that significant difference exists between orphan and non orphan children in regard to positive and negative emotion. There is a significant gender gap in happiness in regard to education, political power, human diversity and life expectancy. Happiness among adolescent were found to be significantly correlated with developmental aspects, peer support, appearance satisfaction. Student self esteem is found to be correlated to conducive home environment and policy formulation relating to family school interface.

*Self esteem and social support*

Social support is the perception and actuality that one is cared for, has assistance available from other people and that one is part of a supportive social network like emotional (e.g., nurturance), tangible (e.g., financial assistance), informational (e.g., advice), or companionship (e.g., sense of belonging) and intangible (e.g. personal advice). In regard to research conducted on social

support and self esteem Teoh HJ & Afiqah R (2010), Naeem et.al (2014) in their study found that there is no significant gender difference between self esteem and social support. In another study Teoh HJ & Afiqah R (2010) found that all the personality and social support factors were found to be associated with levels of self esteem, only extraversion, openness to new experience, conscientiousness, emotional stability. No significant gender difference was found to exist in regard to self esteem and social support. It was found that there is no correlation between social support and self esteem.

*Self esteem and level of parental education*

Leila et.al (2013) in their research on level of parental education and their children's self esteem found that there is no significant relationship between the two. No significant relationship was found to exist between student self esteem and level of parental education or between self esteem of boys and girls in relation to their family literacy.

*Self esteem and humour style*

Humour styles are related to the way in which individuals differ in their use of humour in everyday life. People of all ages and backgrounds engage in humour, but the way they use it can vary greatly. Although humour styles can vary slightly depending on the situation, they tend to be a relatively stable personality characteristic among individuals. In regard to research on humour style and self esteem Liu (2012) in his study found that adaptive humour styles, self esteem, and subjective happiness all are positively correlated.

*Self esteem and social domain*

Social domain is the affective domain but with the some crossovers to the cognitive domain. Social domain skills included greater awareness in regard to communicating and teaming skills support management and leadership skill. Gentile et.al (2009) in their study on the impact of social domain on self esteem found that there is no significant gender differences in regard to academic achievement, social acceptance, family and self esteem. It was also found that there is a significant gender difference in physical appearance and self esteem among adults. However, it was found that there is no significant gender difference in self esteem in regard to self acceptance, academic achievement and family.

*Self esteem and academic achievement*

Academic achievement or (academic) performance is the outcome of education- the extent to which a student, teacher or institution has achieved their educational goals. Several researches have been conducted to study whether academic achievement of an individual affects his level of self esteem. Srivastava and Joshi



(2009), in their study found that there were significant differences in regard to academic achievement of adolescents living in rural and urban area. Acharya and Deshmukh (2012) in their study found that there is no significant difference in regard to academic achievement among rural and urban students. However, it was found that students who were living in urban areas were scoring significantly higher on self esteem as compared to students who were living rural areas. In another study Rafei (2008) found that significant difference exists between grade levels in the global, in general. It was also found that academic & social self esteem subscales while no significant difference was recorded in the personal and parental self esteem among that grade level. However, Rafei (2008) in his study found that there is no significant interaction between gender, academic achievement, and social self esteem. No significant gender difference was found in regard to academic achievement of students and place of residence i.e. urban/rural area. Similarly, no significant interaction was noted between gender, academic achievement & social self esteem.

#### *Happiness and self efficacy*

Self-efficacy is the extent or strength of one's belief in one's own ability to complete tasks and reach goals. Self-efficacy affects every area of human endeavour. By determining the beliefs a person holds regarding his or her power to affect situations, it strongly influences both the power a person actually has to face challenges competently and the choices a person is most likely to make. These effects are particularly apparent, and compelling, with regard to behaviours affecting health. Hunagund & Hangal (2014) in their study on self efficacy and happiness found that both are positively correlated. It was also found that there is significant difference between undergraduate and post-graduate students in regard to self efficacy but no gender differences exists in happiness. Self efficacy and happiness are correlated. No significant gender difference exists in happiness in regard to self efficacy.

#### *Self esteem and happiness*

In regard to researches on happiness and self esteem Farzaee (2012) in his study found that a positive as well as meaningful relation exists between the two. In another study Malekiha, et.al (2012), found that self esteem was significantly correlated with happiness & depression. However Hasnain, et.al (2013), in their study noted that there is no significant difference between happiness of children and different parenting style with self esteem. It was found that self esteem and happiness are correlated.

From the basis of the observation of several studies mentioned above it may be said that self esteem and life satisfaction are positively correlated. Men and

women are equally affected by household income in happiness and life satisfaction. Happiness and gender difference in life expectancy gap are negatively correlated. No gender difference exists in social, academic achievement and parental self esteem. No gender difference exists in regard to self esteem of pre-adolescent and adolescent students living in urban and rural setting. No difference in self esteem level was found in regard to age, father's occupation, birth order. No difference in happiness was found in regard to age, positive or negative effect, relationship with mother and personal growth. Gender difference exists in happiness in regard to spiritual experience, father relationship, autonomy, peer relationship, positive relation with others, and area of residence, civil status, health, income, empowerment, social competence & social support. Difference exists between orphan and non orphan children in regard to positive and negative emotion. There is a gender gap in happiness in regard to education, political power, human diversity and life expectancy. Happiness among adolescent were found to be correlated with developmental aspects, peer support, appearance satisfaction. Student self esteem is found to be correlated to conducive home environment and policy formulation relating to family, school interface. No gender difference was found to exist in regard to self esteem and social support. Human style, self esteem and happiness all are found to be positively correlated. There is no difference between self esteem among boys and girls in relation to their family literacy. There is a gender difference in regard to physical appearance and self esteem among adults. No gender difference was found in regard to academic achievement of students and place of residence i.e. urban/rural area. No gender difference exists in overall self esteem level with the respect to age, birth order, residential location, father's occupation and socio geographic status. No gender difference was noted in regard to academic achievement of rural and urban students. No gender difference was found in the level of happiness in respect to age. Strong gender gap exists in regard to happiness associated with highest educational level, political power and parenthood. No difference was noted between happiness of children and different parental style on self esteem. Men were found to have lower self esteem when their partner succeeds social intelligence task than when their partner fails, whereas women's implicit self esteem is not affected by partner's performance. These gender differences have important implications for understanding social comparison in romantic relationships.

### ***Conclusion***

Related literature review supported that happiness and self esteem are related. It also boosted our confidence in the notion that despite the high degree of relatedness between happiness and self-esteem, they are separable constructs

with potentially different sources. Equanimity, a deep sense of happiness, is attainable through proper knowledge and practice, building up a habit refraining from acting, speaking or thinking in everyday life. Such constructive behaviour builds up the potentials on our mental continuums for experiencing happiness in the future. Our mind can create images, even images of our self. Some images act like memories and are stored in ways that we are not aware of, or we might call unconscious self-images. The mind is the realm of imagination; nothing has to be fixed or finite. The mind can create many self-images and they can change from time to time and can be contradictory too. The mind has no innate need or governing mechanism to resolve these conflicting self-images. This explains how we can feel good about our self in one moment, and then triggered by a circumstance, or someone making a comment, we feel terrible and deflated the next moment. We can trigger those potentials to ripen by not denying the good or bad qualities of any object or situation, we experience or any level of happiness or unhappiness with which we experience it- regardless of what object or situation may be. These self-image created and maintained in the mind can also be distorted. Images of our self from memories formed during moments of embarrassment, shame, guilt, fear, or anger might be lodged with lots of emotion. These emotions make them more powerful and distort an honest representation of our self in our mind. We need especially to quite our mind of worries or expectations. In that serene tranquil state of mind, we will feel a level of happiness and that can trigger the potentials and then we will have for feeling of even greater happiness. We can then expand our mind by turning our attention to the problems of others and how they might be in even worse situation than ours. We must stop thinking for only our own selves. We could think how wonderful it would be if all others could be free of their suffering and how great it would be if we could help them to accomplish that. This strong compassion naturally leads to feeling of love- the wish for them to be happy. Thinking of their happiness triggers even more of our potentials for happiness to ripen.

However, it was found that very few researches have been conducted so far on self esteem and happiness among students pursuing higher education in regard to life satisfaction, gender inequality, academic achievement, humour style, social support, and level of parental education. More research need to be conducted to study the relationship between self esteem and happiness for both teachers and students at secondary and higher educational level and also to study the impact of teachers in this regard on students. Further, study may be conducted on self esteem and happiness in regard to orphan, non-orphan children, father's occupation, caste, place of residence (rural & urban), sibling's achievement, support of parents and other family members. Study may also be

conducted to examine whether home or working environment has any impact on individual's happiness and level of self esteem and if yes then how and to what extent.

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## Mapping the Significance of Human Rights Education in Undergraduate Curriculum

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### **Abstract**

Global trends point towards inclusion of human rights in the curricular of all learning institutions leading to strengthening of universal commitment to human rights culture. This paper reports on a study designed to examine how college students perceive the various human rights norms as embedded in international laws. It discusses the significance of human rights education to promote a participatory, democratic and humane society. The undergraduate college students (N= 150) in Kolkata were selected as sample for the study. It was divided into two subgroups (N= 75 for each subgroup) on the basis of human rights education as curricular subject and without it. The study finds significant relation between human rights awareness and behavior related to protecting human rights among the total sample groups and the two subsample groups as well. The two groups differed significantly among themselves in relation to awareness about human rights and related behavior. The coefficient of correlations of the two independent samples also differed significantly. The findings indicate the importance of introducing human rights education at the undergraduate level to usher an egalitarian and tolerant society.

**Key Words:** Human Rights Education, Undergraduate Curriculum, Democratic and Humane Society

### **Introduction**

Human rights education is increasingly emphasized worldwide in organizational, curricular and discursive developments (Andreopoulos and Claude 1997; Elbers 2002) though the whole phenomenon was little anticipated in educational thought and research a few decades ago. The relevance of human rights education has largely been neglected in empirical research (Stellmacher & Sommer 2008). Human rights education is a lifelong process that builds skills and knowledge as well as attitudes and behaviors, to promote and uphold human rights. This definition guides the World Programme for Human Rights

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Education, a global initiative of the UN which since 2005 has encouraged concrete measures to integrate human rights education in all sectors.

The Plan of Action for the second phase (2010-2014) of the World Programme for Human Rights Education was adopted by U.N. Human Rights Council on 30 September 2010, with the new focus on human rights education for higher education and human rights training programmes for teachers, educators, civil servants, law enforcement officials and military personnel at all levels. Building on the foundations laid during UN Decade for HUMAN RIGHTS EDUCATION (1995-2004) the World Programme which has been complemented by a new specific standard setting effort, namely the UN Declaration on Human Rights Education and Training adopted by General Assembly on 19 December, 2011. Article 2 of the Declaration states that Human rights education and training comprises all educational training, information, awareness raising and learning activities aimed at promoting universal respect for and observance of all human rights and fundamental freedoms and thus contributing inter alia to the prevention of human rights violations and abuses by providing persons with knowledge skills and understanding and developing their attitudes and behaviours, to empower them to contribute to the building and promotion of a universal culture of human rights.” Human rights education and training encompasses education about human rights, which includes providing knowledge and understanding of human rights norms and principles, the values that underpin them and the mechanisms for their protection.

The Indian Social Institute and Delhi- PUCL with the assistance of NHRC held a seminar in 1995. The proceedings of the seminar was published in a book under the title ‘Human Rights Education India’— (i) edited by R.M. Pal and Somen Chakraborty (published by Indian Social Institute, New Delhi-2000), The authors emphasized that Human rights education must transform students in the programme as agents change. It raises the poignant question that what is the use of Human rights education if it ultimately does not strengthen the people whose rights are violated and its students are not inwardly motivated to action? The authors uphold the idea very strongly that human rights teaching has to be centered on dialogue enabling the students to get rid of preconceived notions on hierarchy, inequality and justice.

The notion of human rights is that it is rooted in a conception of human dignity. They are not derived from any institutions of society but from our human status alone. International law now embodies human rights and has developed complex institutions of adjudication. They are universal rights held equally by all human beings every where. Herein lies the significance of human rights as represented in international norms. The principles of human rights

are necessarily abstract, but through their emergence as universal enduring ideas suggestive of a coherent and humane world, human rights lay the ground for a democratic prosperous society. As human rights can be used as an ethical lingua franca as well as standards for conduct (*Bisethand Holmarsdottir* 2013) and can provide a common ground and a way of nuancing our understanding of the world and its various issues. The UN Universal Declaration of Human Rights (UN, 1948) is an exceptionally far sighted moral catalogue (Hamelink 2000). Since we experience a huge gap between morality and reality, an engagement in the ethical perspectives of human rights can help us on the way to closing this gap (*Biseth and Halmardothir*, 2013).

### ***Review of literature***

Doise (et al, 1996) conducted a study supporting the hypothesis that awareness of different kinds of social conflict and personal experience of social injustice can lead to greater involvement in the cause of human rights. The study by Spini and Doise (1998), revealed that involvement in human rights is linked to values and perception that subjects have of a situation. This interesting and significant study explored the factors such as values which lead people to anchor their involvement in Human Rights indifferent ways. The study also showed that at an abstract level it was possible to find a substantial consensus about Human Rights issues but not at the applied level. 1999 Civic Education study by International Educational Association (IEA) revealed that females were substantially more supportive of immigrants rights. These studies reinforce the findings that students predominantly female will have greater engagement with human rights. Sommer and Stellmacher (2002, 2003) conducted two representatives studies on humans rights, where they found that the worldwide implementation of human rights is seen by 76% of the participants as very important. The results showed a very small knowledge about human rights by the participants. Only 4% were able to name the important documents such as UDHR, and other UN major conventions which defines human rights for every human being worldwide. Other studies began to document that although students believed that human rights ought to be universally respected, their level of knowledge about this subject is not as high as one might wish, Gender based difference are emerging as an area of special interest in human rights education programmes and may warrant additional scrutiny. Studies reinforce the finding that those students (predominantly female) who are more emotionally oriented will have greater engagement with human rights concepts.

The study by Sonja (2004) showed that most respondents supported (in principle) the notion of human rights for all but tended to engage in low political

activity rather than actively working towards positive social change. It examined the barriers to respondents viewing themselves as agents of positive social change, and outlined that human rights education may be an ideal way of raising awareness among young people that responsibility for social change rests with every individual and it is only by organizing collectively that we can effect positive change. According to Mihr (2004) HRE leads to a culture of human rights and hence a stable society. It bridges the gap between international normative standard setting and behavior and action according to human rights values. Mihr and Schmitz (2007) suggests that HRE be used as a strategic tool which leads to societal mobilization beyond the narrow non-governmental sector. Stellmacher and Sommer (2008) demonstrated in their study that even short term human rights education can increase and enhance positive attitude and commitment concerning human rights.

Tibbitts (2010) overviews some of the available research on human rights education subdividing it into three main categories; theory of human rights education, implementation of human rights education and outcomes of human rights education. Her study demonstrates that there is an expanding literature on human rights education, the range of research in this field being rich and diverse. Human rights education is attempting to distinguish itself on the basis of its potential to 'empower' and 'transform' yet there remains a need for scientifically rigorous impact evaluations on the outcomes of human rights education programmes. Our understanding of how human rights education can have a transformative impact is somewhat limited, at least in the in the research base. Though human rights education is attempting to distinguish itself on the basis of its potential to empower and transform one cannot expect such outcomes on the basis of short term educational experiences. A 10 country impact evaluation carried out for Amnesty International involved the development of log frame indicators for outcomes at the individual, institutional and societal level. The outcomes at the individual level included understanding of one's human rights and the rights of others, awareness of human rights issues, development of empathy and care for the human rights problems of others, a sense of personal agency in promoting human rights, the application of human rights principles to own private life and relationships (see, Tibbitts, models 2010). Katoch (2011) conducted the study which revealed that gender wise and locality wise there is significant difference in the awareness of college students about human rights. Male and urban college students are more aware about Human Rights as compared to their counterpart. In another study by Katoch the findings reveal that male teachers are more aware about Human Rights than their counterparts and urban teacher trainees are more aware than rural trainees. It

was also evident from the analysis of data that science and arts stream students differ significantly in their awareness about Human Rights. Katoch (2012) found that gender wise teacher trainees differed significantly in their awareness about human rights. Ashraf (2013) found that there is significant difference in the level of human rights awareness among B.Ed and D.Ed teacher trainees. Dayal and Kaur (2015) found that there is significant difference in human rights awareness of male and female teachers working in CBSE affiliated schools.

### ***Objective of the Study***

The study attempts to explore the awareness and understanding of students with regard to the various principles of human rights embedded in UN documents namely theories and perspectives of human rights, their understanding of cardinal principles of human rights such as tolerance, gender equality, justice, non-discrimination; indivisibility, universality and interrelatedness of human rights, their attitude towards poverty democracy and development; problems of vulnerable groups such as women children, indigenous people, minorities, displaced persons and violations of human rights in the civil, political, economic, social and cultural spheres.

The objectives of the study thus are to find out

- The level of awareness of the undergraduate students in the context of the different components of human rights as embedded in the UN documents.
- The level of human rights related behaviour of the sample group students.
- Whether there is any difference in the awareness and behavior of the two sample subgroups one studying human rights education at the undergraduate level and other with no such curricular component.
- Whether awareness about human rights component is correlated with human rights related behavior
- And whether there is any significant difference in two coefficient of correlation values of the two sub sample groups.

### ***Hypothesis***

On the basis of the above mentioned objectives following hypotheses are framed.

- H<sub>0</sub>1 There is no significant difference in the human rights awareness scores of the students with human rights education as subject and that of students without it.
- H<sub>0</sub>2 There is no significant difference in the human rights related behaviour scores of the students with human rights education as subject and that of students without it.

- H<sub>3</sub> The scores of human rights awareness and human rights related behaviour are positively correlated.
- H<sub>4</sub> There is a significant difference in 'r' values of subgroup with human rights education as a subject with the subgroup sample without this subject.

### ***Design***

Kerlinger (1978) defines a research design as the plan, structure and strategy of investigation purporting to answer research questions and control variance. An ex post facto approach with only one independent variable (Human Rights Education) in a survey Research design is contemplated for the present study.

### ***Population***

Students between the age 19-21 years enrolled in the bachelor degree programme in colleges of Kolkata and its adjoining areas comprise the population for this study.

### ***Sampling***

Data is gathered from a total of 150 students who were selected randomly from the colleges where human rights education is taught as a subject and the colleges where this subject is not taught separately. The population of the sample is then divided into two sampling units and they are 75 students (2nd and 3rd year) enrolled in Bachelors Degree with Human Rights as a elective subject and 75 students enrolled in the Bachelor Degree who are not studying Human Rights in their undergraduate curriculum.

### ***Tools***

Two questionnaires were constructed by the researchers namely Human Rights Awareness Scale and Human Rights Activism Scale. The scales were constructed on the basis of the other research works in these particular areas. (Sommer and Stellmacher 2002, 2003, Tibbitts 2010 Katoch 2011). The items used by these researchers were compiled and expert opinions were sought regarding their applicability in the Indian social context. Five experts from the department of Education Calcutta University and the Department of Anthropology Calcutta University were requested to rate the items for assessing components of human rights principles and related behavior for protecting and upholding such rights.

On the basis of their endorsement 35 items were selected for Human Rights Awareness Questionnaire and 30 items for Human Rights Activism Scale The Likert Scaling Technique was used to measure the respondents' degree of agreement or disagreement to a given point of view. The reliability of the two

questionnaires was determined and Cronbach alpha for Awareness Scale was found to be 0.91 and that of Activism scale is 0.89.

Two examples of items include in the Human Rights Activism Scale are  
i) At home, if any member of my family abuse rights of an individual, I protest. Always ( ) Sometimes ( ) Occasionally ( ) Rarely ( ) Never ( )

ii) I take part in debate and discussions where the issue is related to human rights Always ( ) Sometimes ( ) Occasionally ( ) Rarely ( ) Never ( ). Two items from Human Rights Awareness are i) Human rights values are western concepts and therefore cannot be accepted as basic human values ii) No one shall be subjected to torture and cruel inhuman degrading treatment or punishment. Strongly agree ( ) agree ( ) undecided ( ) disagree ( ) strongly disagree ( )

### ***Variables***

#### *Human rights awareness*

The working definition of human rights awareness is the knowledge about rights and freedom of all human beings who are entitled to rights by virtue of being human. For the purpose of the study awareness means understanding and knowledge of international human rights standards embedded in major human rights instruments. Awareness also means to have understanding about the various kinds of violations in the political, civil, economic, social and cultural spheres and sensitivity towards such sufferings.

#### *Human rights behavior*

This means, attitude and behaviour in accordance with human rights values. Such behaviour encompasses all kinds of activity such as advocacy, campaign, mobilization of masses with the help of community, police, government and other organizations for empowering and protecting rights. For the purpose of the present study human right behaviour would also mean being inwardly motivated to bring positive social change.

#### *Human Rights Education*

For the purpose of the present study human rights education would mean a formal education and training in the undergraduate curriculum of studies of university which aims at all the following objectives with special emphasis laid on moulding of attitude and perspective in accordance with human rights principles.

Human Rights Education is defined in the United Nations Plan of Action for the United Nations Decade for Human Rights Education as “training, dissemination and information efforts aimed at building of a universal culture

of human rights through the imparting of knowledge and skills and the moulding of attitudes The objectives of human rights education are given below.

- It aim at strengthening of respect for human rights and fundamental freedoms
- It seeks full development of the human personality and the sense of its dignity
- It promotes understanding of tolerance, gender equality and friendship among all nations, indigenous peoples and racial, national ethnic, religious and linguistic groups
- It enables of all persons to participate effectively in a free society.
- It endeavours to further develop the activities of the United Nations for the maintenance of peace

**Result and analysis**

The data were analysed and presented in two parts. In the descriptive statistics the nature of the distribution of the scores is shown.

Table 1 shows the descriptive statistics of the scores of Human Rights Awareness of the total sample group (N-150)

**Table 1 : Awareness Scores**

N	150
Missing	0
Mean	150.83
Median	151
Mode	155
Standard deviation	13.26
Skewness	-.339
Standard error of skewness	.198
Kurtosis	-.235
Standard error of Kurtosis	.399

The mean of the scores is 150.83, median 151 and mode 155. The distribution is negatively skewed (-.339). It signifies that scores are piled on the positive side indicating that most of the students reported higher HR awareness.

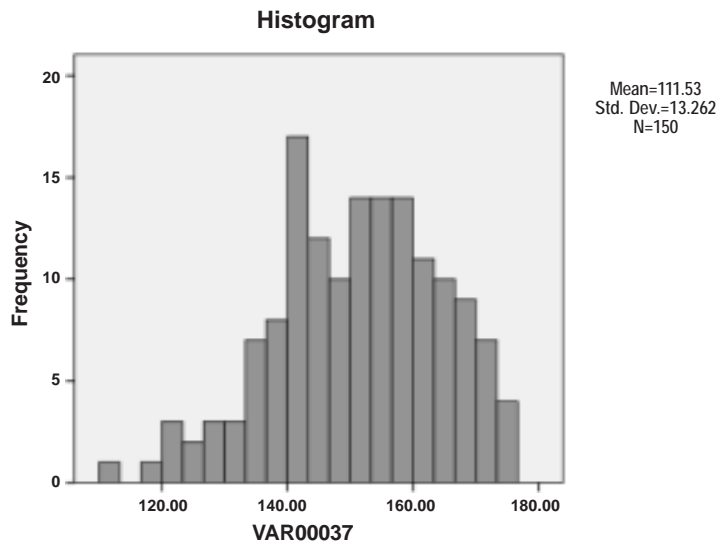
The following figure shows the distribution of the scores. The distribution is slightly negatively skewed which indicates the scores are more inclined on



the positive side. It implies that the students' awareness of human rights is on the higher side.

Fig-1 : Showing the frequency distribution of HR awareness scores.

HR Awareness



Similarly the HR Activism scores are also analyzed and the following table shows the descriptive statistics.

**Table 2 : HR Activism Score**

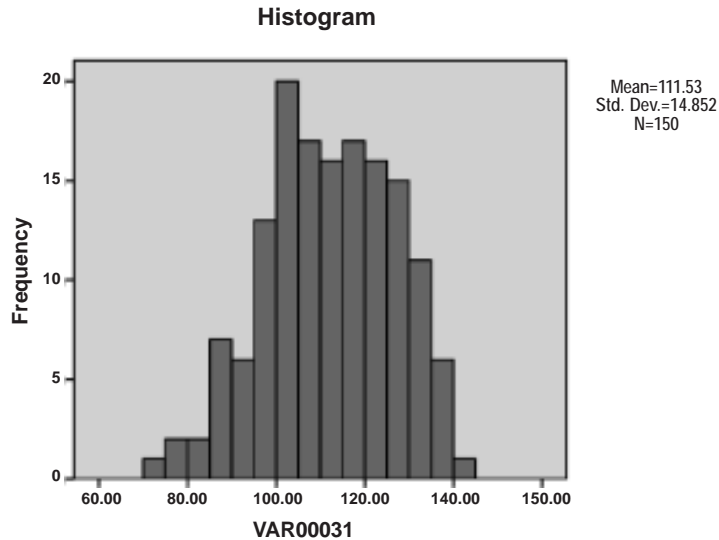
N	150
Missing	0
Mean	111.5
Median	111.5
Mode	129
Standard deviation	14.85
Skewness Standard error of skewness	-.231.198
Kurtosis Standard error of Kurtosis	-.278.302

The table shows the mean, median and mode of activism scores. The standard deviation of the distribution is 14.85. The distribution is negatively skewed like

awareness scores distribution which implies that the larger number of scores are piled on the higher side of the distribution.

Fig-2 : Showing the distribution of activism scores.

HR Activism



The above mentioned figure also shows that scores are negatively skewed. The indication is that high level of environment related behavior practices.

Testing HR awareness differentials among the students belonging to different sub samples.

H<sub>0</sub>1 There is no significant difference in the human rights awareness scores of the students with human rights education as subject and that of students without it.

**Table 3 : Showing the Difference in Awareness Scores between Students with Human Rights Education Subject and Students without it.**

Sample	N	Mean	SD	df	't' value	Standard error of difference	'p' value
With HR	75	154.4	13.5	148	3.43	2.08	.0008
Without HR	75	147.24	12.2				

From the table 3 it is evident that there is a highly significant difference in HR awareness among the two groups of students. Obviously the knowledge of human rights acquired through curriculum transaction has contributed in developing such awareness.

Testing of HR activism differential,  $H_02$  which says that there is no significant difference in the human rights related behaviour scores of the students with human rights education as subject and that of students without it.

**Table 4 : Showing the Difference in Activism Scores between Students with Human Rights Education Subject and Students without it.**

Sample	N	Mean	SD	df	't' value	Standard error of difference	'p' value
With HR	75	1114.9	13.35	148	2.94	2.31	.0037
Without HR	75	108.08	15.5				

This result also shows the importance of HR education as there is a significant difference in the two means of the two sample groups. It may be surmised that being more aware the students who study human rights as a formal subject, practice rights related behavior more than their other counterparts.

**Testing of hypothesis  $H_3$**

$H_3$  The scores of human rights awareness and human rights related behaviour are positively correlated.

The following table (Table 5) shows the correlation between awareness and activism scores.

**Table 5 : The Correlation between Awareness and Activism Scores**

		Aware all	Act all
Aware all	Pearson Correlation	1	.461**
	Sig. (2-tailed)		.000
	N	150	150
Act all	Pearson Correlation	.461**	1
	Sig. (2-tailed)	.000	
	N	150	150
**. Correlation is significant at the 0.01 level (2-tailed).			

The 'r' value (.461) is positive and significant. So it can be said that if rights related behaviours are to be inculcated among the students, then knowledge and awareness about the various aspects of human rights are to be imparted and instilled among the students.

Testing of  $H_4$  which maintains that there is a significant difference in 'r'

values of subgroup with human rights education as a subject with the subgroup sample without this subject.

Table nos. 6 and 7 show the coefficient of correlation.

**Table 6 : Showing the Awareness and Activism Sores of the Students who Study Human Rights Education as a Subject in Undergraduate College**

		awarehr	acthr
awarehr	Pearson Correlation	1	.519**
	Sig. (2-tailed)		.000
	N	75	75
acthr	Pearson Correlation	.519**	1
	Sig. (2-tailed)	.000	
	N	75	75
**. Correlation is significant at the 0.01 level (2-tailed).			

It is evident from the 'r' value that awareness scores and activism scores is positively and significantly correlated ( $r = .519$ ) with reference to students having HR education as a subject.

**Table 7 : Showing the Awareness and Activism Sores of the Students who do not Study Human Rights Education as a Subject in Undergraduate College**

Correlations			
		awarenohr	actnohr
awarenohr	Pearson Correlation	1	.342**
	Sig. (2-tailed)		.003
	N	76	75
actnohr	Pearson Correlation	.342**	1
	Sig. (2-tailed)	.003	
	N	75	75
**. Correlation is significant at the 0.01 level (2-tailed).			

The value of 'r' in this case is also positive and statistically significant ( $r=.342$ ). It obviously indicate that even though the HR education is not formally taught the general awareness about human rights concepts is likely to induce people to practice related behavior.

The two coefficients of correlation are compared to find out whether any

statistically significant difference exists between them. So the Fischer z was calculated with the help of Lenhard and Lenhard (2014) Psychometrica.

**Table 8 : Shows the Result**

	N	r
Correlation 1 (HR as subject)	75	.591
Correlation 2 (Without HR as subject)	75	.341
Test Statistics z	1.94	
Probability	.026	

The z value indicates that the difference between the two values are statistically significant at .05 level. Therefore it may be concluded that the correlation between awareness and activism is stronger in case of those students who study human rights as a curricular subject.

***Educational implication of the study***

The core of the research lies in exploring the attitude and understanding of the students towards human rights principles and violations of human rights as it unfolds in our society. It was found that those who are learning about human rights in the formal curriculum of studies, have deeper and holistic understanding of human rights norms and were found to be more in agreement with the points of view as enshrined in international laws. The study reveals that these students have a better appreciation of the holistic concepts of human rights. The holistic concept is that all human rights are universal, interrelated and indivisible. This forms the bedrock of the idea of human rights without which empowering people and putting an end to social injustices is not possible.

With regard to human rights behaviour students who have chosen to study the subject in the formal undergraduate curriculum demonstrate a higher degree of sensitivity to atrocities and are more active in the human rights sphere. They think that injustices against others within society are a problem belonging to all of us, and it is their personal responsibility to ensure that human rights of all people in society are respected. In contrast those who do not learn the subject in a formal undergraduate curriculum-demonstrate an absence of adequate understanding of the injustices faced by vulnerable groups and think that injustices against others within society is not a problem belonging to all of us. They do not think it is their responsibility to ensure that human rights of all people are respected. They think that the government is mainly responsible for ensuring human rights-so they do not play nor intend to play an active role in human right movement, and are of the view that nothing they could do would make a difference.

The inclusion of human rights education in the undergraduate curriculum study envisions a transformative experience for the students. The present study amply demonstrates that students who are exposed to the influence of human rights education are more aware of human rights principles as represented in international instruments, have better understanding and appreciation of international human rights standards and therefore are more inwardly motivated to act and think according to human rights values.

Thus the implication of the study is far reaching as the study reiterates that inclusion of Human Rights in the curriculum of educational programmes to foster and strengthen the human rights culture is an urgent imperative which is effective in empowering human beings to live with dignity.

### ***Concluding Remarks***

The curriculum of human rights education must help in bringing about positive change and prepare the learners to analyse and understand the world around. The purpose of Human Rights curriculum is to foster and strengthen the human rights culture. To accomplish this human rights education must be multi-disciplinary, proactive and effective in empowering human beings to live with dignity. Identification of various vulnerable groups, their economic and social problems and the impact of development in their lives need to be properly linked to a programme of human rights study. Human rights education must not be confined to the institutional framework alone and it should be integrated with human sufferings in society at large. Even if practitioners would hope that human rights education programmes will bring about changes supportive of a human rights culture, as with any educational programme, one cannot expect such outcomes on the basis of short term educational experiences. The present study can lead to development of new knowledge and advance critical reflection in the area of human rights, which in turn inform policies and practices in human rights and in human rights education. In the context of Indian society human rights violation is an intractable problem despite the Constitutional guarantee. India is yet to provide for equity for its citizens as the menaces of religious bigotry, xenophobia and upper caste chauvinism raise their ugly heads at regular intervals. Under such circumstances the human rights education can inculcate the values of peace, mutual respect intercultural tolerance in young people. There is an urgent need to be equipped with skills to uphold and protect the rights of people by acting as carers. India must prepare its young people to realize “the vision and political will reflected in numerous international and regional human rights treaties that stipulate the right to education and its interrelation with other human rights.” (World Education Forum 2015, Education in 2030). Known as the Incheon Declaration, it also reaffirms that education is a public good, a fundamental human right and a basis for guaranteeing the realization of other

rights. It is essential for peace, tolerance, human fulfilment and sustainable development.

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## **Nineteenth Century Bengal Renaissance and Raja Rammohan Roy: Present Perspective**

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### ***Abstract***

At the end of 18th century and in the beginning of 19th century, India in general and Bengal in particular was undergoing through stagnation and denegation. Mechanical observances of rituals, irrational thinking and superstitions were decaying every hooks and corners of the society. Under such a dismal tradition, an urgent need was felt for humanity, high standard of rational thinking and for a new awakening. That new awakening was termed as Renaissance, which evolved Bengal with humanity, rationality and modernity. One of the most remarkable personalities of the 19th century Bengal with whom all those changes came into being was none other than Raja Rammohan Roy. Raja Rammohan Roy, as a father of Bengal Renaissance made immense contributions for uplifting the condition of society and education and by those contributions brought a new awareness, a new consciousness among his countrymen. All his contributions in the field of Bengal Renaissance are still significant today for reforming and regenerating today's society.

**Key Words:** Humanity, Rationality, Modernity, Raja Rammohan Roy, Bengal Renaissance.

### ***Introduction***

At the end of 18th century and at the beginning of 19th century, in every sphere of politics, society, culture and education, darkness, superstitions, meaningless rites and rituals were prevalent. In 19th century, social oppression and religious fanaticism engrossed the society thereby declaring the age as an age of 'ideological fanaticism, religious bigotry, economic injustice or social oppression.' (Barua, B.P, 1988)

The original thinking power of the people was blocked. Culture was decadent. Educationally, the official policy was in favour of revival of traditional oriental learning, though the demand of the age was for western, modern and

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liberal education for an inauguration of the new learning. All those were possible if and only if natives could be given instruction in western Science and literature. That could bring a new awakening, enlightenment, which was in high demand then. That new awakening was termed as 'Renaissance'. Needless to say that after the Charter Act of 1813, the complex, many sided socio-cultural movement which influenced company's educational policy was designated as Renaissance. In India, Renaissance, the new awakening started with Bengal, so it is termed as Bengal Renaissance. That Renaissance movement was heralded by none other than the father of modern India, Raja Rammohan Roy.

### ***Background of Bengal Renaissance***

The main reason for that new awakening was to pull out the men from medievalism, casteism, *purdaha* and other social evils to an age of development and illumination. i.e. from political, social, cultural and educational stagnation to an age of light. Renaissance functioned as a process of removing men from superstitions to science. At that time in accordance with fatal political, social, cultural and educational backdrop and with regard to the dead culture and creativity, renaissance came as a process of removing all those obstacles.

**Politically**, The year 1765 was the year when the East India Company moved from being traders to becoming de facto rulers. Consequently there was a crucial shift in their activities too. Fundamentally East India Company accounted a 'populous society, thriving economy, and a well developed political institution.' (Mani, L, 1998). Gradually the British mastered the whole country. The British in general and the company in particular were very clever in the matter of non-interference in the religious views and social practices of the natives. They used to take a neutral position thereby leading to no complaints on the part of the Indians (both *Hindus* and *Muslims*) against the conquerors. (Krishnayya, G.S, 1969). Because of that weak and negative neutral position, **socially**, natives used to practice and cultivate those rites and rituals which were meaningless and were not at par with the religious doctrines of the *Hindus*. Out of many such prevalent horrible rites, the rite of *Sati* was worth of mentioning. That practice became familiar during the epic period as in *Mahabharata*; there were examples of faithful wives who cheerfully burnt themselves on the funeral pyre of their dead husbands to prove their truth. (Singh, I, 1958.) there was always an attempt to prohibit such rite. However all attempts did not end with success. As per the report of the Asiatic Journal of January, 1824, the practice "was discouraged and even forbidden by the Mughol Government." (Collet, S.D, 1988). However that was never absolutely forbidden. **Culturally**, also the society was in a paralysed condition. *Hindu* society was deprived of proper cultural values. There was no unity of religion and morality, thereby leading to ignorance, bigotry,

superstitions and social and cultural decadence. Undoubtedly the reason behind such ignorance and apathy in every sphere of religion, society and culture was the lack of **education**. True system of education with proper emphasis on science was rejected. More emphasis was placed on orientalism. Democratic education, conducive for public good, i.e., a complete system of education was absent then. Proper education with a unity with rationalism was very much felt then. So, the demand of the age in accordance with a dark background of politics, society, culture and education, was a warm welcome of western civilization, an awakening. That dawn of modern awakening was termed as Renaissance.

The first phase of Bengal Renaissance was led by none other than Raja Rammohan Roy, who by his farsighted vision, zeal, compassions and efforts successfully led the movement and created the modern age at a time when it was of utmost importance. He heralded the movement of Bengal Renaissance in 19th century. Socially, the activities for which his name would be remembered all the times was the abolition of *Sati* practice, likewise, in education his most significant contribution was the emancipation of western system of education with particular emphasis on the language of English. He was the first producer as well as the first product of the composite culture of India, which was a fact to be recognized today. His thoughts, his activities, his contributions in social and educational field were beyond the comprehension of an average man. Raja Rammohan Roy's Renaissance movement emphasised over the dimension of humanity in society, rationality in religion, newness in education. He upheld the causes of monotheism and universalism in religion, which further developed into the concept of "internationality, super nationality and universal state." (Seal, B, 1924). Today's concepts of women empowerment, value education, national integration and international understandings all were not possible without humanitarianism, universalism and rationality. Emancipation of one's manhood is very significant today which is not possible without understanding the guiding philosophies of Raja Rammohan Roy's movement. He promulgated his ideas of enlightenment, concepts of liberty and equality along with the method of enquiry. Still today the society is deep buried under the heaps of injustice, corruption and lack of values. The root cause of all sorts of superstitions and dogmatism in the country is inadequate socialisation, which is the result of deviation from social norms and the latter is due to lack of proper education. So, during that dismal stage, when the political, social, cultural and educational conditions were unstable, the study of the nature of Raja Rammohan Roy's Renaissance movement, by which he shaped his own religion and culture is very significant to eradicate the moral degradation, social oppression and educational backwardness (especially for women) covering the Indian society even after so many years of Indian independence.

### *Objectives*

1. To study the political, social, cultural and educational conditions of Bengal at the time of Bengal Renaissance.
2. To study the role of Raja Rammohan Roy in Bengal Renaissance.
3. To study the present day relevance of Raja Rammohan Roy's contributions In Bengal Renaissance.

### *Definitions of the Terms*

1. Bengal Renaissance- The literal meaning of Renaissance was revival or rebirth of ancient tradition, culture and literature. After the Charter Act of 1813, the complex, many sided socio- cultural movement which influenced company's educational policy was designated as Renaissance. In India, Renaissance, the new awakening started with Bengal, so it is termed as Bengal Renaissance.
2. Raja Rammohan Roy-He was a nationalist reformer, born in 1772, on 22nd May, in the village Radhanagar, in the district Hooghly. He fought single hand against many prevalent inhuman evils and practices. He worked tirelessly for the rational analysis of religion with scientific temper, and brought a sense of modernity in the minds of his fellow countrymen by liberal system of education. He was the father of Bengal Renaissance. All the dimensions of his renaissance movement, namely, humanism, rationality and modernity are still significant today.

### *Raja Rammohan Roy—The Pioneer of Bengal Renaissance*

'Renaissance', a rebirth of the age old decaying culture and superstitions brought a new sense of consciousness among the countrymen at a time when in religion, society, education, culture and politics they faced a decadent tradition and an attacking humanity. Regarding the significance of that dark age against of which Raja Rammohan Roy brought revolution, Rabindranath Tagore had remarked that "He was born at a time when our country having lost its link with the innermost truths of its being, struggled under a crushing load of unreason, in abject slavery to circumstances. In social usage, in politics, in the realm of religion and art, we had entered the zone of uncreative habit, of decadent tradition and ceased to exercise our humanity." (Bose, 1976). His renaissance movement actually was a movement for bringing **humanism, rationality and modernity** in the then society. That movement revived the old heritage and glorious past.

Through the Renaissance movement, Raja Rammohan Roy stressed over bringing **humanism** in so called decaying society of 19th century, by emphasising over the eradication of social oppressions, superstitions, ignorance

and sectarian bias. He fought earnestly for eradicating one of the inhuman crimes of the then Hindu society, *Sati*. He was opposed to caste system and for bringing people of different class, castes and communities under one roof of common worship, he founded the *Brahmo Samaj*. That *Samaj* reacted against social stagnation and tirelessly worked for cultural, social and educational upliftment. The chief objective of the *Samaj* was to improve the moral character of the *Hindus* by raising their mind above superstitions and by leading their senses towards truth and reason. (Majumdar, J.K, 1983). His Renaissance movement emphasised over common public good, "*Lokasreya*". (Seal, B, 1924).

The **rational** dimension of Raja Rammohan Roy's Renaissance movement emphasised over comparative religion and over the wholeness of different cults and religions. He believed in the intellectual capacities of man and advocated that man should make an enquiry into the nature and principles of religious doctrines before their acceptance with the validity of the doctrines of truth and reason. Through that movement, he emphasised over the inductive reasoning. (Tagore, S, 1975). For that purpose, Raja Rammohan Roy stressed over the importance of science and scientific education. He believed that Science would enable men to reject dead social conventions, modes and practices.

Another dimension or aspect over which he was always adhered to was the dimension of **modernity**. He was rightly called as the 'beacon of the modern age'. (Upadhaya, P, 1990). He believed that for this, modern liberal type of education is required which could escape men from all bondages of dogmas and superstitions. That enlightened system of education, he knew could secure individual dignity and rights and could promote well developed personality. He was always vocal for individual rights, dignity and the personality. Raja Rammohan Roy believed that through that movement, man would be conscious about their rights and privileges. For that reason, he worked as a co-adjutor of David Hare in founding the Hindu College. not only that but also he extended his valuable help to one of the earlier representatives of the Christian Education Mission, Dr. Alexander Duff in setting up Scottish Mission Secondary School.

### ***Present Perspective***

Raja Rammohan Roy is recognized as a man of many distinguished features, who heralded the Renaissance in Bengal in the 19th century. Three dimensions of his renaissance movements namely, humanism, rationality and modernity still amaze us. So, it becomes necessary to discuss and focus the dimensions of his movement in the context of the present day to find the relevance of his activities.

Through the renaissance movement, Raja Rammohan Roy fought against one of the malignant disorders of popular Hinduism, *Sati*. Though *Sati* is abolished

today, cruelty like bride burning, discrimination between boys and girls in the family, mental, physical torture, rape and many more social oppressions and harassment are still continuing in our society. Nowadays, this general imbalance begins even before birth as because of unscrupulous medical practitioners, who, with the help of technology help to identify a female foetus and destroy it. The cruel rite of *Sati* has taken new version in our present society, female infanticide and female foeticide, gender based oppression of women in India.

In general the sex ratio imbalance worldwide, with a decreasing number of females for every 1000 males may be an indicator of the growing increase of female infanticide and female foeticide. It is based on the sex determination, which leads to an irresistible conclusion that the practice of eliminating female foetus by prenatal diagnostic techniques is widely prevalent. Female foeticide began in the early 1990s as a result of the availability of ultrasound techniques in India capable of determining the sex of an unborn child. Social organizations, activists, thinkers' media and people's representatives have viewed female foeticide as nothing but a case of murder.

According to the Children in India 2012: A Statistical Appraisal, released by the Ministry of Statistics and Programmed Implementation, it was revealed that at least three million girls were missing in 2011 as a result of selective abortions and female foeticide. In 2011 the Indian National Crimes Record Bureau declared that the police had received almost 1,00,000 cases of cruelty to women by their husband or relatives, and more often than not those cases were related to them carrying female foetuses.

Through the renaissance movement, Raja Rammohan Roy always refuted every argument in support of caste system. He was also in support of inter caste marriage and *Saiva* marriage as there was no discrimination of age and caste or race. Raja Rammohan Roy held the view that the entire human society was a big family and for accelerating the national development, caste system had to be eradicated. This concept of Raja Rammohan Roy is very significant today, as in our constitution too, equal rights and privileges for all irrespective of caste, class, creed, sex has been sought for. Article 15 of Indian Constitution, as enacted in 1950, prohibited any discrimination based on caste. Article 17 of Indian Constitution declared any practice of untouchability as illegal.

Raja Rammohan Roy's *Brahmo Samaj* for integrating people of different religious communities and castes still today denounces polytheism, reject the caste system, reject the dowry system and focus on its abolition. Today's *Brahmo Samaj* also held women emancipation as its one of the principles. Other areas where it has focussed today are remarriage of widows, reformation of educational system, opposition to the burning of widows, *Sati*, spread of

universal knowledge, and opposition to corrupting influences etc. The principles are at par with what Raja Rammohan Roy instilled at the time of its foundation.

On 16th May, 1890, at the decision of the Executive Committee of the *Sadharan Brahma Samaj*, *Brahmo Balika Shikshalaya* was founded. From 1910-1936 the wife of Acharya Jagadish Chandra Bose, Lady Abala Bose was the secretary of the school. This school can boast as one of the premier educational institutions for girls in Calcutta still now.

Today in our daily life, Science and technology are growing at a rapid and tremendous pace. In present day there is rapid explosion of information through cellular phones, fax, electronic mails, and the websites. The isolation of the East from the West, which was there in Raja Rammohan Roy's times, is no more. He actually wanted a synthesis between eastern spirituality with western science. Because of the scientific revolution, human lifestyle has changed dramatically in the present centuries. The notions of jet and supersonic air travel, cellular phones, lunar and planetary spacecrafts, computer controlled automation, television, nuclear power, electronic mail all those have appeared as Science fiction but now those are reality. Today more emphasis is placed on scientific invention, research and revolution. Present day science is considered as an appealing stream of career. So, Raja Rammohan Roy's ideologies of scientific temper are still significant today.

Through the renaissance movement, Raja Rammohan Roy emphasised on the dignity, personality and individual rights of men. One such right for which he dedicated his life was undoubtedly the right to education. For securing that right, he assisted in founding Hindu College and in setting up Scottish Mission Secondary School. These two institutions still exist with more expansion and pride. Initially established as Hindu College, it was renamed Presidency College, i.e. the college of the Bengal Presidency in 1855. In 2010, it was upgraded to the status of a full university by the Presidency University Act, 2010 passed in the West Bengal Legislative Assembly. A number of prestigious institutions were started under the aegis of Presidency College. Although now independent, The 'Hindu School' was the college's school when it was established. From the middle of the nineteenth century, the Hare School has been located inside the premises of the college and has been traditionally associated with it. Prasanta Chandra Mahalanobis in 1931 founded The Indian Statistical Institute in the Statistical Laboratory of this college. Scottish Mission Secondary School was converted to Scottish Church College in 1830. Scottish Church College is the oldest continuously running liberal Arts and Science College in India. University Grants Commission rated the college as college with Potential for Excellence. Not only these, but also the following Schools and Colleges were named after

Raja Rammohan Roy as a tribute to his movement for individual educational rights.

- *Ram Mohan College*: Renowned College situated at Raja Rammohan Sarani, West Bengal. It offers undergraduate and post graduate courses. It is affiliated to Calcutta University. Its origin was City College, Kolkata, one of the oldest first grade colleges in West Bengal. It has also a Science building.
- Raja Rammohan Roy *Mahavidyalaya*: This College is situated at his birth place Radhanagore, Nagulpara, Hooghly, West Bengal. From the very beginning the college aimed at spreading both curricular and co-curricular education to the common lot of locality.
- Raja Rammohan Roy College of Education: this college is situated at Bangalore. This college is affiliated to Bangalore University. The college offers courses in Education.
- Raja Ram Mohan Roy Institute of Vocational Studies: this institute is at Chandigarh.
- Raja Ram Mohan Roy Public School : It is situated near Madhuban Chowk, Delhi.
- Raja Ram Mohan Roy Academy Cambridge School : this is situated in Clement Town Dehradun, Uttarakhand.

Apart from schools and colleges, the following libraries and museum were also named after Raja Rammohan Roy as a tribute to his exertions and activities.

- Raja Rammohan Roy Library Foundation: It is a central autonomous organization established and fully financed by the Ministry of Culture, Government of India. It is situated in Salt lake City, in a five storied building.
- Rammohan library: It is situated at Sukiya Street, Garpar, Raja Rammohan Roy Sarani, Kolkata -700009. It is a Public Services Library and having a rare collection of books on the legend.
- Raja Rammohan Roy Memorial Museum : It is on Raja Rammohan Roy Sarani, The memorabilia in the museum consists of photographs, sketches, paintings and excerpts from the writings of Raja Rammohan Roy and others reproduced, wherever possible, in facsimile. Also it has diorama representations designed to recreate the times. Together they not only give us the glimpses of the various facets of one of the greatest personalities of the modern age, but at the same time take us back into a period in history when India was at crossroads, and Raja Rammohan Roy heralded the coming of the modern age. It was opened in 2009.

### **Conclusion**

Thus one can easily interpret that the three dimensions of many sided complex renaissance movement of Raja Rammohan Roy, namely, humanism backed by 'lokasreya' or common public good, rationality, guided by science and scientific temper and modernity, guided by the opening of more and more institutions for modern and liberal type of education for securing individual rights, dignity and personality all are relevant today. Not only these but also his philosophies are required even today for oppressing day to day crimes against women in the name of dowry, female infanticide, female foeticide, withdrawal of property rights etc. So, the activities and contributions of Raja Rammohan Roy still find an important place in the lives of people and also in the society at large. Raja Rammohan Roy will still be adored and honoured and long cherished for many years to come.

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## **Parental Education and van Hiele Level of Geometric Thinking among Higher Secondary Students**

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*Arup Kundu<sup>1</sup> and Aditi Ghose<sup>2</sup>*

### **Abstract**

Nature versus nurture is an ongoing debate in education. Yet we cannot ignore the influence of the home in the education of the child. Significant in this regard are the educational qualifications of parents. Geometry can be one of the most interesting and exacting subjects in the school curriculum. This paper attempts to see whether students' acquisition of geometry thinking is related to their parents' educational qualifications. The population for the study consisted of Class eleven (XI) students in southern districts of West Bengal. The sample consisted of 779 students. The van Hiele test (Usiskin, 1982) was used to assess the levels of geometry thinking, and the Chi Square test was used to ascertain the relationship between of these levels with parental qualifications. The finding indicated that higher parental qualifications were indeed advantageous to the acquisition of higher levels of geometric thinking.

**Key Words:** Van Hiele Level, Geometry Thinking, Parental Qualification.

### **Introduction**

Students in H.S. classes have arisen through ten years of school education and are deemed to have learned the basic knowledge and skills required to lead the lives of proficient citizens. Included in the list of essential qualities to be acquired by the secondary school learner is spatial skill. This is manifest in the students' proficiency and innate understanding of the basics of geometry. Though geometry is to be 'learned' in school it is experienced in everyday life in numerous ways. The richness of this realization depends on each student's individual environment. To look at the influence of the variety of experience and the immediate environment of the student is almost impossible. Yet an inquiry into these aspects can give valuable ideas about the extent to which

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students really conceive geometric ideas. The most important aspect of students' immediate environment that leads to conceptualization of knowledge is the effect of his/her parents' outlook, and by logic, their education.

This argument may be seen as an extension of the oft repeated adage 'An educated mother means an educated family' in our society, usually the father heads the family, and is normally the most educated in therein. Thus he definitely has an effect on the knowledge acquisition of his children. This investigation therefore has attempted to find out the level of geometric thinking of Higher Secondary students and to relate this to the educational qualifications of their parents.

Geometry is the most important branch of mathematics (Isil and Ubez, 2004) and it is related with the properties and relationships of lines, angles, curves, shapes, etc. Geometry helps us to define and explain the world rationally and systematically (Cantürk-Günhan and Baser, 2007). According to Sherard (1981) and Hong (2005), geometry is important for students as it is also applied in other branches of mathematics. For example, geometry is applied in other subjects such as basic science and engineering. The two most poignant objectives of geometry learning are to develop logical thinking skills and to develop spatial intuitions. Spatial abilities are required in learning physics (Pallrand and Seeber, 1984), geosciences (Kali and Orion, 1996), engineering (Hsi, Linn and Bell, 1997) and in chemistry (Bodner and Guay, 1997; Carter, LaRussa and Bodner, 1987; Lord, 1987). Numerous mathematics educators (Barakat, 1951; Murray, 1949; Wrigley, 1958) investigated the relationship between spatial ability and mathematical ability. Mathematics educators (Bishop, 1983) found that spatial ability was correlated more highly with ability in geometry than algebra. Thus geometry is an essential aspect of the education of the individual.

The van Hiele model of geometric thought emerged from the works of two Dutch mathematics educators, Dina van Hiele-Geldof and Pierre M. van Hiele at the University of Utrecht. Van Hiele explained the model of geometric thinking using three aspects: the existence of levels, properties of the levels, and the movement from one level to the next level. The van Hiele model consists of five levels of geometric thinking. These levels, as arranged from the lowest to the highest, include:

**Level 1. Visualization:** The student can merely recognize a shape.

**Level 2. Analysis:** The student is able to analyze a shape because he/she knows the properties of the shapes in Level 1.

**Level 3. Abstraction:** The students have learned geometric properties after having attained the first two levels.

**Level 4. Deduction:** The student is able to construct proofs of geometric properties after having attained the first three levels.

**Level 5. Rigor:** The student is able to understand the implications of non-Euclidian geometry after having attained the first four levels. (Crowley, 1987).

Usiskin tested the ability of the van Hiele model to describe and predict the performance of students in secondary school geometry (Usiskin, 1982). Currently there are two lines of research based on the van Hiele theory in the world: one transforming the van Hiele theory to other areas of mathematics (Boolean Algebra, Function-Analysis-Calculus), and another one using dynamic geometry to achieve higher van Hiele levels – De Villiers(2010).

This investigation has attempted to relate the extent of geometric thinking among H.S. students, with parents' education with the help of the van Hiele model.

#### ***Research Method***

The study was a survey based on quantitative techniques regarding the population of urban class XI student in southern districts of West Bengal.

#### ***Sample***

The sample consisted of 779 Class XI students drawn up from 25 urban schools of southern districts West Bengal. The schools were selected through purposive sampling. Geographical accessibility, proximity and functionality were some of the factors that influenced the choice of these schools. However, adequate representation of districts covering the population was taken. The participants were mainly from middle income socio-economic communities. Formal approval from the school Head Teachers were obtained in order to conduct this research.

Following administration of a personal data sheet the sample was further detailed according to the participants, gender, streams of study and their parents' educational qualification:

**Table 1 : Gender and Streams of Study**

<b>Streams</b>	<b>Science</b>	<b>Arts</b>	<b>Commerce</b>
Male	188	122	95
Female	159	179	36
Total	347	301	131

**Table 2 : Parents' Educational Qualification**

Parent's educational qualification	Illiterate	Primary standard	Madhyamik standard	Higher Secondary standard	Graduate standard or upper	Total
Father's	24	145	180	130	300	779
Mother's	56	188	211	148	176	779

### ***Tools***

A personal data sheet seeking participants' gender, stream of study, educational qualification of father, educational qualification of mother.

The **van Hiele Geometry Test** as constructed by Usiskin (Usiskin, 1982) was translated into Bengali. The test consisted of multiple choice questions, with five questions pertaining to each of the five van Hiele levels. Each question displayed five options consisting of one correct answer and four distracters. The Cronbach Alpha coefficient for reliability of the test ranged from .69 to .79, (Usiskin, 1982; Bal, 2014).

### ***Procedure***

The participants were met in their classes and administered the tools of the study. The completed personal data sheets and the answer sheets of the van Hiele geometry test were collected after about 40 minutes. Forced van Hiele levels were assigned to the respondents according to the literature (Usiskin, 1982).

### ***Data Analysis***

Quantitative techniques were used in the analysis of data using the SPSS 16.0 statistics programs and analyzed.

### ***Findings***

#### ***Fathers' qualifications***

The following table shows the fathers' educational qualification according to the van Hiele levels of the students.

**Table 3 : Forced Van Hiele Level versus Father’s Educational Qualification**

		Father’s Qualification					Total
		Illiterate	Primary	M.P.	H.S.	Graduate or upper	
Forced Van Hiele Level	Level 0	(13)7.5%	(59)33.9%	(55)31.6%	(28)16.1%	(19)10.9%	(174)100.0%
	Level 1	(11)4.4%	(55)22.2%	(58)23.4%	(45)18.1%	(79)31.9%	(248)100.0%
	Level 2	(0)0.0%	(20)12.3%	(37)22.7%	(27)16.6%	(79)48.5%	(163)100.0%
	Level 3	(0)0.0%	(10)7.6%	(21)16.0%	(21)16.0%	(79)60.3%	(131)100.0%
	Level 4	(0)0.0%	(1)1.6%	(9)14.3%	(9)14.3%	(44)69.8%	(63)100.0%
	Total	(24)3.1%	(145)18.6%	(180)23.1%	(130)16.7%	(300)38.5%	(779)100.0%

(Figure in brackets signify frequency)

This has been further illustrated by the following figure:

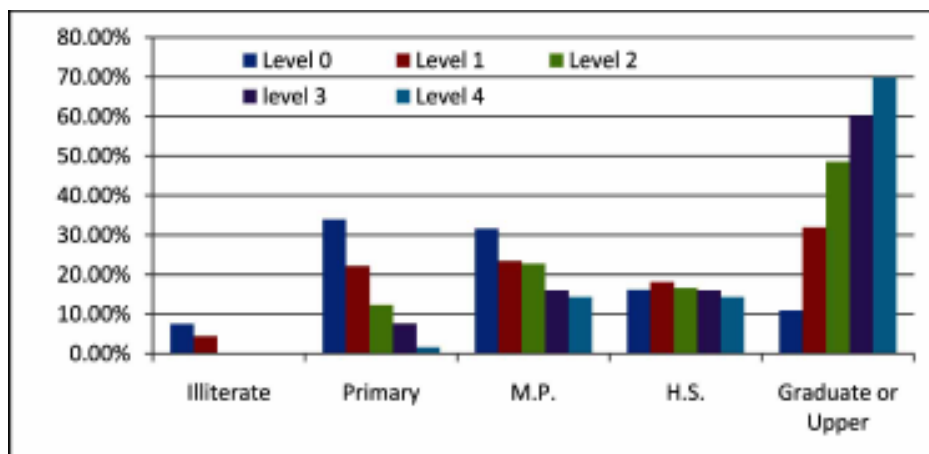


Figure 1. Fathers' educational qualification according to the Forced Van Hiele Levels of students.

The table shows that

- 248 students were at Level 1, making this the modal level.
- Only students with Level 0 and 1 had fathers who were illiterate.
- Student with Level 2, 3 and 4 had a remarkable number of fathers who were graduates or were more qualified.

Thus this indicated that the father's qualification was related to the students' forced van Hiele levels.

To further investigate this the null hypothesis was as follows:

$H_{01}$ : The Forced van Hiele Levels of the participants are independent of their Father's educational qualification.

A Chi Square test was conducted and the result is as follows:

**Table 4 : Chi-Square Test**

	Value	df	Asymp. Sig.(2-sided)
Pearson Chi-Square	1.534E2 <sup>a</sup>	16	.000
Likelihood Ratio	174.517	16	.000
Linear-by-Linear Association	141.024	1	.000
N of Valid Cases	779		

The Chi Square value is highly significant at 1% level, thus  $H_{01}$  may be rejected. The forced van Hiele Level of the participants is not independent of the fathers' qualification. Therefore one may conclude that the father's qualification has an impact on the student's level of geometric thinking. That is, fathers with higher qualifications are more likely to have children with higher forced van Hiele levels. Unfortunately, children of fathers who are illiterate appear to suffer in this regard.

*Mothers' qualifications*

The following table shows the mothers' educational qualification according to the van Hiele levels of the students.

**Table 5 : Forced Van Hiele Level versus Mother's Educational Qualification**

		Mother's Qualification					Total
		Illiterate	Primary	M.P.	H.S.	Graduate or upper	
Forced Van Hiele Level	Level 0	(30)17.2%	(65)37.4%	(61)35.1%	(14)8.0%	(4)2.3%	(174)100.0%
	Level 1	(22)8.9%	(77)31.0%	(58)23.4%	(48)19.4%	(43)17.3%	(248)100.0%
	Level 2	(2)1.2%	(31)19.0%	(45)27.6%	(40)24.5%	(45)27.6%	(163)100.0%
	Level 3	(2)1.5%	(12)9.2%	(34)26.0%	(33)25.2%	(55)38.2%	(131)100.0%
	Level 4	(0)0.0%	(3)4.8%	(13)20.6%	(13)20.6%	(34)54.0%	(63)100.0%
	Total	(56)7.2%	(188)24.1%	(211)27.1%	(148)19.0%	(176)22.6%	(779)100.0%

(Figure in brackets signify frequency)

This has been further illustrated by the following figure:

Figure 2. Mothers' educational qualification according to the Forced Van Hiele Levels of students.

The table shows that

- No students at Level 4 had mothers who were illiterate.
- Student at Level 2, 3, and 4 had a considerable number of mothers who were graduates or were more educated. In fact, most students at Level 4 had mothers who were graduates or more educated.

Thus this indicated that the mother's qualification was related to the students' forced van Hiele levels.

To further investigate this null hypothesis was as follows:

$H_{02}$ : The van Hiele Levels of the participants are independent of their Mother's educational qualification.

The result of the Chi Square test is as follows:

**Table 6 : Chi-Square Test**

	Value	df	Asymp. Sig.(2-sided)
Pearson Chi-Square	1.859E2 <sup>a</sup>	16	.000
Likelihood Ratio	210.009	16	.000
Linear-by-Linear Association	166.364	1	.000
N of Valid Cases	779		

The Chi square value is highly significant at 1% level, thus  $H_{02}$  may be rejected. The forced van Hiele Level of the participants is not independent of the mothers' qualifications. Therefore one may conclude that the mother's qualification has an impact on the student's, level of geometric thinking. That is, mothers with higher qualifications are more likely to have children with higher forced van Hiele levels. Unfortunately, children of mothers who are illiterate appear to suffer in this regard.

### ***Discussion, Conclusion and Recommendations***

The above analysis shows that the students' forced van Hiele Levels is impacted by the qualifications of both fathers and mothers. In other words, the primary source of acculterization, and by reasoning, of attuning to the reception of knowledge by the student is the family. In this case, the acquisition of spatial skills and conceptualization of geometric ideas depends on the educational level of the parents.

Highly educated parents are more likely to be believers of the importance of mathematics on their children's lives. Thus they transfer their positive feelings and attitudes to their children (Hong, You, & Wu, 2010). Once students are exposed to positive mathematics feelings and attitudes, their intrinsic motivation towards mathematics can increase (Gottfried, Gottfried, & Oliver, 2009) and they want to be more successful in mathematics. Several researchers appear to be in consonance with the present findings. For example, Demir, Kilic and Unal (2010) find that students whose parents are highly educated and exposed to mathematics in their lives tend to show more success in mathematics than their peers whose parents are less educated and not exposed to mathematics. Because highly educated parents know the learning requirements and provide opportunities for the appropriate educational environment for their children (Alomar, 2006), their children are exposed earlier to mathematics in the most effective educational environment.

Even though the majority of the literature on parents' education pertains to the direct, positive influence on achievement (Jimerson, Egeland, & Teo, 1999; Kohn, 1963) Luster, Rhoades, & Haas (1989) also suggest that it influences the beliefs and behaviours of the students, Thus parents' education leads to positive outcomes for children and youth (Eccles,1993).

Though 'the nurture versus nature' debate has not been resolved, it remains that with the right kind of nurturance children may be able to develop with more awareness and greater logical sense and hence enhanced power of conceptualization. Ergo, children of educated parents have the advantage of being enveloped within an atmosphere of discourse that is directly or indirectly affected by their urbane knowledge.

Educators are constantly concerned with the poor performance of the learners in geometry. The van Hiele theory was useful in analyzing the performance of the learners. The results of this research identified a notable factor that could explain why learners experience difficulties with school geometry in school.

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## Relationship between Teaching Behaviour and Personality Trait of Effective Science Teachers

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### *Abstract*

Teacher behaviour is influenced by both situational factors and personal dispositions. In the present study a constructive methodology was adopted to find out the relationships between the teaching behaviour patterns and the personality patterns of the effective science teachers of the secondary school level. A sample of 30 effective science teachers (10 in Mathematics, 10 in Physical Science and 10 in Biological Sciencet) were identified from the perceptions of their ex-students studied in their respective schools. The Effective Teacher Rating Scale and Cattell's Five-Factor Inventory were used as data gathering tools. It was found that there were some sorts of relationships between the teaching behaviour patterns and personality patterns, especially between the Personality Traits, viz., Openness, Concientousness, Extraversion, Agreeableness, Neuroticism and Teacher Behaviours, viz., General Teaching Behaviour, Preparatory Behaviour, Presentation Behaviour, Pedagogical Behaviour, Motivation Arousing Behaviour, Classroom Management Behaviour either in a positive way or in a negative way.

**Key Words:** Effective Teacher, Teacher Behaviour Pattern, Personality Pattern.

### *Introduction*

Behaviour of the teacher in general and in the classrooms in particular has a great bearing in their participation in the teaching-learning processes on development and shaping of the student behaviour. Teacher behaviour is the activities as they go about doing what ever is required of teachers, particularly those activities which are concerned with the guidance or direction of the learning of students. It also regards teacher behaviour as a function of the

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characteristics of the teacher, the educational environment and the tasks in which the teacher is engaged with.

Teachers are made as well as born. Some teachers may possess natural capabilities or aptitudes but the scope of their modifiability through self-experience is quite considerable. The teaching behaviour may also be acquired through training as well as interactions with the environment and as such it is modifiable. Since the situations are not static, the teaching behaviour changes due to the surrounding environment.

Behaviour is influenced by both situational factors and personal dispositions. Such disposition does appear to be relatively stable over time and accorded situations in most of the instances. The basic question is which disposition or traits are most important for consistency in effective teacher behaviour. In his search for the key dimension or traits of personality, Gordon Allport (1961) distinguished between two basic approaches. One, known as the *Nomothetic* approach, seeks to compare all individuals on the same dimensions of personality. The other, known as the *Idiographic* approach is concerned with the uniqueness of specific individuals. It seeks to identify the unique combination of traits that best describe the personality of a specific person. Using the Idiographic approach, Allport concluded that personality traits could be divided into several major categories. According to Allport, "each human being possesses a small number of central traits that together account for much of that person's uniqueness as an individual".

Using the factorial analysis technique, Cattell and Dreger (1977) have identified 16 basic source traits. Sophisticated research conducted during the past two decades has begun to converge on a refreshingly simple conclusion. In fact, there may be only key or central dimensions of fundamental source traits (Costa & McCrae, 1988; Hogan, 1983; McCrae, 1989; Noller, Law & Comrey, 1987). These five central dimensions are known as – (i) Extraversion, (ii) Agreeableness, (iii) Conscientiousness, (iv) Emotional Stability and (v) Openness to Experience (Baron, 1995).

Constructivism is basically a theory, based on observation and scientific study about how people learn. It says that people construct their own understanding and knowledge of the world through experiencing phenomena around us and reflecting on these experiences. When we encounter something new, we have to reconcile it with our previous ideas and experience, may be changing what we believe, or may be discarding the new information as irrelevant. In any case, we are active creators of our own knowledge. To do this, we must ask questions, explore, and assess what we know.

In the classroom, the constructivist view of learning can point out towards a number of different teaching practices. In the most general sense, it usually means encouraging students to use active techniques (experiments, real-world problem solving) to create more knowledge and then to reflect on and talk about they are doing and how their understanding is changing. The teacher makes sure he/she understands the students' preexisting conceptions, and guides the activity to address them and then build on them.

Constructivism as applied to education is a relatively recent phenomenon primarily derived from the work of Swiss developmental psychologist Jean Piaget (1973) and Russian psychologist Lev Vigotsky (1978). However, its underlying principles have had a long history in education influenced by the developmentalist notions of 18th century French philosopher Jacques Rousseau, and later, the theories of John Dewey, G. Stanley Hall, and Arnold Gesell (Stone, 1996). Developmentalist teaching practices emerged as a reaction against the harsh educational practices employed in 18th and 19th century Europe and America.

Biswas, A.K. (1998), in his study on "Teacher Effectiveness Index" has developed an Index that objectively and meaningfully quantifies a secondary school teacher's effectiveness from the viewpoint of pupils' learning with the assumption that a pupil's annual-learning in a school subject is assessed by his/ her scores on curriculum reference test of the Mastery system. This index may be used to measure and compare teachers' effectiveness irrespective of pupils, subjects, classes and schools. Real-life data have been used to determine the index of teacher effectiveness.

The present constructive study dealt with the relationship between teaching effectiveness behaviour and personality factors of the science teachers of Secondary level.

### ***Objectives***

1. To identify effective science teachers of secondary level in West Bengal as perceived by their ex-students;
2. To identify classroom behaviour patterns of effective science teachers of secondary level in West Bengal;
3. To find out the relationship between the five personality traits and classroom behaviour pattern of effective science teachers.

### ***Methods***

The proposed study as an empirical research was based on constructive study design. According to Strommen, E.F. & Lincoln, B. (2006), there are four phases

of a constructive study design – (i) Exploration, (ii) Conceptualization, (iii) Production and (iv) Post-Production.

*Sample*

Approximately one thousand ex-students of different categories drawn at random was the first sample of the study. The second sample was thirty effective science teachers, ten each from Mathematics, Physical Science and Life-Science subjects, who are still teaching in secondary schools of West Bengal, drawn from the pool of effective school teachers identified from the opinions of ex-students.

*Variables*

Two major variables were – (i) Classroom Behaviour Pattern of Effective Secondary School Science Teachers and (ii) their respective Personality Traits.

*Tools*

- (i) Effective Teacher Rating Scale - The scale was used by each of the sampled ex-students to identify effective teacher he/ she was taught in his /her school life and the same was used to identify classroom behaviours of that effective teacher.
- (ii) Cattell’s 5 P.F. Inventory - The inventory was administered by each of the sampled effective science teachers under study to locate five key or central dimensions of personality traits.

**Table 1 : Showing Means and Standard Deviations of Teacher Behaviour of Science Teachers**

<b>Effective Teacher Behaviours</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Standard Deviation</b>
General Teaching Behaviour	.00	4.67	3.4333	1.33380
Preparatory Behavior	.00	5.00	3.7000	1.46102
Presentation Behaviour	.00	4.67	3.5500	1.31245
Communication Behaviour	.00	4.50	3.5167	1.32742
Pedagogical Behaviour	.00	4.50	3.0375	1.26251
Motivation Arousing Behaviour	.00	4.80	2.8400	1.28513
Classroom Management Behaviour	.00	4.75	3.0500	1.29529

**Results**

The obtained data was analyzed and the following results were obtained:

Table 1 shows that Preparatory behaviour of the Science teachers (N=30) has the highest mean score (M=3.70) and the General Teaching behaviour is the next one (M=3.4333). The lowest mean Score is found in respect to Motivation Arousing behaviour of the Science teachers. But the overall scores of the Effective Teacher Behaviour of the Science are found below average.

Table 2 indicates the Means and SDs of five Personality Traits of Science Teachers (N= 30). The highest mean score (M=4.6833) is found in Openness personality trait, whereas the lowest is in Neuroticism (M=1.9333). The overall personality pattern of the Science Teachers has been found quite moderate.

**Table 2 : Showing Means and Standard Deviations of Five Personality Traits of Science Teachers**

Five PF	Minimum	Maximum	Mean	Standard Deviation
Openness	4.33	5.00	4.6833	0.22839
Conscientiousness	2.83	3.50	3.1667	0.26058
Extraversion	3.00	4.50	3.7333	0.50430
Agreeableness	2.17	3.83	3.2667	0.54546
Neuroticism	1.00	3.00	1.9333	0.52234

Table 3 shows that Openness and Conscientiousness personality traits of science teachers are positively correlated with all the seven measures of effective teacher behaviours, whereas personality traits like Extraversion, Agreeableness and Neuroticism are negatively correlated

**Table 3 : Showing Correlation Matrix between the Scores of Effective Teacher Behaviour and Five Personality Traits of Science Teachers (N=30)**

Effective Teacher Behaviour	Statistics	Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism
General Teaching Behaviour	r (Pearson) Sig. (2-tailed)	.663* .037	.124 .732	-.130 .720	-.117 .747	-.592 .071
Preparatory Behavior	r (Pearson) Sig. (2-tailed)	.683* .030	.113 .755	-.146 .688	-.222 .538	-.620 .056
Presentation Behaviour	r (Pearson) Sig. (2-tailed)	.563 .090	.054 .882	-.136 .708	-.098 .787	-.661* .037

**Table 3 : Showing Correlation Matrix between the Scores of Effective Teacher Behaviour and Five Personality Traits of Science Teachers (N=30) (Contd.)**

Effective Teacher Behaviour	Statistics	Openness	Conscientiousness	Extraversion	Agreeableness	Neuroticism
Communication Behaviour	r (Pearson) Sig. (2-tailed)	.508 .134	-.018 .961	-.242 .501	-.126 .728	-.599 .067
Pedagogical Behaviour	r (Pearson) Sig. (2-tailed)	.519 .124	.049 .893	-.393 .261	-.023 .950	-.677* .032
Motivation Arousing Behaviour	r (Pearson) Sig. (2-tailed)	.502 .139	.044 .903	-.227 .527	.205 .570	-.790** .007
Classroom Management Behaviour	r (Pearson) Sig. (2-tailed)	.451 .191	.014 .970	-.247 .492	.189 .602	-.775** .009

\*p< .05; \*\*p< .01

with the effective teacher behaviours of the science teachers. It further reveals that Openness is significantly correlated with the General Teaching Behaviour and Preparatory Behaviour of the science teachers but negative significant correlations are found between Neuroticism and teacher behaviours, like, Presentation Behaviour, Pedagogical Behaviour, Motivation Arousing Behaviour and Classroom Management Behaviour. Where as, Conscientiousness, Extraversion and Agreeableness personality traits show low level correlations with all the seven types of Effective Teacher Behaviours.

**Conclusion**

The present study reveals that that there are some sorts of relationships between the teacher behaviour patterns and personality patterns, especially between the Personality Traits, viz., Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism and Teacher Behaviours, viz., General Teaching Behaviour, Preparatory Behaviour, Presentation Behaviour, Pedagogical Behaviour, Motivation Arousing Behaviour, Classroom Management Behaviour either in a positive way or in a negative way. It further reveals that the exhaustive related elements need to be further studied for developing a model of an effective teacher. It emphasises not only the domains of effective teaching which receive most of the attention in teacher education and evaluation, namely content knowledge, pedagogical knowledge and, more recently, pedagogical content knowledge but also takes into account the teacher’s personal knowledge and knowledge of context. We suggest that it is not just this knowledge that teachers



have in these domains but the way this knowledge overlaps and interacts both within the teacher and with the teacher's physical, social, intellectual and emotional environment.

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## **Representation of Women and Museum Education: A Micro Study in some Selected UK Museums**

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*Indrani Bhattacharya\**

### *Abstract*

The paper focussed mainly on representation of women in some UK museums. In this regard the researcher surveyed few museums in UK, viz., the British Museum, the Science Museum; and the Hunterian at Glasgow University, along with the Imperial College Library. The study concluded that museums being important social institutions reflect prevalent situations in the society. Representations of different socio-economic segments of the society must be reflected in the museums.

**Key Words:** Museum Education, Display, Programmes, Representation, Women, Policy

### *Introduction*

About half of the world populations are the women. Ideally, in every sphere of life, including museums, women should have equal participation, but the reality is far from the ideal. In the museums, women participation in the policy making and decision taking positions are seldom found. Though, ironically enough, girls constitute majority of the students in the university Museology departments throughout the world. Women are found in museums in limited numbers restricted to the lower ranks. The Researcher finds a serious subject for research to be undertaken to look out the factors behind such inequality. When one goes to look for basic data regarding the number of women visitors in the museums, the likes & dislikes, expectations, aspirations & desires of the women museum visitors, exhibitions relating to women issues, role of women in museum management, the contributions of women in the collections that are possessed by the museums, etc., he/she would likely to find a complete vacuum in the database. No explanatory research has been taken up, even by the big institutes, on such important issues. The basic problem is that the museum planners and administrators do not accord women issues the same importance as they do to the men. Such apathy perhaps arises from the visualisation of the role of women in family and society.

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Women are the major contributors to the museum collections. Traditionally rural women have been involved in the production and distribution of goods and services. Many of the art and craft collections in the museums are solely produced by the womenfolk. Even today, women artisans play pivotal role in producing handicraft items. Women have considerable roles in the production of the artefacts made by their men folk. Say, for example, the clay and terracotta idols, though produced mainly by the male artisans, still women participate in decorating, arranging and packaging them. Examples are plenty. In different parts of India, handicraft items, beautiful textiles made by the women can be found. The contributions of the women must be duly recognised. Women are in fact repositories of numbers of traditional cultural heritage. In rural Indian set up, also in the urban milieu, women are the primary source of moral and value education for the children. When one thinks of his/her own grandmothers or great grandmothers, he/he may find that probably, they were not formally educated, still they used to uphold high standard of morality, ethics, social values and collective wisdom. The so-called *granny's kitchen remedies* are extremely useful even in today's world of medical excellences. The traditional wisdom borne by the women must be properly and scientifically documented immediately to save them from extinction. Hordes of elements of cultural heritage, especially the oral traditions like ballads, folk songs, riddles, rituals, decorations, folk games, even recipes, etc., are still being carried by the women.

Museums and museologists must arrange to take up serious research works to document, preserve and revive such a rich repository of the Indian cultural heritage. Immediate research should be taken up to ascertain the exact numbers of women visitors, their choices, dislikes, aspirations, etc. Museum research on women should be counteracting cultural and social barriers and should add to the skill and experience. As a very first step, it must be ascertained the actual percentage of the women visitors in relation to their male counterpart. Then it must be found out the women's choices regarding content, format & style of the exhibitions even to the basics like colour schemes of exhibits, galleries, etc., exhibit orientation, various programmes including the educational ones and the extension services. The inputs should help to prepare a complete database on the women museum visitors that would enable the museums to amend themselves.

#### ***Objectives of the Study***

- a. To study the representation of women in the exhibits of the selected museums.
- b. To make a study on programmes undertaken for women by the selected museums

- c. To study representation of women in the staff pattern of the selected museums.
- d. To arrive at a correct conclusion regarding the representation on women in and around the museums.

### ***Research Methodology***

Research methodology included thorough search of the published materials and other papers, which are available at various libraries. Most current information provided by organisations, conferences and individuals actively working in this field will be accessed. Information was also obtained from the Internet. Extensive surveys in selected museums, particularly in India & United Kingdom, to photo-document the exhibits representing women, and to acquire other relevant data for further analysis and comparing is the most important part of this project. Interviews with museum personnel, both women & men are another focus area of the project. The accumulated data were analysed to arrive at a rational conclusion. Lastly the findings and interpretation will be published.

### ***Observation***

1. The Researcher made extensive Library works in the British Library, London, Science Museum, London and the Imperial College Library, London, in search of related references and collected adequate materials on the objectives of the Research Project.
2. The Researcher also searched Internet for relevant materials and made a collection of archival materials.
3. The Researcher made extensive study on the exhibits displayed in the British Museum, Science museum, London, the Victoria & Albert Museum, London, and photo-documented the exhibits that represent women.
4. The Researcher visited several important museums in UK, viz., the Hunterian, the Kelvingrove Art Gallery & Museum, Glasgow; the National Art Gallery, London; the National Portrait Gallery, London, and photo-documented exhibits related to the topic of Research for making comparative studies with the findings in the Indian museums.
5. The Researcher made a study on programmes undertaken for women by the selected museums.
6. The Research project recorded and analysed the demographic profile of the women visitors in the selected museums and also studied representation of women in the staff pattern of the selected museums.
7. The Researcher completed compilation and analysis of the collected data

to arrive at a correct conclusion regarding the representation on women in and around the museums.

8. The findings of the research project corroborated the primary contention that representation of women as a whole is marginal in the museums though women as exhibits are predominantly perceptible.
9. The research findings strongly underline necessity of further research to assess the situation more accurately.

### ***Major Findings***

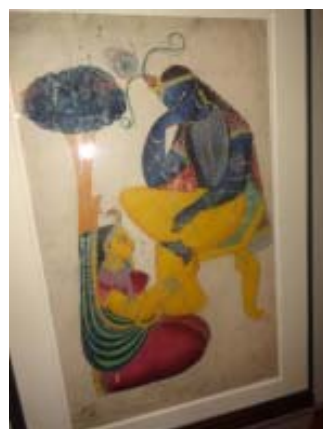
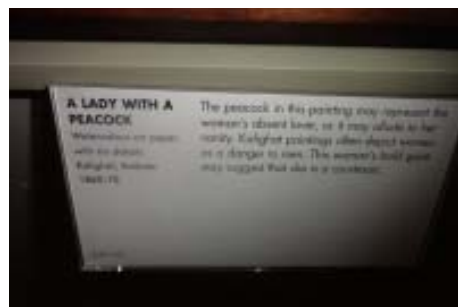
Representation is presently a much debated topic not only in postcolonial studies and academia, but in the larger cultural milieu. The 'Oxford English Dictionary' defines Representation primarily as 'presence' or 'appearance' there is an implied visual component to these primary definitions. Representation can be clear images, material reproductions, performances and simulations.

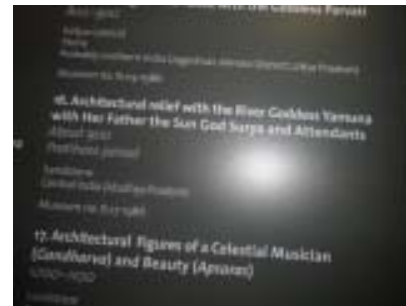
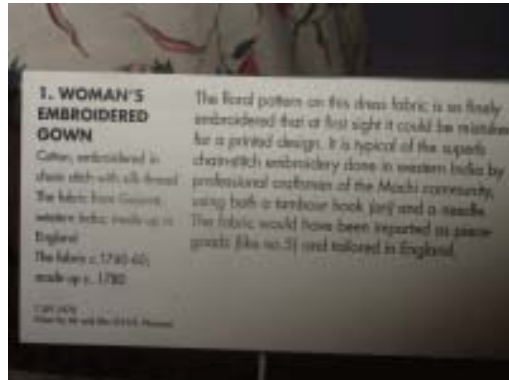
Venus from British museum, UK, height 88 inches, gift of H.M. King William IV; this sculpture was one of a dozen or so found at roman villa at campolemini dug up in spring 1794 by Robert Fagan in partnership with Prince Augustus and Sir Corbet. The Venus is of the Capitoline type. Prince Augustus had promised the statue to his brother Prince of Wales, and it centred the letters collection at Carlton house. Four years after the death of George IV (1830), his success William IV donated it to the British museum, London. Venus was the Roman goddess of love. The goddess is shown in art as young and beautiful and sometimes accompanied by Eros or cupids and doves. Venus was one of the most popular deities in roman art and numerous representation survive including sculptures figurines in terracotta and bronze and representation in mosaics and wall paintings. Bronze statuette of Venus or her mother Dione were made in the roman period probably around the middle of the 2nd century AD. This figure shows 'Venus' the roman goddess of love.



During the survey works in different museums in London, the researcher found various objects displayed in Victoria & Albert Museum, India Office Library, The National Art Gallery, London are related to women issues. Some are depicted here for references.

Thematically and aesthetically some of the finest secular patas of Kalighat are related to women. Sometimes they make music on the veena, the violin, the harmonium or tabla well stacked versions of surasundaries or celestial beauties of the sun temple at Konark, Orissa. Others are seen getting ready for their clients of the evening, giving the last touches of their pneumatic women like early make up. One golap sundari 'the beauty with the rose' another fixing her eardrop, a third finishing her toilette. One beauty fondles her pet parrot as she awaits her Babu. Another refuses a drink offered by her lover. From the visuals it is clear that women constitute a major part of museum collection. In Victoria & Albert Museum, London a beautiful collection of these patas reveals the same socio-cultural pictures.





When work of a museum itself generates higher levels of accountability and responsibility by systems that encourage direct feedback on performance, clear work goals, and appropriate involvement of a Museum a climate for creativity and the work output of improved quality has been achieved. In Science Museum, London, UK, One could witness this. Many of the Science Museum exhibits are donated to the Museum by women. For example, the calculating machine which was used at the Scientific Computing Service (SCS) from about 1939 to 1965, when it was transferred to Physics and Astronomy Department of University Collage, London. It was given to the Science Museum in 1981 by Beryl Waters—a woman. Its fundamental design was done by Alan Turing, who wrote the specification in 1945 while working at the Government’s National Physical Laboratory. Until 1960s, most homosexual was illegal. Many people lived in constant fear of being caught by police, prosecuted and either imprisoned or fined. In 1952, Turing was arrested for a sexual relationship with a man and sentenced to a one-year course of female hormone treatment. At that time he was busy advising the Government on secret code-breaking projects. The Pilot ACE computer, 1950—was one of the first electronic ‘universal’

computers. Two years after his arrest, in 1954, Turing was found dead at his Wilmslow home. The official verdict was suicide from cyanide poisoning, the coroner believing 'his mind had become unbalanced'. Science Museum recently organises an exhibition on Alan Turing's Life and Legacy. Head of Exhibitions and Programme, Emily Scott Dearing stated that 'we are always mindful of the gender balance in creating any exhibition and constantly thinking about making this a welcoming place for all. Nowadays there is gender imbalance in studies of physics and mechanics. But recently science museums organises some new exhibitions like 'Engineering Today' to arouse curiosity among the target groups of 11 to 16 years so that both boys and girl students are interested in studying pure science and engineering. Though there are many women scientists and engineers who are women, but there lies a great gap in the numbers of boys and girls students studying pure science and engineering. Like Indian subcontinents, in United Kingdom also most of the girl students prefer to study humanities and social sciences. Besides that she also claims that her team is predominantly female. In 2014, In International Women's Day Programmes, all the speakers are women. Basically, Dr Dearing is a post doctorate in gene therapy from Cambridge University. Now she is the first person in decision making about museum programmes and exhibitions.

Head of research and public history in Science Museum, London, Dr Tim Boom worked for 31 years and mainly worked on public history of the science. In United Kingdom, there are many science centres besides science museums. But most of the museums are reluctant to have biological sciences. In 1970s Welcome Trust came forward to open the Welcome wing which is mainly related to human biology and medical sciences. Coming of Welcome is a revolution in science museum. It is also a turning point towards the socio-historical and social dynamics of museums. According to him science museums are both social and cultural institution and it is much more than an institution of science communication, but serious types of research on the social dynamics has not been done on it. As the history passes the meaning of the objects of museum changes, the science museum professionals took part to uncover the stories of the unheard, working classes of people since 1960s onwards. He also stated that we have to be careful in choosing languages due to social change and he pointed out the disproportionate representation as 'positive discrimination'.

Amelia Robinson—the manager of Audience Research in Science Museum, London, UK, stated that among museum visitors almost 50% are women. Some of them come to the museum accompanying family to spend quality time in the museum. Some of them also come because they are interested in science and culture and some want to give their children some knowledge in an informal



manner. She also told that the Director of learning in the museum is woman and lots of the projects in the museum are headed by women leaders. Ms Robinson also added that woman professional come to the museum by choice. In London day care for babies is very expensive, so some mothers prefer to join in part time jobs. On behalf of the museum she added that Museums authority does not differentiate between males and females. All exhibitions are open to large no of people as much as possible. But some persons of older generation believe that girls are not fit for hard core science and technology fields.

Jean Franczyk, the Deputy Director of the Science Museum, London, UK, worked for 15 years in different museums and he is working 9 years in this museum. By birth she is an American. She mentioned the pioneer woman pilot, Amy Johnson, whose story is also depicted in the 'Flight Gallery.' She said, "Men Do Not Believe Us Capable." According to her after 10 years of her joining in the museum the situation regarding woman museum professional has been changed, recently more women are in the profession, there is also an option for part-time professional. The pro-active steps of the Government to promote more girls students to science and technology is probably the another reason. Now they have strong voice for the audience.

The British Museum: Visit Modes and Segmentation report 2013/14 presents two methods through which the British Museums' audience is divided into groups of individuals with shared needs and values: culture Segments and Visit Modes. Culture Segments is a sector-specified whole market segmentation system for culture and heritage organisations. On the other hand, visitors to cultural venues are far from homogeneous, and an individual visitor never makes the same visit twice. Their behaviour on site varies each time they come based on who they are coming with and their reasons for visiting. A total of 262,400 booked schools groups visited the British Museum in 2013-14.

Sightseers are socially driven visitors for whom the destination, the building, and orientation tools are as important, if not more, than the collections. They are predominantly one-off visitors and view the British Museum as one of the many tourist attractions in London. 82% of the Sightseers group were visitors from overseas. This group focuses on having a general visit of the Museum's collections. But in this type of survey women visitors participation was not counted separately, though the different age groups and the purpose of visit was considered as important data regarding visitor surveys. From the data it is also clear that families are visiting for a combination of both enjoyment and learning. Adults within the family, mostly father and mother, have different levels of knowledge and confidence. But one thing is common i.e. they are attending with children under the age of 16. For a successful visit the parents

need to occupy, stimulate and engage their children. Less confident parents need the British Museum to act as a facilitator in their visit, on the other hand some parents have the knowledge and experience to explain and analyse the collections to their children. Families represented the largest Visit Mode group, accounting for 26% of all visitors. The number of family visitors in 2012-13 and 2013-14 are more or less similar, revealing that the Family audience was maintained rather than increased. Family visitors were significantly more likely than average to be aged between 35 and 44. In British Museum 'Visit Modes & Segmentation Report', 2012-13 was a particularly successful year for engaging families. While the growth in the family market did not continue in 2013-14, the size of the family audience was maintained.

Elizabeth-I's (1558-1603) reign is considered the Golden age in the history of England. For she ushered in political stability and with it trade, commerce, and fine arts flourished, But Elizabeth was not in a hurry to solve the question of religion and she wanted to solve this delicate problem with the help of parliament who represented the people. Her childhood as Besides Elizabeth-I England and Great Britain have had a few reigning queens when the crown had no male heirs. These women rulers include some of the best known, longest-reigning, and culturally most successful rulers in Britain History; Empress Matilda – Lady of the English, Lady Jane Grey, Mary I, Mary II, Anne, Victoria, Elizabeth II. Queen Victoria was Queen of the United Kingdom of Great Britain and Ireland from 20th June, 1837 to 22nd January, 1901 till her death which is longer than any other British monarch and the longest of any female monarch in history. This period in history is known as the Victorian Era. From 1st May, 1876, she used the title of Empress of India. It was a period of cultural, political, industrial, and scientific change within UK. It was also marked by a great expansion of the British Empire. She was the last British Monarch of the House of Hanover. Victoria later described her childhood as 'rather melancholy'<sup>1</sup>. Her mother was extremely protective, and Victoria was largely isolated from other children under the so-called "Kensington System."

This type of conservative social system was prevalent in British Society. According to Jill Cook of the Department of Prehistory & Europe Section of the British Museum, London, now the British Government has good laws regarding women. The Government is also inspiring girls' student to join in the pure science & engineering disciplines of colleges & universities of UK. Though the no of women population in UK is higher than male population but ratio of women scientists & engineers in relation to men scientists & engineers are much less. According to 2011 Census, the population of the United Kingdom was

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<sup>1</sup> <http://www.ons.gov.uk/ons/rel/census/2011-census>, accessed on 10.12.2014

estimated to be 63.2 million. There were 31 million men and 32.2 million women. A recent comprehensive review of statistics on women's & men's position in Britain finds that differences between men and women are getting smaller over a wide range of areas from employment to education and health.

In the collection of this museum there is a large no. of objects which are related to women directly or indirectly. In Room No. 4 there is a limestone statue of a husband and wife which belongs to 1300-1250 BC. The Warren Cup is a silver drinking cup decorated in relief with two images of male same sex acts. Roman artworks on glass, pottery, etc., with sexual acts represented were very popular and were intended to be seen by all sections of society. The Warren Cup is exhibited in the Room No.70 of the British Museum, Romans had no word for homosexuality and the images on the warren cup provide an important aspect of their culture. Greek Vases in the 'Enlightened Gallery' also reveals women subjects.



In Room No 23, one could find the version of the 'Crouching Venus' (Accession no. GR1963.10-29.1). It is the former collection of Sir Peter Lely; lent by HM Queen Elizabeth II, dated back to 2nd Century AD. It is a marble statue.

In Room No. 56, the Babylonian 'Queen of the Night Relief' of the Goddess Ishtar, circa 1790 BC – this Mesopotamian Goddess of sexual loves and war. Portrait of a young woman (c. 1440) Leonardo da Vinci's 'The Virgin and Child' with Saint Anne and the infant Saint (c. 1499-1500), Drawing of a woman with a rose (1763-1765), In Room No. 40 – the ivory statue of Virgin & Child, who is crushing a dragon under her foot from Paris, France (1310-1330 AD) are some collections of this type. In Room No 46, the ivory sculpture of Virgin Mary and Child, Mediaeval, about AD 1330, Paris, France.

The Hunterian is Scotland's oldest public museum and has over a million magnificent items ranging from mummies to rocks, minerals and meteorites. William Hunter's original collection is assembled here. In 1807, the Hunterian was the first museum in Britain with a gallery of paintings. But it is most famous



for Whistler and Mackintosh collections. Masterpieces by Rembrandt, Rubens, Chardin and Stubbs and world largest display of works of James Mc. Neill Whistler are presented here. The mackintosh house displays the personal settings of the remarkable artist couple.



**Conclusion**

The researcher collected relevant inputs to document, preserve & prepare a database regarding the women visitors in museums in UK, actual percentage of women visitors in relation to their male counter parts, women’s choices regarding

content, format & style of the exhibition, women professionals actively working in museums. This work helped the researcher to compare the inputs with collected data from Indian context. This work is completely based on a different socio-cultural milieu. Being a vast topic it is very difficult to do complete justice within a few pages. Museum is a social institution and quite relevant to contemporary social issues. The Torreon Declaration of INTERCOM, 2009 calls the museums to be active in promoting diversity and human rights; the essence being the equal, unbiased representation of all, especially the underprivileged in the core of management of modern museums. Women and their creativity as individual entities need to be managed professionally. Immediate research should be taken up to ascertain the exact numbers of women visitors, their choices, dislikes, aspirations, etc. The findings of the Research work are important ones in relation to the interdisciplinary subject Gender Studies. The present study would definitely help in maintaining the balance in the museums. Nevertheless, further studies should follow to achieve the goal.

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## Teaching Dynamism and Teacher Education

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### **Abstract**

The present paper tried to highlight few points regarding teaching learning situation which they supposed to be needed to bring dynamism in teaching. Moreover as teacher education programme is the gateway of successful teaching, so the highlighting points can be given more concern in the teacher education programme to make teaching dynamic and effective.

**Key Words:** Teaching Dynamism, Critical Thinking, Analytical Thinking, Creative Thinking, Classroom Mannerism.

### **Introduction**

Education is an important tool for social reconstruction. It helps to the solution of various problems faced by the society. As the role of teacher is very important to the education of children so the education of the teachers themselves becomes an important matter of concern. Modern society is full of professional men and women like doctors, engineers, weavers, oilmen, cobber, barber, sweeper, washer men etc. A doctor's profession is concerned with the physical side of man's personality and the engineer looks after physical side of social life in building roads, bridges, dams, houses in devising new methods and machines. Likewise all the above mentioned professions are useful for the society, which is limited to physical side of human life only. But the highest good consists in all round development of individual physical, social, intellect, moral, spiritual and aesthetic aspects. It is the teaching profession which helps an individual for his growth fully in his body, mind, spirit, intellectual emotion with moral values and artistic sensitivity. Therefore teaching has been accepted as the noble profession.

Teacher education is an integral part of education system which is conditional by the ethics and principles of education of teacher to strengthen the main attributes of a profession. It is one of the principles of educational planning that the quality of education depends upon the quality of teachers and teacher

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education is a systematic process to make quality teachers with proper training and education.

***Dynamics of Teaching in 21st Century Education***

“The teacher, like an artist, the philosopher and the man of letters, can only perform his/her work adequately if he/she feels himself/herself to be an individual directed by an inner creative impulse not dominated by an outside authority”–B. Russell.

The basic need of 21st century is to have dynamic teacher. Every teacher must have widest vision where the highest aim of education should not be to make students only to pass the examination. The ultimate goal of education is learning must be to make the students well developed personalities with high intellectual, moral and spiritual upliftment.

***Major Components of Dynamism in Teaching:***

- Knowledge of the subject-content
- Understanding of child psychology
- Pedagogic principles of teaching
- Adjustment capability
- Effective use of teaching materials
- Planning of lesson
- Proper knowledge of Guidance and Counselling
- Incorporation of co-curricular activities
- Proper evaluation techniques
- To fulfil the ultimate aim of education with the all round development of the learners

***Classroom Setting for Effective Teaching-Learning Interaction***

A huge increase in the field of knowledge with a rapid change in the scientific and technological areas have directly and indirectly changing the processes and practices of education, the impact of which indicating the need of change in the programmes of teacher education. The advances in the field of educational technology with the inventions of new learning methods have revolutionized the traditional concept of teaching. The role of teachers has become more extensive and comprehensive. The job of a teacher does not remain confine just to make his/her students able to pass the examination, gather lots of certificates with some rote memorisation of subject contents. The new direction of teacher’s responsibilities is to enable the students-learning how to learn, knowing how to know and experiencing how to do.



To develop dynamism in teaching for effective and purposeful learning proper classroom teaching-learning interaction is very important which is based on proper classroom management. Classroom management and the issues associated with it appears as a dominant concern in the research on student teacher (e.g. Fuller, 1969, Ryan, 1970, Morrow & Rane 1983). Many such studies particularly focus on the role of the teacher. Secondly, it focuses on classroom dynamics, the institutional context of the school and wider socio-political factors influencing teacher student relationships (e.g. Connell, 1985, Zeichner, 1986, Britzman, 1986). Goodman's (1985) research into student-teacher field experience and the institutional forces of social control revealed the dominance of issues of classroom management.

Many teachers struggle with their classroom teaching throughout their life; it is because they are unable to organize systematically a learning atmosphere within the classroom. Actually a well organized classroom has to be created with lots of thoughts, planning and efforts. Every classroom has is a heterogeneous groups of children with different attitudes, expectations, behaviours and learning abilities. It demands careful actions from teachers to manage these heterogeneous groups into a productive unit. A child centred classroom motivated students to enjoy all the challenges of learning and stimulates them to work honestly and work hard to reach the heights of success with excellence. To achieve the ultimate teaching goal with a well managed interactive classroom, teachers have to cautiously and consciously apply their abilities, implementing appropriate teaching strategies. It needs to be cherished and developed with couple of dynamism to make teachers competent enough through teacher education programme.

### ***Teacher Education for Teaching Dynamism***

The main aim of teacher education programme is to prepare teachers who can efficiently carry out the school education programme. The basic objective and function of teacher education is to produce effective teacher. A teacher after his training should be better equipped with ideas of change and competency to face the real classroom teaching effectively. The success of teacher education programme largely depends upon the proper implementation of teacher education programme in real classroom teaching. Practice teaching is an integral part of teacher education programme which is the way to enable teachers with effective teaching skills that a teacher needs. But for developing effective teaching skills quality of practice teaching is need to be implemented. In the words of Education commission (1964-66), "The quality of training institutions remains, with a few either mediocre or poor, competent staffs are not attracted, vitality and realism are lacking in the curriculum and programme of work which continue to be

largely traditional and set patterns and rigid techniques are followed in practice teaching with a disregard for present day needs and objectives". The present paper prepared to highlight few points' needs to improve the quality students teaching in teacher education programme.

In teacher education programme practice teaching is a process through which student teachers are prepared for all aspects of teaching like- practical use of teaching skills, teaching methods, teaching strategies, teaching techniques, teaching materials etc. Practice teaching is given under simulated and actual classroom which is very important for student teacher to train themselves to be effective teachers. The present paper prepared to highlight few point need to improve the quality of students teaching in teacher education programme.

Some implications for teacher educators are needed to improve quality of teacher education.

### ***1. Encouragement of Learner-Centred Method***

Teacher students can be motivated to train with learner centred method of teaching which will encourage them to improve their teaching by applying these type of methods in their future teaching. Some of these methods are pair work Group work activity, Group discussion, project work, activity-oriented assignments.

### ***2. Learning in a Diverse Way:***

Somediverse ways of learning in teacher education programmecan make teacher students' learning more effective as learning materials for self learning, self-development, proper use of library, using of mass media, learners' participation in seminar, workshop, conference etc., learning through question-answer and discussion.

### ***3. Use of ICT in Teacher Education***

The use of ICT in teacher education is applicable at different level as-small group instruction, classroom instruction, country wide classroom instruction during teaching training courses by using different kinds of technological gadgets. It enables teachers to analyse content in terms of media and technology and they become able to use LCD, OHP, teleconferencing, video-conferencing for teaching and power point present of content in seminar, conference etc.

### ***4. Personality Development***

To be a teacher, personality of a teacher student needs to be well developed. The total personality of a teacher depends upon the development of some skills. These skills are

- Emotional, personal and social development
- Communication and language skills
- Knowledge and understanding of the world
- Expressive and aesthetic development

### ***5. Application of the Principles of Teaching***

A teacher should know clearly ‘what’ should be taught and ‘why’, ‘when’, ‘how’ it should be taught. The knowledge of the appropriate use of principles of teaching makes teaching more beneficial. By understanding and combining the fundamentals principles of teaching with psychological principles, a teaching can be more learner-centred.

### ***6. Development of Critical Thinking***

In teacher education programme teacher students can be taught by using various methods of teaching which can develop their critical thinking ability as- problem solving, brain storming etc. It is said that if one needs to have their own opinions about anything heard, read or seen they have to think critically. Teacher also needs to have some innovative ideas and opinions of his/her which he/she can incorporate in teaching by developing critical thinking.

### ***7. Development of Creative Thinking***

Creativity is applicable in different spheres of life as in thinking, working, writing and even in teaching-learning interactions. Creativity is a quality which cannot be taught or a person cannot be made creative. But teacher education programme can pay a vital role to encourage and stimulate creative thinking among teacher students through which they can improve their quality of teaching.

### ***8. Development of Analytical Thinking***

Analytical thinking means analyzing the whole things into parts to find out the relationship between things or figure out the features of things. Reflection and analytical thinking can equip teacher students with better thinking skills necessary to meet the challenges that arise out of problematic situation. Encouraging teacher students to think analytically will train them to think independently, systematically and to acquire more knowledge.

### ***9. Development of Classroom Mannerism and Communication Skills***

Classroom mannerism and communication depends upon combination of a few factors which can definitely make a tremendous influence. Conducting the conversation skilfully during classroom teaching, presenting impressively the contents of lessons, asking appropriate questions in order to elicit specific

information are some of the most pivotal communicative abilities that can enhance the effectiveness of classroom teaching.

### **10. Effective Evaluation**

Objective and effective evaluation of performance periodically help the teacher students improve professionally. Halo effect has to be avoided for proper judgement of performance. It helps in monitoring closely the teaching learning strategies so it can be used at every stage of designing lesson plan, using teaching strategies, learning processes etc.

### **Conclusion**

Education is one of the most important components for social change which involves transformation of educational system from traditionalism to modernism to satisfy the current needs of the society. Keep on focusing of the present needs of the society the present author feels that there is a need to implement a complete and effective regulation of teacher education programme. Increase in cooperation between theory and practice by following the content and methodology approach can play a significant role in improving the quality of teacher education programme as a whole.

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## Research Abstract

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### Primary Education: Internal Efficiency of School and Scholastic Achievement of Students

<b>Title</b>	A Study of Sarva Siksha Abhijan Programme in relation to Internal Efficiency of School and Scholastic Achievement of Students at Primary Level in Rural West Bengal
<b>Research Scholar</b>	Syed Nurus Salam
<b>Supervisors</b>	Md. Kutubuddin Halder
<b>Joint Supervisor</b>	Nimai Chand Maiti
<b>Department</b>	Department of Education, University of Calcutta
<b>Degree Awarded</b>	Ph.D. 2014
<b>Availability</b>	Central library, University of Calcutta

#### *Problem*

Sarva Siksha Abhijan (SSA) is a highly integrated and comprehensive programme aiming at achieving the target of 'Education for All' in a time bound approach. Since 'Primary Education' involves a number of factors e.g. physical infrastructures, teaching-learning methods & techniques, scholastic achievement. In simple terms internal efficiency can be defined as an optional relationship between the input and output. An activity is said to perform efficiently if a given quantity of output is obtained with the minimum inputs or given quantity of input yields the maximum output. Thus, the internal efficiency of school means to get maximum output. It is the ratio of difference of output & input and input multiplied by 100. Primary Education is the beginning stage of formal education i.e. classes I to class IV.

#### *Objectives*

1. To compare the internal efficiency of school before and after implementation of SSA Programme.
2. To study the changes in physical facilities in Primary schools before and after implementation of SSA Programme.
3. To compare the rate of repetition and completion of primary education among the first, second and third phases.

4. To compare the achievement level of class IV students before and after implementation of SSA Programme.
5. To study the changes of socio-economic background of class IV students before and after implementation of SSA Programme.
6. To find out the constraints of proper and effective implementation of SSA Programme.

### ***Sample***

Stratified random sampling technique was adopted. 18 Schools were selected in 6 Blocks of three districts in Rural West Bengal. In all these 18 schools all 539 pupils enrolled in class I in 1974, 830 in 1990-91 and 786 in 2007-08 sessions constitute the sample. For knowing the achievement of the students, 216 students in class IV in 2000 and all 538 students in class IV in 2011 were chosen from the 18 schools. 4 students of each school in two phases 144 (72+72) in total were sampled out for class IV students to satisfy the objective no. 5. Besides these, all teachers including Headmaster/Headmistress of 18 schools were taken as sample.

### ***Tools of the study***

The following tools were used for the investigation-

1. Questionnaire on general information of the school.
2. Students' admission and attendance register (class I to IV from 2007-08 to 2013).
3. Interview schedule on quality aspect of the teachers.
4. Schedule on Socio economic background of the student.
5. Scholastic Achievement Test

Achievement test of class IV was constructed by Dr. Kutubuuddin Halder, Department of Education, Calcutta University, the supervisor of the present study under the guidance of late Dr. Sharmistha Chakrabarty, Department of Education, Calcutta University on the basis of achievement level test for class IV prepared by Indian Statistical Institute (ISI), Kolkata. Some items of that test were also taken into consideration at the time of preparation of this test. Item analysis was done keeping in view that there must be individual differences and also to maintain some sorts of reliability and validity, avoiding too much so called easy items or difficult items. The test was framed in three parts based on three subjects namely Bengali, Mathematics and Environmental Studies. Full marks of each subject and entire test were 50 and 150 respectively.

### ***Analysis of Data***

For quantitative analysis of data, ratio, percentage, mean, standard deviation,

#### Research Abstract

t-test, z-test and  $\chi^2$  test were applied and qualitative analysis were done on the basis of informal discussion with the assistant teachers and headmasters of the schools while collecting data. In the study data analysis was done in three phases i.e. *First Phase*, *Second Phase* and *Third Phase*. The *First Phase* was a period before adoption of new curriculum in 1981 recommended by H.B.Mazumder Committee i.e. the academic sessions from 1974 to 1981. Eight years back i.e. the year 1974 was considered as the base year for the *First Phase* because it was found from the pilot study that some children took eight years to complete primary education and some of them continued several years (more than four years) in primary education. The *Second Phase* was a period before SSA programme i.e. the academic sessions from 1990-91 to 1997-98 and the enrolment of children in class I in 1990-91 was considered as base year of the phase. It is to be noted that the academic session in primary schools was converted from May to April at that material period. The academic session 2007-08 to 2013 were treated as the 3rd phase i.e. the period after the implementation of SSA policy. The enrolment of children in class I in 2007-08 was considered as the base year for *Third Phase*. The calculation of internal efficiency in school, rate of drop out, stagnation and completion were calculated using 'True Cohort Method' which is more accurate method in comparison to 'Apparent Cohort Method' or 'Reconstructed Cohort Method'.

For getting data regarding socio-economic background and scholastic achievement of students for post SSA period, Schedule on Socio economic background of the student and Scholastic Achievement Test were administered on the students of class IV in the academic session 2011 and for pre SSA period, the investigators used the data collected by Halder, M.K. in the academic session 2000.

#### **Findings**

The study shows an improvement in all indicators of internal efficiency e.g. input-output ratio; input per graduate; wastage ratio; proportion of wastage on accounts of drop outs and repeaters; average duration of stay; cohort survival and dropout rates, although repetition and drop-out still exist in primary education. The physical facilities have been improved in SSA period but the physical environments of the schools are dirty and unclean. There is improvement in the pupil-teacher ratio but enrolment has been decreased in school. Competency wise analysis of achievement level in Bengali, Mathematics and Environmental Studies shows that there is no significant difference in pre SSA and post SSA period. The performances in mathematics in post SSA period are still poor. The gender parity has been improved. It is a great concern that though internal efficiency and physical facilities of the schools have been improved in SSA

period but achievement of the students have not improved. In recent time, these schools are getting the students with comparatively lower socio economic background as there is a perception of common people that a private primary schools are better in quality than a government primary schools. The students with comparatively better socio economic background are coming to private primary school. So there are developments in quantity aspect but there are no observable changes in qualitative achievement of the students which is the ultimate goal. There is tangible infrastructural development in SSA period but impacts of that development have not been transformed into quality of education. Government aided primary schools are transforming to the schools of socially disadvantage groups. These schools are not inclusive for the entire society.

### ***Conclusion***

On the basis of the findings it may be recommended that only remedial or correctional measures may not be sufficient. The entire teaching learning process may be re-looked and revisited. It may also be recommended that the depth in study in this field may shed extra light to find out its real cause of such maladies and its remedial measures. In mathematics it is evident, the error committed by the students are many and varied. Their root causes are also numerous. But it can be assumed that those errors are generated by the teaching, may be in the classroom situation or from the knowledge gained from outside. Before teaching, the so called teachers must be acquainted with such types of errors committed by the students. The error correction is required regularly and the teaching procedure may be modified. Teachers should have clear idea about the various competencies in different subjects. The physical environments of these schools are dirty and unhygienic. Even the schools are running without regular sweeping and unhygienic sanitary arrangement. There is no provision of sweeper or any other group D staff. According to the opinion of the teachers, students are not ready to the sweeping voluntarily. Guardians are in strong opinion that his/her ward is not going to school for sweeping or other work of sanitation. So they are discouraging these. Teachers do not dare to make the student to do these works at the present socio-political situation. So teachers are in the opinion that there should be the provision of sweeper and group D staff in primary schools.



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