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Editorial

J ournal of education & culture is an attempt to reflect the researches in education in printed form to encourage both the researchers and the concerned teachers for enrichment of Education as a discipline and societal benefit too. In our country so many researches and other contemplation is somewhat hidden due to lacking of some exposure, the present journal will act as a catalyst to highlight those extracts.

The purpose of the publication is completely research-centric and to develop the field of Education both from the foundation side and also from specialized side. The mode of publication is biannual.

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C o n t e n t s

An Exploratory Factor Analysis of the Organisational Citizenship Behaviour Scale

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Abstract : *Organisational citizenship behaviours are not the part of formal job requirements of the employees rather being discretionary in nature. These behaviours are extra- role behaviour as against in- role behaviour. In recent times OCB has been extensibly studied, albeit mostly in industrial management. However, OCB of the teachers have also drawn the attention of the researchers. The OCB as a construct has been analysed and a few underlying factors like altruism (helping behaviour), conscientiousness, organizational compliance, individual initiative, civic virtue (Podsakoff et. al.. 2000) have been identified The two types of OCB, one directed at individual (OCBI) and another directed towards the organization as a whole (OCBO) have also been proposed (Williams and Anderson 1991). Since OCB have been found to be associated with improved functioning of the organization, there is a strong case for studying it in the context school organization in general and teachers in particular. However, studying OCB of the teachers is not so straight forward as unlike industrial employees, the distinction between in-role and extra-role behaviour of the teachers is quite blurred, The present study is an endeavour in this respect, which adapted an OCB scale constructed by Podsakoff et. al.. The scale was applied on the teachers of three schools in Kolkata and the psychometric properties of it were studied and reported.*

Key words : *Organizational behavior, Extra role behaviour, Organizational commitment.*

Introduction

There are many variables which affect the effective functioning of an organization, which may include motivation, leadership, organizational climate, commitment etc. of course individual factors are no less significant, but it is also true that the organizational climate often moderates the individual behaviour. In recent times, organizational citizenship behaviour has been studied extensively to understand its implication in the field of management studies. The OCB or organizational citizenship behaviour in the context of educational administration is worth studying as researches have proved that it is correlated with effective functioning of the educational administration (Bogler & Somech, 2005). But the nature of the construct of OCB needs to be analyzed as many of the researches have sought to understand the relationship of OCB with other constructs instead of giving a proper operational definition of it (Organ, 1988). The present study is a part of extensive research to understand concept of OCB and its relation with other variables in the context of school administration within the city of Kolkata and its neighborhood.

Defining Organizational Citizenship Behaviour

Organisational citizenship behaviour has been mainly conceptualized as extra role behavior within an organization. It is a type of behaviour which goes beyond what is required in a specific job. In other words, OCB is job behaviour outside the job description (Katz, 1964; Katz & Kahn, 1978). According to Organ (1988, p 4), OCB is discretionary behaviour, not directly or explicitly recognized by formal reward system but nevertheless promotes effective functioning of an organization.

The organizational citizenship behaviour is considered to be extra role behaviour in workplace but it is often difficult to differentiate between extra role and intra role behaviour in the context of a particular job. This controversy is all the more pronounced in the case of teachers in educational institutions where the scope of job responsibility and the boundaries are not clearly defined. A teacher is supposed to undertake various tasks, including class room teaching, wherein the perception of teachers' role varies from teacher to teacher. Hence, to understand the OCB construct in the context of teaching learning process needs extensive research work.

Characteristics of Organizational Citizenship Behaviour

Organ (1998) described OCB as the good soldier syndrome. An organizational citizen is a good Samaritan endowed with pro social behavior. He knows that his behavioural pattern will not likely to yield any extrinsic reward yet he indulges in voluntary and non obligatory behaviour. The three main characteristics of OCB are – they are individual's free choice to engage in informal work, they are beneficial to the organization and they are multidimensional (Cohen and Kol, 2004).

The domains of OCB are identified as altruism, courtesy, loyalty, civic virtue, voice, functional participation, sportsmanship, advocacy participation etc (Bateman and Organ, 1983; Williams and Anderson 1991; Van Dyne et.al., 1994).

As OCB is rooted in social exchange, it is culture specific. The researchers in India have identified five dimensions of OCB namely- Conscientiousness, helping co workers, group activity, participation, sportsmanship courtesy (Bakshi et.al., 2009).In a study conducted in China it was reported that among the ten dimensions of OCB, at least one was not evident in West. The Chinese formulation of OCB was different from that of West being embedded in its unique culture (Jing et. al.., 2004).

Lepine et. al.. (2002) explained five categories of OCB namely Altruism, conscientiousness, Sportsmanship, Courtesy, and civic virtue. However, the researchers have argued that the two major dimensions of OCB are altruism and conscientiousness within which other dimensions can be subsumed.

Podsakoff et. al.. (2000) have identified various aspects of OCB such as Altruistic behavior (helping behaviors directed at specific individuals), Conscientiousness (helping behaviors directed at the organization as a whole), Sportsmanship (tolerating the inevitable inconveniences of work without complaining), Courtesy (informing others to prevent the occurrence of work related problems), and Civic virtue (participating in and being concerned about the life of the organization).

Although researches on OCB are quite substantial yet there is general opinion that OCB is not clearly defined (Law et. al.., 1996). Operationalisation of the term has not been easy. OCB may not be a construct at all rather a set of behaviours which belong together. (Tayyab, 2005). Podsakoff et. al.. mentioned as many as thirty overlapping organizational citizenship behaviours.

However, other researcher Motowidlo (2000) conceptualized it as latent construct like personality. Many of the studies on OCB seek to identify the antecedents of OCB rather than its definition. The variables examined in this regard are job satisfaction (Morrison, 1994), organizational commitment (Gordon et.al., 1992), organizational justice etc. There is a research gap in understanding the enlargement of the role of the teachers' vis-à-vis school or students.

Types of Organizational Citizenship Behaviour

Apart from describing different categories of OCB, the researchers have sought to classify these behaviours into types depending on the person or objects towards which the behaviour is aimed at. Williams and Anderson (1991) differentiated between organizational citizenship behaviour towards individual (OCBI) and OCB directed at organization as whole (OCBO). Settoon and Mossholder (2002) mentioned about task focused and person focused behaviour.

Despite rich research literature on OCB, these types of behaviour in the context of teaching learning situation involving teachers, educational administrators and also students need to be studied in detail as OCB is likely to impact on organizational climate.

Psychological Processes Underlying Organizational Citizenship Behavior

Initially OCB were considered to be discretionary in nature but recent studies are more inclined to view it as role obligation (Coyle-Shapiro & Kessler, 2002; Coyle-Shapiro, Kessler & Purcell, 2004; Kidder, 2002; Tepper & Taylor, 2003). It has been observed that OCB occurs more when the behavior is viewed as obligatory. (Coeyl- Shapiro & Kessler, 2002) Moreover, it is also claimed that it is not outside the ambit of reward system rather rewards are associated with its performance (or non performance). As a matter of fact OCB is preceded by OCB role definition, that is, the individual first perceives whether a particular behavior is part of job or a component of the job role. Thus the teachers may have different beliefs about their obligations in reference to their jobs (Hoffman & Gerras, 2003). Obviously belief system is liable to change over time and also within specific work contexts. No doubt OCB role definition is context specific and likely to vary from teacher to teacher, from school to school and for different stages of education.

The determinants of OCB are procedural justice perception and three individual difference variables namely

- Reciprocation wariness
- Empathic concern
- Perspective taking

Procedural justice perception indicates how an individual perceives the treatment meted out by the work place organization towards him. He will be reluctant to contribute or initiate action if he feels that he is unfairly treated or exploited (Tepper & Taylor, 2003).

Reciprocation wariness implies that the individuals are extra cautious about the return help from others and therefore withholds citizenship behavior. Empathic concern and perspective taking are personality variables which are implicated in citizenship behavior. Empathic concern is other oriented emotions and perspective taking is other oriented cognition and awareness (David, 1980, 1983). Because of these two psychological factors people are inclined to view altruism and courtesy as in- role form of OCB.

The dynamics of OCB are further explained by social exchange theory or norm reciprocity (Gouldner, 1960). According to this theory people give benefits to others in expectation of receiving benefits of equivalent value back from them. The social exchange theory underpins the importance of trust which is the basis of interpersonal relationship (Pillai et.al., 1999).

The OCB in teaching profession have not been studied adequately as the emphasis in this respect is more on the field of commercial organization. Teaching is a service sector job where helping others is the key component, which is why teaching and OCB may overlap. Nevertheless OCB in education should be researched as it is instrumental in enhancing organizational effectiveness. It is thus imperative to describe the concept of OCB operationally.

Aim of the Study

This particular study is a pilot work for the subsequent in depth research on OCB and other factors in teaching learning context. The objective of the study is identifying underlying factors of the OCB scale in order to analyze the theoretical basis of it.

Method

Participants

The participants are school teachers, both male and female, teaching in government sponsored and private secondary schools. The total number of the participants is 120 with the range of teaching experiences varying from two to ten years.

Tool

The teacher OCB was studied by Jimmieson and Hannam (2006) in the University of Queensland, Australia. The scale constructed by them, was adapted in Bengali with their permission. Factor analysis was conducted on this scale in order to use it in subsequent Ph.D. research along with other variables like job satisfaction and the relation of the school with external community. The scale has 24 items with 8 items in the three categories namely behaviours towards students, coworkers and the school.

Data Analysis and Findings

SPSS was used to do factor analysis of the scores obtained from the OCB scale applied on the participants. Since the objective of the study was to understand the underlying concept of OCB, no other test was applied to find out the influence of OCB on other variables or vice versa.

The reliability of the scale was determined by Cronbach alpha and the value was found to be 0.725, which could be accepted as high for a social science questionnaire. The KMO and Bartlett's test of sphericity were also calculated. The KMO is 0.596 which is fairly adequate but not good. The KMO values for the individual variables are required to be produced on the diagonal of the anti-image correlation matrix. However, it was not done in this case. The Bartlett's test is significant (approx chi-square value 428.387) indicating that the R-matrix is not an identity matrix and there are some relationships between the variables which are to be considered. Highly significant Bartlett's test proves that factor analysis is appropriate.

Table 1. Total Variance Explained

Component	Initial Eigen Values			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4.806	20.024	20.024	4.806	20.024	20.024	2.547	10.612	10.612
2	1.99	8.293	28.317	1.99	8.293	28.317	2.011	8.38	18.991
3	1.819	7.581	35.898	1.819	7.581	35.898	1.979	8.248	27.239
4	1.664	6.935	42.833	1.664	6.935	42.833	1.868	7.783	35.022
5	1.44	5.998	48.831	1.44	5.998	48.831	1.762	7.34	42.362
6	1.292	5.385	54.216	1.292	5.385	54.216	1.656	6.898	49.26
7	1.24	5.167	59.384	1.24	5.167	59.384	1.642	6.84	56.1
8	1.108	4.618	64.002	1.108	4.618	64.002	1.503	6.264	62.364
9	1.089	4.537	68.539	1.089	4.537	68.539	1.482	6.175	68.539

Normalization. a Rotation converged in 10 iterations.

From Table-1 it is observed that the nine factors have been extracted and total cumulative variance is explained above 69%. The following scree plot depicts the nine factors having more than one eigen value.
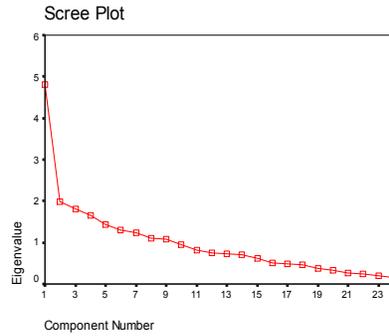
Fig 1. The line graph of the component factors

Table 2. Rotated Component Matrix Component

	1	2	3	4	5	6	7	8	9
Q-1	0.677			0.115	0.156		0.296		
Q-2	0.788						0.14		
Q-3				0.872				-0.179	
Q-4	0.474	0.27		0.389			-0.435		0.398
Q-5	0.167	0.126			0.221		0.726		0.159
Q-6	0.111	0.613	0.125		0.123	0.234	0.359		0.2
Q-7			0.821	-0.128			-0.126		
Q-8	0.119	0.26		0.445			0.43	0.486	-0.184
Q-9	0.177	-0.101	0.169	0.648	0.131		0.213	0.102	0.384
Q-10	0.113	0.637	-0.106	-0.112		0.148		0.357	0.174
Q-11						0.101		0.857	
Q-12				0.143	0.173	0.618	-0.216	0.157	
Q-13				0.173	0.133				0.8
Q-14	0.136	0.386	0.575	0.214	0.145		0.185		
Q-15	0.102	0.783	0.221						-0.147
Q-16		0.175			-0.139	0.796	0.271		
Q-17	0.291	0.186	0.48		0.303	0.363	0.19	0.172	-0.133
Q-18	0.495	0.358	0.345	0.18					-0.243
Q-19	0.786	0.182	0.166				-0.184		
Q-20		0.167	0.483	0.218	-0.349	0.309	0.351	0.206	
Q-21	0.158		-0.136	0.253	0.35	0.364		0.192	-0.508
Q-22	0.18		0.36	0.136	0.329	0.391		-0.43	
Q-23	0.309	0.117	0.278		0.65		0.269		
Q-24		0.108		0.821					0.102

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser

Factor 1

Q-1	Stay in lunch time to listen to students.	0.677
Q-2	Assist students outside of school hours.	0.788
Q-4	Help out students with learning or behaviour disability.	0.474
Q-18	Organise activities involving parents / community.	0.495
Q-19	Attend school related functions even when not required.	0.786

In factor 1 the first three items (1, 2 and 4) are person focused citizenship behavior and item numbers 18 and 19 are task focused behavior. This category of items may be named as conscientious component of OCB where the teachers are likely to initiate citizenship behavior to satisfy their conscience.

Factor 2

Q-6	Put effort into planning a variety of interesting and interactive learning activities.	0.613
Q-10	Check on coworkers who I know have been upset or struggling with problem.	0.637
Q-15	Consult or collaborate with colleagues in planning students' learning experiences.	0.783

In this factor item no. 6 and 15 are task focused and item no 10 is person focused. The category of items may be termed as civic virtue, in which case the intention is to help others be they students or co-workers.

Factor 3

Q-7	Arrive at work earlier to prepare for lesson.	0.821
Q-14	Take extra responsibilities to assist other teachers with heavy workload.	0.575
Q-17	Volunteer for tasks and roles not mandatory.	0.480
Q-20	Acquire skill and knowledge in new areas to contribute work.	0.483

In factor 3 items namely 7, 14 and 20 are task focused and item 17 is related to civic virtue.

Factor 4

Q-3	Encourage less able students to contribute ideas to classroom.	0.872
Q-9	Take time to listen to co workers ideas, problems.	0.648

These two items have been bracketed under factor 4. Both the items show concern for the students and as well as fellow teachers and be categorized as civic virtue.

Factor 5

Q-23	Keep up with departmental reforms and developments.	0.650
Q-24	Conscientiously follow school or departmental regulations and problems.	0.821

The two items 23 and 24 are related to compliance with rules and regulations of the educational institutions.

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Factor 6

Q-12	Take care not to interrupt colleagues at inconvenient time.	0.618
Q-16	Offer to lend my resources, property or equipment to colleagues.	0.796
Q-21	Read and refer to important school documents.	0.364
Q-22	Take care to conserve school supplies and look.	0.391

These four items are related to courtesy shown to the colleagues and behavior focused to the conservation of resources of the institution.

Factor 7

Q-5	Spend time on reflecting my teaching at the end of the day.	0.726

This is about being conscientious about one's method of teaching.

Factor 8

Q-8	Spend free time /weekends planning student learning.	0.486
Q-11	Take steps to get. al..ong with coworkers.	0.857

Both the items are person focused and shows altruistic component of OCB.

Factor 9

Q-13	Assist new or visiting teachers even when not required to.	0.8

The factor 9 includes only one item but it is a very important aspect of OCB which demonstrates helping behavior directed towards the co-workers.

Discussion, Conclusions and Suggestions

The organizational citizenship behavior in the context of teaching should include organizing extra curricular activities in school, undertaking optional training for enhancing professional growth, spending time with students outside official teaching hours, relieving over-burdened fellow teachers of their duties as and when needed, undertaking various public relation assignments and many such extra role behaviours.

The nine factors extracted from this study may be termed as conscientiousness, helping coworkers and students, willingness to improve one's method of teaching, citizenship behavior towards the school, courtesy, civic virtue and altruism.OCB in the context of education is difficult to explain as it has been claimed by many researchers that it is not a construct but a set of behaviours related to a particular type of work. As many as forty measures of citizenship behaviors have been referred (Tayeb, 2005). Thus it is apparent that factorial structure of OCB may vary across organization settings (Chang & Chelldurai, 2003; Feather & Rauter, 2004). However, exploratory factor analysis of OCB is well documented (Gorsuch, 1997).

An important aspect of OCB in educational context is the existence of CCB or compulsory citizenship behaviours (Vigoda- Gadot, 2006). It implies that there is strong social and managerial pressure to engage involuntarily in informal work in educational institutions. The reported citizenship behavior in this case is undertaken under duress. The teachers often, depending on the type of institutions bow to such pressure

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unwillingly. When CCB is high the teachers feel exploited and abused (Tepper et.al., 2004). As a result there develops a spiraling effect when teachers put less effort on in role behavior as well as extra role behavior. They may rationalize or take recourse to reasoned denial by saying that 'it is not my job' which is combined together with perceived procedural unfairness.

It is imperative that OCB of the teachers and administrators are studied in educational institutions as educational institutions depend on norms of collegiality or such type of administration. Hence a certain level of OCB should exist in educational institutions. There is an urgent need to study the antecedents of OCB and other related variables in the context of educational administration.

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Aging Management For Living Better And Longer

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Abstract : Aging is a universal process of growing old. Number of elderly people is rising faster, all over the world, due to increased life expectancy. Myths as well as realities on the process of aging and its consequences have been created much attention and interest to the scientists of various disciplines to deter the aging process and to live longer with full life-potential. Assessing and analyzing one's lifestyle is a pre-requisite and then proper management of different aspects that could influence the aging process, directly or indirectly, are very essential steps for a person to follow for living better and longer.

Key words : Aging, Aging Assessment, Aging Management.

Aging – The Process

Meaning : The term 'aging' refers to the patterns of change that occur with age in genetically representative organisms living under representative environmental conditions. Aging is a universal process of growing old. It touches everyone regardless of age, gender and socio-economic level. We are all travelling at different speeds to the same destination (Birren, 2000). Plasticity and resiliency are found in function throughout the lifespan of an individual. Aging is multi-dimensional and multi-directional with variability in the rate and direction of change for different characteristics within the individual and across individuals. It is a product of interactive effects of biogenetic processes, and the historical and socio-cultural contexts (Vercruyssen et. al.., 1996).

Population Aging: The number of the elderly people is rising faster than any other segment of world population. The onset of demographic transition takes place with the reduction in mortality rate, which eventually produces the older age distribution. The decline in mortality rate is associated with (a) the changing pattern of death due to the control on certain fatal diseases, (b) better medical services, and (c) together with better sanitation and nutritional levels – have increased the longevity of the individuals (Kumar & Khan, 1997). In our country, there has been a fourfold increase of elderly people over the last 50 years and it will be more than four times again over the next 50 years. It is surprising to note that 151 countries (out of 171 countries) have a total population less than the elderly population in India. In absolute terms the present elderly population (6.7%, 2001 Census of India) of India is only second to China. In view of the decreasing trend in population growth in China through successful family planning measures it is estimated, by the year 2025 AD India will be the country with the highest number of elderly people in the world (Mahadevan et. al.., 1992)

Myth and Reality: The growing interest in aging and the aged is the outcome of two major factors: (i) the proportion of the aged in the population has been increasing at an accelerated rate and (ii) the increase in

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the aging population has been at a higher rate than the increase in the general population. This is mainly due to the life expectancy from a mere 23.63 years for males and 23.96 years for females in 1901 to 63.9 and 66.9 years respectively in the year 2001 (India 2005 : A Reference Manual). The family and kinship bonds, which offered improvised social security system for the care of the old, have gradually weakened under the process of industrialization, urbanization, modern education and the like (Dak, 1997). Myths and realities are broadly as per following (Luckmann, 1990).

Myths	Realities
• Old people eventually become senile.	➢ Less than 10% of older people become senile.
• There is nothing one can do to avoid the effects of aging.	➢ Many negative effects of aging can be delayed or prevented by taking care of health throughout one's life and remembering the role 'use it' or lose it'.
• Retirement is something everyone looks forward to.	➢ People whose lives have always centered on work, who have few outside friends or interests, may resent having to retire.
• Elderly people have little interest in sex.	➢ Sex drive depends on the person, not the age.
• Financial problems.	➢ For most people, social security and pensions are not enough to assure a comfortable retirement.

Consequences: Lifespan potential and the rate of aging have remained unchanged in last 100,000 years and the potential lifespan became fixed. After one's maturity over the course of life, physiological functional capacities diminish and body composition changes due to – (i) reduction in physical and leisure time activities, and (ii) through aging process itself. Functional loss can be happened mainly at three levels– (i) at tissue level, there is a loss of collagen, (ii) at the cell level, a decline in the efficiency in mitochondria, and (iii) at the molecular level. DNA might mutate resulting in inefficient cell replacement or even its cessation. These changes have deleterious effect upon the bodily systems (Mahajan, 1997).

Old age is a state of life that increases the likelihood of psychological problems of – (a) low self-esteem, (b) anxiety, and (c) depression. Three sources are account for the increase in major psychological problems, because older people can – (i) become exposed to the stress of poor health, (ii) become exposed to economic stress, and   (iii) loss of social support. From middle age onward persons confront changes in the social environment and in his physical body, which require readjustment on his behavioural pattern. These problems can be tampered by the adequacy of the individual's social support. Friends, fellow workers, family, and neighbours can ease the burden. But if one cut off from – (a) work (retirement), (b) children, and or (c) spouse (widowhood) – the changes of personal trauma increase manifold (Chadha & Khuble, 1997).

People are now living longer having life potential much preserved and maintained than ever before and the age pyramid of the society is turning upside down, still the view towards aged have not been changed. Different media are projecting elderly people as stereotyped, intolerant, and dependent for its loss of potential. In a traditional society of the orient like India, the older persons were not unwanted. From the long past increasing age has, until very recent past, been accompanied by increasing prestige. Young people would often gather around wise old men for guidance and advice. Recently, however, the practice has started changing. Development of newer technologies no longer demands that the skills of the artisans should be transmitted down through generations. These changes weakening the so-called traditional status of the aged in their family. VModern methods of teaching through books, radio, films, and computers,

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learning have become comparatively a quicker process. Hence the aged can no longer is necessarily associated with imparting knowledge and wisdom to the young (Chakraborty, 1997). As old age advances, events at home too many contribute to the problems. The 'empty nest' feeling arising as a result of the – (i) grown up children leaving the houses, (ii) daughters departing as a result of wedlock, and (c) sons leaving station in pursuit of higher education or job may make the aged more lonely. The loneliness also arises because of premature death of spouse. This would deprive the person of a long-standing emotional security. Added to these the increasing gap and cumulative stress and strains in the family may lead the elderly live without peace of mind. The elderly as a result of these developments feel marginalized, alienated, and left out of the mainstream. Person grows old tend to discourage and withdraw him from social role of younger life (Jamuna, 1992).

Assessing and Analyzing for a Long Life

Aging can be a positive experience or a negative one. Much depends on one's attitude about getting older, and how well prepared he or she is socially, psychologically, and physically for changes that come with age. Assessing and analyzing how one feels about older people – and about growing older oneself – can help an individual to prepare for aging. To clarify how oneself feels about growing older and keeps track of his or her aging, use one's health diary and self-test questionnaires (Palmore, 1980). To analyze one's feelings and behaviours related to aging and the aged, transfer the data in one's health diary and self-test questionnaire to a chart with the two categories – negative and positive changes, mental changes, or psychosocial changes in aging. Next analyze how well an individual is currently ensuring a healthy old age. A person may probably have trouble to adjust in later life, if he or she is (i) engaged in many activities not suited to later life, (ii) having few friends now and (iii) not planning future financial matters.

Managing to Live Longer and Better

Because of the eradication of several killer communicable diseases, we are now living longer and better than our ancestors did. Knowledge about how to prevent, lessen, or adapt to the changes that come with age will help to look forward to enjoy one's later years (Luckmann, 1990).

Take Care of Your Health Starting Now : What you do now, can greatly affect how healthy you will be later. Many of the problems associated with old age result not from age, but from disease, abuse, and disuse – factors often under your control. Controlling stress, exercising, eating properly, and quitting unhealthy habits such as tobacco use and alcohol abuse can help you to live longer and better.

Controlling Stress : At every age, not just midlife and the final years, change means stress. If you learn to cope with stress now, you will not only ensure that the rest of your life will be more enjoyable, but you may also be able to avoid many stress-related illness in old age. Yoga, meditation, and other stress reduction techniques can help you control stress.

Exercising : One of the most important steps you can take towards avoiding feeling or showing signs of age is to begin a life-long exercise programme. By increasing your metabolism and delaying the loss of muscle tissue, exercise can help you avoid weight gain that is often a part of aging. Regular exercise increases stamina, heart- and lung-power while decreasing your chances of developing diabetes, heart disease, osteoporosis, or depression. The earlier you start a regular exercise programme, the better – but it is never too late. Studies have found that even people in their 90s can become stronger and increase muscle size through exercise (deVries & Housh, 1994). Check with you doctor, and then find a form of exercise that you enjoy (walking is a good lifelong choice) and start slowly. Try to include activities to develop strength, endurance, and flexibility.

Eating a Nutritious Diet : Eating right is important at any age. A life-long diet low in fat and sugar and high in fibre, vitamins and minerals can help ward off diabetes, heart disease, and weight control problems. Adequate nutrition can help the declining immune system of an elderly person perform as well as possible. Cutting down on fat in the diet helps to reduce calories, a necessity for the elderly, who generally need fewer than their younger counterparts. Take the benefit from food supplement that includes zinc, iron, and vitamin B, C and E.

Controlling Your Weight Gain : As you age and your metabolism slows, it becomes easier to gain weight. You can not eat the same way in your 40s as you did in your 20s without gaining weight – unless of course you are more active.

Restricting Alcohol : Elderly people generally must restrict their caloric intake, so there is not much room in their diet for the 'nutrient empty' calories of alcohol.

Giving up Tobacco : To put it bluntly, smoking shortens your life and makes the year you live less healthy. It not only initiates certain disease conditions – such as heart disease and lung cancer, but it also impedes the healing process of other disorders in the body. Smokers also tend to show signs of aging of the skin at a much earlier age than nonsmokers, and with more severity.

Use Medications Cautiously : The same medications that can cure your ills can, as you have seen, cause harm in excess. To avoid falling victim to drug side-effects you – (i) put all the drugs you are taking in a bag, and go and review them with your primary doctor, (ii) inform the doctor who prescribes medication for you about other medications you are currently using and ask about possible interactions, (iii) question the need for any drug and to what extent of it in terms of effects and worry-some side effects, and (iv) if any drug you are taking seems to be affecting your sex drive negatively, ask your doctor to change drugs.
Seek Medical Advice When Needed : While you need to be cautious about medicines as you age, don't let unreasonable fears keep you from seeking out- and taking-medications for health problems at this time, like- arthritis, Parkinson's disease, osteoporosis, hypertension and diabetes. When dealing with chronic diseases, early prevention is the key. Men and women should have regular physical exams, and also learn how to screen themselves for potential cancers starting at an early age.

Plan for Financial Security : Many young people make the mistake of not preparing financially for their later years. But pensions and social security don't always provide enough for a comfortable retirement. The best way to avoid financial problems as you grow older you may learn about taxes, investments, retirement planning, and money management – by talking to a financial planner. Then you decide – how much money you will need to live a comfortable retired life, and start saving now.

Adapt and Adjust to Growing Older

Not all of the physical, mental and physiological changes that accompany aging can be avoided or planned for. But with some work, you can adapt to them and enjoy the "golden years".

Adjusting to Physical Changes : One way to adapt to the inevitability of physical changes is to begin to place a higher value on intellectual qualities than on simple physical powers. But do not ignore changes that cause problems. Better lighting and corrective eyeglasses can help vision changes. Use hearing aid for hearing problems. To compensate for sensory losses and avoid accidents – light stairwells and bathrooms well, and use night-lights. Keep power cords and decorative items up off the floor. Use railings and handrails on stairways and make sure they are secure.

Adjusting to Mental Changes : Challenging you mind with new, stimulating information not only prevents loss in mental capability but also can actually increase your cognitive skills as you age. Do those things that you are truly interested in and that give you a sense of purpose and involvement in life. Although older people can readily learn new things, they may need to allow themselves more time to learn and to ask more questions as they go. Memorizing – whether names of information – can be improved at any age by saying the name or fact aloud and then repeating it silently to yourself several times. Don't be shy about using the greatest memory aid of all –written list for anything you need to get or do.

Adjusting to Psychosocial Changes : Planning and adapting to transitions that are just 'part of life' will help considerably to make growing older enjoyable. It is important to maintain a social support network of family and friends – making friends of both sexes and all ages, especially younger people. You may have benefited from the wisdom and advice of a mentor, and now it is your turn to be a mentor to those younger than you. Making friends outside of the work place can help to make the transition to retirement much easier. Join in a group or organization that gives you a feeling of 'belonging'. By turning your attention from yourself to the world around you, you become less focused on negative aspects of growing older. But if you are still depressed, seek counseling. Volunteer work can help to give you a sense of connection with the rest of the world, as can medication or prayer. A need to feel a part of the universe is important for many people, as they grow older. Having a job that you enjoy, whether paid or volunteer, or hobbies that you can continue into old age – can all increase prospects for life-long happiness and health.

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Comparative Study between Male and Female First Year College Students in Terms of Anxiety

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Abstract : *The present research seeks to investigate a comparative study between male and female 1st year college students in terms of their anxiety. A sample of one hundred (male and female) students is drawn from different colleges of south Kolkata by the method of purposive sampling technique. Tool used in this regards is STAI. Statistical analyses performed are Means and Standard Deviations of all the major variables calculated across the gender separately, Linear correlation calculated in order to determine inter association between the variables, t-test analyses administered to find out the significant difference between the means of males and females across the major variables, The result shows significant differences between male and female 1st year students in terms of their state and trait anxiety scores of 1st year college students. A highly positive significant relationship exists between state and trait anxiety scores among both the male and female students separately.*

Key words: *Comparative study, Anxiety level of male & female students.*

Introduction

Over the last few decades, people seem to have become more anxious, worrying about safety, social acceptance, and job security more than in the past. The fear for the unknown becomes acute in the human mind as the new world, hailed by many as a globalized village, seems to be equally informed by a great leap ahead for human civilisation in terms of technological advancement on the one hand and, on the other, the conjunctive emergence of crisis in newer manifestations. The new globalized world order seems to encourage the formation of human society strictly in the line of consumerist principles which tend to commodity human life, doing away with the supposed values of ethics and morality. This dominant trend in human life is so obvious that some authors have labelled the twentieth century "the age of anxiety" (Spielberger & Rickman, 1990), which supposedly denies man of the basic security of his life.

In the context of the above perception of the effect of anxiety in the modern jet-set life, it seems to be imperative to initiate a study on the 1st year college students who seemingly offer themselves as potential case for research by virtue of their traditionally belonging to the age group of 18 to 19 years. It is the stage where pupils cross the boundary of their school days and enter into a new life. It may be simply termed as the junction period between adolescents and young adults. The mounting pressure of parental aspirations on their wards to perform (or perish) in a highly competitive social space seems to render this age group vulnerable to these psychological emotions. They come to develop visible signs of anxiety which

seemingly influence their personality dimensions in an effective manner. The enormous importance of this formative period in the life of a student seems to necessitate a critical engagement with the effect of anxiety of male and female students and also make a comparison between these two sexual categories in terms of their age group.

Definitions of Anxiety

Anxiety continues to be a significant problem among college students. The twentieth century has been called "the age of anxiety". However, the concern with anxiety phenomena is as old as the history of humanity. Anxiety can be defined in different ways at various situations following different theoretical orientations. Anxiety is a diffuse, highly unpleasant, often vague feeling apprehension, accompanied by one or more bodily sensations – for example, an empty feeling in the pit of the stomach, tightness in the chest, headache etc.. Sattre defined anxiety as, "A fear of failure to meet a standard or fear that one does not hold the appropriate standard". Beck defined anxiety as an "unpleasant emotion that is accompanied by autonomic discharge and subjectively experienced as tension or nervousness"

Types of Anxiety

Anxiety can be viewed in terms of state and trait anxiety. Speilberger states that anxiety can be for a transitory state or it can be a relatively stable personality trait.

State Anxiety : State anxiety is conceptualised as a transitory emotional state or condition of the human organism that is characterised by subjective, consciously perceived feelings of tension and apprehension and heightened autonomic nervous system activity. State anxiety may vary intensity and fluctuates overtime. According to Spielberger & Vagg (1995), the emotional state (S anxiety) experience during examinations, consists of feelings of tension, apprehension, nervousness, worry and associated physiological arousal resulting from activation of the autonomic nervous system. The intensity of this S anxiety reaction will vary as a function of the degree of perceived threat. This depends upon factors like nature of test questions, student's general ability and aptitude in the subject matter area, and how diligently he or she has prepared for the examination. Therefore, Kazdin has stated that state anxiety refers to transient feelings of anxiety at a given moment of time.

Trait Anxiety : Trait anxiety refers to relatively stable, individual differences in anxiety proneness, that is, to differentiate in the disposition to perceive a wide range of situations involving evaluative stress as dangerous or threatening and to respond to such situations with more or less intense elevations in state anxiety intensity. As a psychological concept, trait anxiety has the characteristics of class of constraints that Atkinson (1964) calls 'motives' and which Campbell (1963) refers to an 'acquired behavioural dispositions'. Motives are defined by Atkinson as disposition that remains latent until the cues of a situation activate them. Acquired behavioural dispositions according to Campbell involve residues of past experiences that predispose an individual both to view the world in a particular way and to manifest 'object consistent' response tendencies. Anxiety trait is assumed to reflect residue of past experiences that in some way determine individual differences in anxiety proneness, that is, in the disposition to see certain types of situation as dangerous and to respond to them with anxiety traits.

Statement of the Problem

This study is conducted to make a comparative study between male and female 1st year college students in terms of their anxiety being measured by State Trait Anxiety Inventory (STAI) devised by Spielberger, Gorsuch and Lushene (1970). The present research is continued to fulfil the following objectives :

• To determine a comparative study of male and female 1st year students in terms of their state and trait anxiety.

•   To determine whether there is any correlation between state and trait anxiety or state and trait anger of both male and female students separately.

Hypotheses

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

H_{01} : There is no significant difference among male and female 1st year students in terms of their state anxiety scores.

H_{02} : There is no significant difference among male and female 1st year students in terms of their trait anxiety scores.

H_{03} : There is significant relationship between state anxiety scores and trait anxiety scores of Female 1st year students.

H_{04} : There is significant relationship between state anxiety scores and trait anxiety scores of male 1st year students.

Sample

The research has been carried out on 100 students (50 males and 50 females) who belong to the age group of 18 to 19 and enrolled in 1st year at various colleges in south Kolkata. The samples were drawn from various departments such as humanities, science and commerce but on the basis of first cum first serve. The sampling technique administered here is random non-probability purposive sampling technique. The distribution of participants across the gender is shown in Table–1.

Table–1 : The Distribution of Participants across the Gender of Study

Male	Female	Total
50	50	100

Tool Used

The tool used for data collection by the present researcher is as follows :

State Trait Anxiety Inventory (STAI) devised by Spielberger, Gorsuch and Lushene in 1970 (reliability are 0.54 for males and 0.27 for females, validity are 0.75 for females and 0.76 for males).

Statistical Analyses

The following statistical measures were applied : Statistical analyses were performed with an alpha level of $p = 0.05$ for all tests, by using S-plus.

1. Means and Standard Deviations of all the major variables were calculated across the gender separately.
2. Linear correlation was calculated in order to determine inter association between the variables.
3. T-test analyses were administered to find out the significance of difference between the means of males and females across the major variables, through which research hypotheses were tested

H_{01} is highly significant and rejected at 0.05 level and of confidence ($p = 0.00$). (Table-2)

Table–2 : Mean, S.D., t-value, p-value, between male and female students in state anxiety scores

Gender	Mean	S. D.	t-Value	P-Value	df	N
Male	50.04	6.50	4.61	0.00	98	50
Female	44.04	6.49				50

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H$_{02}$ is significant and rejected at 0.05 level of confidence (p = 0.0014). (Table-3)

Table–3 : Mean, S.D., t-value, p-value between male and female students in trait anxiety scores

Gender	Mean	S. D.	t-Value	P-Value	df	N
Male	50.66	5.73	3.29	0.0014	98	50
Female	46.86	5.83				50

r-value for 48 df at 0.05 level of significance is 0.279. H$_{03}$ is significant and accepted at 0.05 level of significance. (Table-4)

Table–4 : Mean, S.D. and r-value between state anxiety and trait anxiety scores of female students

	Mean	S. D.	N	r-Value	df
State Anxiety	44.04	6.49	48	0.328	50
Trait Anxiety	46.86	5.83			

r-value for 48 df at 0.05 level of significance is 0.279. H$_{04}$ is significant and accepted at 0.05 level of significance. (Table-5)

Table–5 : Mean, S.D. of and r-value between state anxiety and trait anxiety scores of male students

	Mean	S. D.	N	r-Value	df
State Anxiety	50.04	6.50	50	0.311	48
Trait Anxiety	50.66	5.73			

Summary of Major Findings

The purpose of the present study was to make a comparison between male and female 1st year college students in terms of their anxiety. In order to draw a conclusion the researcher collected samples of 100 participants from five colleges of South Kolkata. The tool applied to measure the variables was STAI.

• Significant differences are found between male and female 1st year students in terms of their state and trait anxiety. Gender has significant impact on state and trait anxiety scores both at 0.01 and 0.05 level of confidence.

• A highly positive significant relationship exists between state and trait anxiety scores among both the male and female students separately. With 95% confidence it can be said that there is significant positive relationship existing between state & trait anxiety of both male and female 1st year college students.

Discussion

First year college students are at the junction period between adolescents and young adults. Adolescence is described as the "spring of life". It is the period when an individual moves from childhood to adulthood-mentally, physically, emotionally & socially. In this stage the child tries to become emotionally independent & develops his own values & ways of thinking. But in spite of these, family and environmental factors play a key role in developing their personalities. The mounting pressure of parental aspirations on their wards to perform (or perish) in a highly competitive social space seems to render this age group vulnerable to these psychological emotions. They come to develop visible signs of anxiety

The findings of the present study indicate that gender has significant impact on both state anxiety and trait anxiety scores that means male and female 1st year students differ among themselves in terms of their

state and trait anxiety. From the calculated mean it could be concluded that male students have higher state and trait anxiety than their female counterparts.

The current study reflects a highly positive significant relationship between state and trait anxiety scores among both the male and female students separately. This implies that higher the level of trait anxiety experienced by both the male and female students, greater their degree of state anxiety in any events. Trait anxiety is relatively stable characteristic in any individual whereas state anxiety is transitory level of anxiety, which often situationally determined, and fluctuates with time and circumstances. Individuals having inborn characteristics of trait anxiety are often become anxious in any unstable situation. In the study of Adela Yarcheski and Thomas J. Yarcheski (2002) we see that individuals with high levels of anxiety are likely to have high blood pressure, coronary artery disease and so on.

Limitations of the Study

In spite of utmost care and all the possible precautionary measures undertaken while conducting the research, several limitations were identified during different stages of research. These are :

- A more varied sample could have been included in the study if the researcher collected data from almost all the colleges of Kolkata and outside Kolkata.
- The researcher could have been included samples from different streams such as Humanities, Commerce and Science and also from different years such as 1st, 2nd and 3rd year. A stream wise and year wise comparative study could have also been made.

Scope for Further Research

While undertaking the present study the researcher felt that there are certain gaps which can be overcome through future researchers. The study has helped to give birth to a number of fascinating research problems in this particular area. Some of these are as follows :

- A longitudinal study according to year wise and latitudinal study according to stream wise will provide much more valuable contribution.
- Case study can be conducted on students suffering from high anxiety. Different intervention and management programmes can be organized for students suffering from anxiety.
- Other variables such as family environment, parental aspirations and involvement, socio-economic background can be undertaken in this regard.
- Further statistical analysis can determine whether male or female students have higher degree of anxiety levels.

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The Effects of Some Factors on Different Types of Concept Development of Children at Pre-Operational Stage

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Abstract : *In our country the education at pre-primary level is gradually gathering its momentum to spread overall corners of the country. In this situation the present study may focus a new light on (i) the curriculum development (ii) Teaching strategies and also the teacher training programmes of the pre-primary level. Beyond these, present findings can help the educators to use the Piagetian techniques of educational guidance specially for the Indian children. The findings of the study also suggest a number of implications for pre-primary education and for systematic development of the Piagetian technique of educational guidance.*

Effects of Instruction on Development of Concepts : The present study has attempted to test that whether or not the formal instruction has a direct effect on the development of concepts in length, time, speed and total by the children at pre-operational stage. This is based on the idea that children at Pre-operational Stage can learn concrete, abstract and relational concepts from the environmental Stimuli either from Schools or from the nature. The results of the present study indicate that regarding the development of concepts in length and time, instruction has a direct impact but no impact is found regarding the development of concept in speed. The results signifies that instruction has a direct effect on development of more abstract relational concept.

Effects of Age on Development of Concepts : The second important aim of the present study is to determine the effects of age on development of the same concepts in pre-operational stage. The aim is based on the theoretical idea of Piaget (1970) is that individuals being active biological organisms, continuously interact with their environments. These physical experience and social environments contribute to the emergence of the different stages of development. Though all children go through the stages in the same fixed sequential order, but the chronological age at which children's complete each successive stage varies some what. The results of the present study indicates that mean scores on concept development have gradually increased with the age. The significant mean differences are found in respect to the 3 years and 4 years children on the development of all the concepts in length, time and speed. Similarly, the significant mean differences are also found in respect to the 3 years and 5 years children on the development of all the concepts. Between the 4 years and 5 years children. Significantly mean differences are revealed on the development of concepts in time, speed and total but not in length. The findings signify that the development of concrete concepts may be completed at the age of 4 years, so no difference is found between the 4 years and 5 years of children, On the other hand, the abstract and relational concepts are still developing in the children at pre-operational stage.

Effects of Sex on Development of Concepts : The third aim of the present study is to determine whether the effects of sex has an impact on the development concepts of same types. The basic assumption behind

the aim is that sex does not play any direct role on the development of concepts (Piaget, 1970; Inhelder, 1971 & Precener, 1972 etc.). The present study finds no significant mean difference between the boys and girls on the development of concepts and thus also supports the previous studies.

Effects of Locality on Development of Concepts : Another aim of the present study is to test the effects of locality on development of the same concepts. It is based on the idea that there is a cultural effect on the cognitive development. The development of concepts may vary with the cultural difference socio economic status difference or with the differences due to environmental exposures. The results of the present study reveal that there are significant mean differences between the urban and rural children on the criteria of development of concepts in length time and speed. It also signifies that the concept development is influenced by the exposure of urban and rural areas. Urban children are found better in developing concepts that the rural children.

Effects of Parental Qualifications and Development of Concepts : The last but not the least aim of the present study is to find out the effects of parental qualifications on concept development of their children. It is based on the idea that educational qualifications of the parents have an influencing role in concept development of their children. In the present study, it is found that between the two groups of children whose parents are illiterate and literate respectively differ significantly on the development of concept of length only but not on time, speed on total. Similarly between the two groups of children whose parents are illiterate and secondary education level only the development of concept in length differs only between the two groups of children whose parents are illiterate and higher education level, the development in speed and total are found significantly different. Similar results are found between literate vs secondary education groups, literate vs. higher education (not in speed) only. Thus, though the inference is not so clear still there is a tendency which may establish a relationship between the parental qualifications and the concept development of their children. To resolve this ambiguity there is a scope of further research in the area.

Methodology

The main purposes of the study are to determine the effects of instruction, age, sex, locality and parental qualifications on the criteria of development of concepts; length, time and speed of the children at pre-operational stage. Thus, the independent variables are instruction, age, sex, locality and parental qualifications and the dependent variables are development of concepts on length, time and speed. McGuigan (1990) has advocated the quasi-experimental designs for the researches in Social sciences where randomize treatments are not possible. Cook and Campbell (1979) presented a variety of quasi-experimental designs and applied them to a number of Societal Problems. In the present study norm equivalent comparison group design of Cook and Campbell (1979) has been followed to explore the objectives of the study.

Population : Children of the age group 3 to 5 years having Bengali as the mother tongue in the state of West Bengal have been considered as the population of the study.

Sample : From the population, a total number of 240 sample has been purposively selected at random for the different strata, of the study. The strata-wise distribution of the sample are shown Table-1 to Table-6.

Instrument : A twenty item individual test of BTCF (Roy & Ghosh, 1992) developed by the researcher has been used in the present study. The instrument is used to measure the concept development of the children

(3 to 5 years) on length, time and speed. The scoring principle and other norms are used to obtain the relevant data.

Variables of the Study : Variables are the conditions or characteristics, that the experimenter manipulates, controls or observes. In connection with this experiment, the following variables have been identified to find out its effects on some specific concepts development.

a) Independent variable : The independent variables are : i) Instruction, ii) Age, iii) Sex iv) Locality and v) Parental qualifications.

b) Dependent variable : The dependent variables are development of concepts on i) Length, ii) Time, iii) Speed and iv) Total.

c) Intervening variable : The researcher has been aware of the fact that there may be various types of intervening variables which may affect this study. These types of variables may be the effects of natural exposure, physical environment, biological environment, heredity, parents, teachers, teaching aids and other psychological abilities.

In the present study, the researcher controls this contamination effects through randomization. In the posses of randomization the effects of the intervening variables may also be equally distributed in each sub-group.

Procedure of the Study

The researcher has administered the BTCF on two uninstructed and instructed groups of children from August 2008 to January 2009. The researcher first administers the test on uninstructed group in both the locality urban and rural areas. Firstly he has surveyed two villages Nazirpur and Shibpur and found sixty children (30 boys and 30 girls) of 3 to 5 years age who are uninstructed. He has administered the test on them and collected the data. Similarly in the urban locality Birnagar and Krishnagar Municipality, the researcher has surveyed, identified administer and collected data on a sample of sixty uninstructed urban children (30 boys and 30 girls).

In the next phase the researcher has administered the test on the instructed group. In the rural locality the test is administered on a sample of sixty children (30 boys and 30 girls) of three age groups being instructed in the school " Nazirpur Tarun Sangha Balwadi" and "Therpur Singha Sriti Sangha Balwadi". In the urban locality the test is administered in the same way to the sample of sixty children of three age groups being instructed in the School "Krishnagar Academy". The response sheets are scored following the scoring principle of the BTCF. The correct answer of each item has been credited by 'one' mark and incorrect or partially correct or no response by 'zero' mark. Then, the marks obtained by each student has been collected and arranged in tabular forms for further analysis.

Results

The present study deals with the analyses of the scores by descriptive statistics. Following the quasi-experimental design, the hypotheses are tested by the inferential statistics, 't'-test. In this study effects of the five independent varieties, viz. (a) instruction, (b) age, (c) sex, (d) locality and (e) Parental qualifications have been analysed on the criteria of the development of concept in (i) length, (ii) time, (iii) speed and (iv) total. Thus to test the hypotheses significant mean differences have been calculated between the levels of each of the independent variables.

Table–1 : 't' Values between the Instructed and Uninstructed Groups of Children Development of the Concepts

	Length	Time	Speed	Total

	Instructed	Uninstructed	Instructed	Uninstructed	Instructed	Uninstructed	Instructed	Uninstructed
N	120	120	120	120	120	120	120	120
M	6.09	4.89	3.74	3.33	3.75	3.68	13.61	11.61
SD	1.85	2.09	1.27	1.15	1.48	1.44	3.75	3.92
SE_D	0.26		0.16		0.19		0.50	
T	4.62**		0.56*		0.37		4.00**	

*Significant at 0.05 level of significance, **Significant at 0.01 level of significance.

Table-1 shows that instructed group of children have developed better concepts on length, time, speed and total in comparison with the uninstructed group of children. It reveals that the instructed and uninstructed groups of children differ significantly on the development of all the concepts except speed concept. Thus, the null hypotheses OH_1 is partly rejected.

Table–2 : 't' Values between the 3 years, 4 years and 5 years groups of children on development of the concepts

	Length			Time			Speed			Total		
	3 yrs	4 yrs	5 yrs	3 yrs	4 yrs	5 yrs	3 yrs	4 yrs	5 yrs	3 yrs	4 yrs	5 yrs
N	80	80	80	80	80	80	80	80	80	80	80	80
M	4.01	5.95	6.44	2.84	3.64	4.15	2.70	3.98	4.39	9.55	13.31	14.96
SD	1.91	1.75	1.76	1.10	1.08	1.13	1.35	1.02	1.41	3.39	2.91	3.40
SE_D	0.29	0.29	0.28	0.17	0.22	0.21	0.19	0.22	0.20	0.50	0.54	0.51
T	6.69**	8.38**	1.75	4.71**	0.64	5.71**	6.74**	7.68**	2.05*	7.52**	10.02**	13.2**

*Significant at 0.05 level of significance, **Significant at 0.01 level of significance.

Table-2 compares the mean scores among the three age groups (3 years, 4 years and 5 years) of children. It signifies that development of different concepts gradually grows with the age. Mean score of the children of 5 years are better than that of 4 years and children of 4 years are better than that of 3 years. It includes that there are significant mean differences between 3 years vs. 4 years and 3 years vs. 5 years groups of children on the development of concept in length. But no significant difference is found between 4 years vs. 5 years group of children on the development of concept in time. Significant mean difference revealed between the 3 years vs. 4 years age group of children on the development of concepts in speed and to all the groups differ significantly. Thus, the Hypotheses OH_2 is partly rejected.

Table–3 : 't' Values between the Instructed and Uninstructed Groups of Children Development of the Concepts

	Length		Time		Speed		Total	
	Male	Female	Male	Female	Male	Female	Male	Female
N	120	120	120	120	120	120	120	120
M	5.58	5.41	3.47	3.62	3.72	3.69	12.53	12.66
SD	2.10	2.01	1.27	1.18	1.55	1.34	4.06	3.81
SE_D	0.55		0.16		0.19		0.51	
T	0.31*		0.94		0.16		0.26	

*Significant at 0.05 level of significance, **Significant at 0.01 level of significance.

Table-3 indicates a very significant result. Boys have developed a slight better concept on length than the girls. On the other hand, girls are found slightly better in respect to the time and speed concepts development.

Table–4: 't' Values between the Instructed and Uninstructed Groups of Children Development of the Concepts

	Length		Time		Speed		Total	
	Rural	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**	**Rural**	**Urban**
N	120	120	120	120	120	120	120	120
M	5.75	5.22	4.06	3.40	3.87	3.52	13.27	12.07
SD	2.21	1.86	3.96	1.19	1.21	1.61	3.89	3.89
SE_D	0.15		0.38		0.19		0.50	
T	3.53**		1.74*		1.84*		2.40*	

*Significant at 0.05 level of significance, **Significant at 0.01 level of significance.

Table-4 shows that urban children have developed all the concepts better than the rural children. It reveals that there are significant mean difference between the urban and rural children on development of all the concepts. Therefore the null Hypotheses OH_4 is totally rejected.

Table–5 : Table showing Mean and S.D. of Parental Qualifications of Children on Development of the Concept

	Length				Time				Speed				Total			
	ILL	**L**	**SE**	**HE**	**ILL**	**L**	**SE**	**HE**	**ILL**	**L**	**SE**	**HE**	**ILL**	**L**	**SE**	**HE**
N	75	84	19	62	75	84	19	62	75	84	19	62	75	84	19	62
M	3.64	5.18	5.05	6.68	3.47	3.42	3.00	3.94	3.49	3.59	2.84	4.06	11.97	11.69	11.00	14.71
SD	2.09	1.91	2.04	1.73	1.12	1.12	1.53	1.17	1.48	1.57	1.82	0.96	3.76	3.90	4.75	3.05

*Significant at 0.05 level of significance, **Significant at 0.01 level of significance.

Table-5 indicates that apparently there is no relationship between the development of concepts of the children with their parental qualifications further inferential analysis are required to confirm the interpretations. It is found that on the development of concept in length there are significant mean differences between the different groups of children best on their parental qualifications. On the development of concept time significant mean differences are found between the groups of children best on the parental qualifications- illiterate vs. higher education, secondary education vs. higher education only, but other groups are found no significant differences. On the development of concepts in speed significant means differences are found between the groups of children illiterate vs. higher education, literate vs. secondary education and secondary education vs. higher education only. On the development of concept in total significant means differences are found between the groups of children - illiterate vs. higher education, literate vs. higher education and secondary education vs. higher education only. Thus the null hypothesis OH_5 is partly rejected.

Conclusions

The study on concept development and logical thinking indicates that theoretical explanations of cognition and its development must consider the development not only of logical rules, but also of efficient information processing strategies. Several developmental psychologists have realized the differences in developmental theories to data and have began to consider new approaches which appear to hold considerable promise for the future with this broad frame of reference, The present study has made an attempt to identify some independent variables which may effect the process of information processing and ultimately the development of concepts. Thus, instruction, age, sex, locality and parental qualification may have some influencing role on concept development of the pre-operational children. Furthermore, nature of the concepts has also a direct influencing role on its development at pre-operational stage.

The findings may suggest a number of implications for pre-primary education and for systematic development of the Piagetian technique of educational guidance. In our country the education at Pre-primary level is gradually gathering its momentum to spread over all corners of the country. In this situation the present study may focus a new light on (i) the curriculum development, (ii) teaching strategies and also the Teacher Training Programmes of the pre-primary level. Beyond these, present findings can help the educators to use the Piagetian techniques of educational guidance specially for the Indian children.

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Quota within Quota is Vital for Proper Socio-Economic Empowerment – An Overview of the Status of Dalit Women in India

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Abstract : *In the caste system of our country, a 'Dalit' is often called untouchable. He is a person who does not have any Varnas ; Varna refers to the different parts of the body of the divinity Purusha. The part form which a Varna was created defines its social status for issues such as who they can marry and what jobs they can do. Dalits fall outside Varna system and have historically been prevented from doing anything but the most menial jobs.*

Key words: *Economic Empowerment, Status of Dalit.*

Introduction

Dalit is not a caste name. Dalits are known as outcastes. The word 'Dalit' comes from the 'Indo-Aryan' root dal, and means 'need under checked', 'suppressed' or 'oppressed'. Dalit is not a new word. Apparently it was used in 1930's as a Hindi and Marathi translation of 'depressed classes'. The word was also used by Dr. B. R. Ambedkar in his Marathi speeches. In 'The Untouchables' published in 1948 Ambedkar choose the term broken-men an English translation of 'Dalit' to refer to the original ancestors of the untouchables for the reasons which must have been self evident, because he did not explain them. The social structure suggested by Dr. Ambedkar among the Hindus is as follows :

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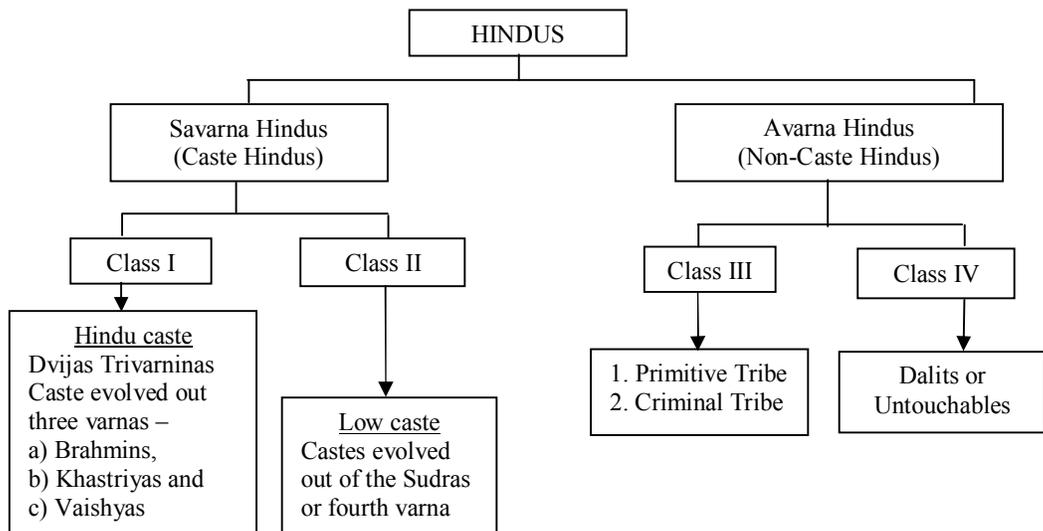
The problem remains with class IV 'the Dalits' they were discriminated in every sense. Discrimination against dalit is not limited to Hindu community. This situation is extended by the fact that non Hindu dalit groups have traditionally not been recognized. The Dalit Muslims or Arzal as well as Dalit Christians from an integral part of the caste system in South Asia among Muslims and Christians. Many Dalit Muslims are discriminated against by the upper caste 'Ashraf' Muslims and Dalit Christians discriminated against by upper caste Christians priests and nuns.

Some Dalits were successfully integrated into urban Indian society, where caste origins are less obvious and less important in public life. In rural India, caste origins are most readily apartment and Dalits remain excluded from local religious life. But due to changing social norms of acceptable behaviours, this exclusion in its severity is diminishing day to day.

Caste discrimination is an old and a cruel form of discrimination continues to 160 million Dalits of which 49.96% (approx.) are Dalit women. Dalit women are a deprived section and they belong to the lowest level of economic and educational structures. They are poor, illiterate sexually harassed and exploited. One of the important reasons for Dalit women having better position than those of higher caste is Dalits consider their women as equals. They have respect, for their mother, sister and wives. Dalit women have to work for their bread mostly outside the home, thus they are more or less economically independent. Generally they have undertake manual low paying, tedious time consuming work. As a result they earn very poor amount of money. Dalit women are bonded abused sexually exploited by other caste, humiliated and easy targets of insult.

The globalization process has severely affected the life style of Dalit women. They are unemployed due to introduction of new farming techniques such as mechanization for harvesting and transplanting. Due to the rapid process of industrialization they are losing their land and common natural resources.

Dalit women are deprived from health services. The average life of Dalit women is only 50 years. The infant mortality rate is very high, i.e. 90 / 1000. They are malnourished and anaemic. They suffer prolapsed uterus, soars on the toes, infectious diseases, cervical cancer, back pain, skin irritation etc.

76.27% of Dalit women are illiterate because they have less access to education which is also an inherent part of the caste system. Due to economic and other constraints most of the Dalit girls are not in a position to avail the scope of education. They are involved mostly in hazardous work such as Beedi making, working in Match factories, making crackers, and in taking care of small children.

Recent data indicate that there is an 8% sharp increase in crimes against women especially of Dalit society. They are murdered, gang raped, molested, sexually harassed, auctioned for the sex trade. On an average 3 Dalit women are raped everyday and are victims of caste riots.

The 73 amendment of Indian Constitution allows Dalit women to be elected to local government offices. Presently they are fighting for political power within this caste system. But the representation of Dalit women in various bodies is negligible. The data of representation of Dalit women in Parliament is an indicator of this. It is well established fact that political parties has not given space to Dalit women in proportion to their population share. In 1971 of the total SC women members of Parliament was 1.56%. Whereas they constitute half of the SC population. The number increased from 1.56% to 13% in 1996 and more or less static in the last General Election (2004). Some section of people believes that unless there is a special provision like quota within the quota for Dalit women, they will remain sidelined, and only political empowerment can bring them in the active part of development.

But real situation highlights a very critical situation for Dalit women. In three tier Panchayat Raj system reservation for women has been adequate importance, specially for all categories of women. Usually women who do not have the courage to speak out are chosen for the post. Often the meeting takes place after 9 o'clock in the night and while the men are well prepared and know what will be discussed the women who had been working for the whole day are not informed and can not participate in the discussion. Often they also have no opinion of their own. The discussions are practically taken by their husbands who instruct the women what to say. It is beyond doubt that the reservation of seats for women and Dalits provides new opportunities for these two sections to improve their conditions while taking up their responsibility the developed a vision which however cannot be realized in the Panchayat system. It is also a fact that the elected women and Dalit representatives could not take up the sensitive issues of women and Dalit as they are being challenged by the community Panchayat. Because other groups are very powerful as they have established a hold over community and power a corpus fund larger than that of the formal Panchayats.

All these taken together have given rise to the issue that socio-economic empowerment or political empowerment is more important for the upliftment of Dalit women. Empowerment in this context can be distinguished by its focus on developing critical awareness increasing feeling to collective and self efficiency and developing skills for personal, inter personal or social change. Dalit women are oppressed in all sphere of life. They need to empower in all walks of life. It is true that women in power can inspire more women to take up these paths. The actual picture is that they are elected but cannot increase power because of massive illiteracy. Thus to achieve the political reservation is not the proper solution for the development of Dalit women, which may give birth to another kind of elitism within the quota for them. The socio-economic empowerment can play the vital role for the purpose.

The empowerment must come through organisation and action and the acquisition of knowledge that is useful for life. Knowledge is power and knowledge about something is empowerment. The activity of working with people towards empowerment is very much on education and organizational activity leading to action. Most of the Dalit women are illiterate and have not any idea about representation, reservation etc. They live in huts, denied of basic amenities such as sanitation, light, water. Actually they are powerless and have no access to resources. Their basic common needs are nutrition, health, education, family welfare, safe drinking water, essential goods and medicines, electricity, proper sanitation, fair price shop etc.

So the following suggestions refer mainly to the programme and implementation aspects for the socio-economic empowerment which is more important for political empowerment in present context :

1. Acceptance of the Dalit as a unique community with their own world view will enable the government to understand the way Dalits think their concepts, priorities and even their weakness.

2. Economic development of poor Dalit women shall not help them in sustaining themselves but shall give us many more healthy social impact. By ensuring proper earning it shall help us to bring down crime rate since it will draw them away from various criminal activities by getting scope for ultimate sources of income.

3. The rate of illiteracy amongst them is usually much low more so in respect of women leading to less awareness and less susceptible to skill training first and foremost work should therefore to make Dalit women literate. Therefore it is essential to provide non-formal education and adult literacy should be based first on nutrition, child care, sanitation of the environment and making aware of their rights for equal wages.

4. Provide skill training while planning development quantum of skill they possess need to be assessed so that skill input required may be incorporated in total planning process.

5. Before modern medical science took over it was Hadi women (one class of Dalit) who used to help delivery of child in respect of all community. This branch of science at least up to certain extent was

known to them. If they are given proper scientific training and education it is expected that they can be better nurse or gynaecologists than others. This aspect may be considered in our planning process.

6. Dalit and local women cadres should identify as community to work in Dalit areas.
7. Ensure minimum wages and introducing new employment facilities and self employment programme.
8. Mobilizing and organizing them with the help of voluntary organization.
9. There should be provision to hold women meets which act as a forum to share societal concerns and at same time enable expression of their talent.
10. There should be a regular orientation for administration appointed to handle the affairs of the Dalit communities.
11. Co-operation between the Govt. and Non-govt. sector must be needed in working in these area.
12. The Govt. should support those social activities who are fighting against inequality and are mobilizing the poor, particularly members of Dalit to assert their legal rights.
13. The goal of India should prepare a status plan about the social and economic conditions of the Dalit in the country, which should also given an estimate about the differential between the levels of development of Dalits in different parts of the country based on sample survey and in depth studies.
14. A systematic review should be undertaken of all those communities by the goal of state and central level.

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Application of Boolean Algebra in Estimating Reliability of Education System in Government Aided Schools of West Bengal

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Abstract : *The study of the reliability of education system using the techniques and tools of Boolean Algebra is a new area of research. In this paper special emphasis has been given on the issue – application of Boolean algebra in educational research in estimating reliability of education system in a govt. aided school of West Bengal.*

Key words : *System reliability, Software system, Boolean algebra.*

Introduction

'Reliability' of a system means functioning of the system in a consistent way. If a system functions properly then it is said that the system is reliable. In manufacturing process or industrial process the quality of the output is assured through reliability of the system. For the time being education system is compared with industrial manufacturing system. Like the term 'quality output' the term 'quality education' is frequently heard in the addresses of educationists, social scientists, ministers etc. With the advancement of time, productive aspect of education is being widely prioritized. So many publications are on the issues like reliability of electronics system, reliability of electrical system, reliability of software system etc. But a study like reliability of the components of education system using techniques and tools of Boolean Algebra is a new area of research. In this paper the objectives of the study includes application of Boolean Algebra in educational research in estimating reliability of education system in govt. aided schools of West Bengal.

Method of Study

As the reliability of the system depends on the reliability of the components or sub-system, to estimate the reliability of the system, it is very much necessary to identify the major components of the education system and consequently, to establish the functional relationship between the different components of the system. To establish the functional relationship in a quantitative way a mathematical model comprising of different independent variables defined on the components of the system, have been used along with logic gate and truth table widely used in Boolean Algebra. Logic gate establishes diagrammatically, functional dependence of different components or sub-systems on controlling the reliability of an entire system with

the help of switching circuit diagrams. Truth table establishes the functional relation of reliability of education system quantitatively with other system components of related independent binary variables.

Identification of System Components and its Functions : Entire education system is the integrated form of different sub-systems. Education being in concurrent list of both State and Central Governments, remains in the domain of responsibility of the respective Governments for educational development. Different central agencies and state agencies are employed for development of education through formulating education policies and executing the formulated policies through different action programmes. Central agencies frame up different policies at national level taking into account the cultural diversity, language diversity and socio-economic diversities of different Indian States or Territories. To maintain a nationwide common education programme and to execute a common curricular structure, central agencies play crucial role in the development of education in the whole country.

Ministry of Human Resource Development controls over all central and state agencies directly or indirectly to ensure the quality education in the country. It also executes parliamentary decisions regarding education. The Central agencies like UGC, NCERT, NCTE, NIEPA, CIET are all in the control of Ministry of Human Resource Development. Different state agencies are also involved in development of education.

Department of Education in a state regulates education system of the respective state. Department of School Education has the responsibility of controlling education system of state govt. schools, state govt. aided schools, govt. sponsored schools, and private schools. Department of School Education executes the education policy of centre and state, frames up independent education policies and programmes and executes them through Directorate of School Education (DSE), West Bengal Board of Secondary Education (WBBSE), West Bengal Council of Higher Secondary Education (WBCHSE) etc.

State Council of Educational Research and Training (SCERT) is another state agencies supplementing advisory support to Department of Education. State Council of Teacher Education (SCTE) is another state agency giving state level advise regarding teacher education programmes. In addition to these state agencies, state school administrative system implement the national level school education programme, and state level education programme through govt. schools, govt. aided schools or govt. sponsored schools or through some NGOs, and govt. or quasi govt. organizations. Success of the national level educational development programme in a state depends on execution policy of the state or efficacy of the state school administration system.

For govt.-aided schools, elected governing body, called School Managing Committee plays crucial role in executing state level education policy and programme. In some special cases, it has to execute the direct orders of central policies or verdicts of Supreme Court regarding education related problems or issues. Performance of all the central and state level education programme become fruitful if and only execution of upper level instructions penetrate down to grass root level through successful supervision of the School Managing Committee.

'Headmaster' of the school, who is also the Jt. Secretary of the Managing Committee co-ordinates with Assistant Teachers of the school. Resolutions of Managing Committee are implemented through the 'Headmaster' of the school. In Managing Committee meetings, Headmaster discusses different academic issues, financial issues, administrative issues or problems etc.

Following the above discussions, it can be sorted out that five major system components regulate the function of state govt. aided school education system. These are i) Central Education System, which include central agencies like NCERT, NCTE, CABE, etc. Central School Administration and Management, Ministry of Human Resource Development etc., ii) State Education System which include state level agencies like SCERT, WBBSE, WBCHSE, state school administration and management, State Department of School Education etc., iii) Local Body Administration (School Managing Committee) which includes

elected members by guardians, elected members by teachers, nominees of D. I., H. M etc., iv) Teachers, v) Learners.

The block diagram (Fig. 1) shows the functional interdependence of major system components. Arrow indicates the direction of functional dependence.
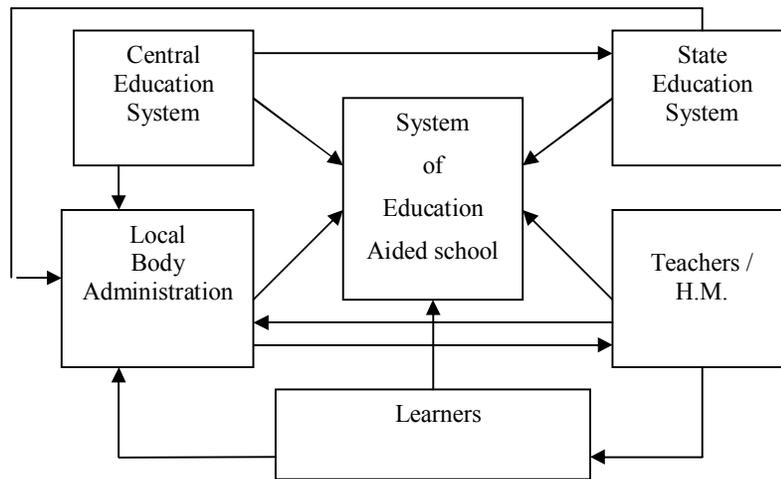
Fig. 1. Block diagram showing the functional interdependence of major system components

Delimitation of System Components : "Quality education" means fulfillment of educational aims and objectives at different levels – national level, school level, and local level. Quality education will also ensure the attainment of individual and social aim of education through proper manifestation of different abilities and skills. The reliability of education system (in Govt. aided schools), which is the dependent variable in the present study, may be treated as binary variable taking two values 0 and 1. If the educational aims and objectives are met, then binary variable takes value 1 and gets value 0 otherwise. That is

$$Q = \begin{cases} 1 & \text{If educational aims and objectives are completely fulfilled} \\ 0 & \text{Otherwise} \end{cases}$$

If aims and objectives are partially fulfilled then Q is zero.

Education, which is regulated by Ministry of Human Resource Development, Govt. of India, influences the state school administration system. Unreliable central education system adversely affect the state school administration system and management system. If the different components of central education system function properly i.e. when different programmes organized by central administration implemented deliberately and if education policy frame up by parliament are economically and socially viable then the component Central education system (C) becomes reliable and takes value 1 and zero otherwise. Thus

$$C = \begin{cases} 1 & \textit{If central education system is reliable} \\ 0 & \textit{Othrewise} \end{cases}$$

State education system also a system component taking value zero when state policy of education and state govt. educational programmes state finance policy is inadequate for fulfillment of educational aims and objectives. Irrational education policy and academic policy, erroneous method of recruitment of teacher, biased interference of teachers' association in making and executing education policy, inadequate fund to execute and implement educational programmes, lack of thoughtful approach in determining educational

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programmes, curriculum design, curriculum planning and implementation strategies reduce the reliability of the State education system (S). Conversely validity and reliability of the evaluation system of Board (WBBSE) and Council (WBCHSE), prudential academic policy, transparency of school administration system, regular and routine inspection of school, infrastructure, development on a periodic basis, sanctioning of the grants for teaching learning material makes the system reliable and the independent binary variable state education system (S) gets value 1.

$$S = \begin{cases} 1 & \text{If state education system is reliable} \\ 0 & \text{Otherwise} \end{cases}$$

School Managing Committee consisting of guardian representatives, teacher representatives, Headmaster and D. I nominee play very crucial role in implementing state and central level education policy, academic policy and programmes in utilization of different grants for infrastructure development, in creating good inter-personnel relation among teacher, HM and guardian, sometimes they discuss the problems of guardian, students and location. They also co-ordinate with local village and ward level education committees. Thus for ensuring quality education and making the education system (govt. aided school) reliable, the independent binary variable School Managing Committee (M) plays important role. It takes values 1 if it functions properly otherwise zero.

$$M = \begin{cases} 1 & \text{If school managing committee functions purposefully, lawfully} \\ 0 & \text{Otherwise} \end{cases}$$

Optimum joint effort of teaching and non-teaching staff is also the major factor in shaping quality education. The value of the independent binary variable, optimum joint effort of teacher (T) takes value 1 if teachers are committed and accountable to his or her responsibilities, inter-personnel relations of teacher are good and if the relations of the teachers with HM are good. Value of T is zero otherwise

$$T = \begin{cases} 1 & \text{If Inteligence Quotient is above 80} \\ 0 & \text{Otherwise} \end{cases}$$

Mathematical Model of System Reliability : Reliability of industrial manufacturing system largely depends upon the reliability of different sub-system and quality raw materials or output. In the corporate era productive aspect of education compare educational process with industrial manufacturing process. Like industrial manufacturing system education system will be reliable if its system components function in a reliable way. Reliability of govt. aided school education system largely depends upon the five major components of the system. These components are Central education system (C), State education system (S), School Managing Committee (M), Optimum joint effort of Teacher (T), Inherent quality of Learner (L).

An education system will be reliable only when its different components function reliably. It will never happen that entire system is reliable but its components are not functioning properly. If at least one component is unreliable then entire system may be unreliable. Thus reliability of the govt. aided school education system (Q) is the product of reliability of its system components. The mathematical model is as follows.

$Q = f(C, S, M, T, L)$
$\quad = C \times S \times M \times T \times L$ where $C, S, M, T, L \in A$, $A = \{0, 1\}$ \hfill (1)

An Outline of Boolean Algebra and its Applications : The term "Boolean Algebra" honors George Boole (1815–1864), a self-educationist, English mathematician and philosopher. He introduced the algebraic

system of logic initially in a small pamphlet. Boolean Algebra is the branch of mathematics dealing with logical addition, logical multiplication and other logical operations.

One of the primary requirements when dealing with digital circuits is to find always to make them as simple as possible. This constantly requires that complex logical expressions be reduced to simpler expressions that nevertheless produce the same results under all possible conditions. The simpler expressions can then be implemented with a smaller, simpler circuit, which in turn save the price of the unnecessary gates, reduces the number of gates needed and reduces the power and the amount of space required by the gates. One tool to reduce the logical expressions is the mathematics of logical expressions, introduced by George Boole in 1854, and known today as Boolean Algebra. The rules of Boolean Algebra are simple and straight forward and can be applied to logical expression. The resulting reduced expression can then be readily tested with a truth table to verify that reduction is valid.

'Boolean Algebra' is the algebra of two valued logic with only sentential connectives, or equivalently or algebras of sets under union and complementation. The rigorous concepts have roots and applications in logic set theory, measure theory, functional analysis logical philosophy etc. The study of 'Boolean Algebra' has several aspects like, structure theory, model theory of Boolean algebras, decidability and undecidabilty questions for the class of Boolean algebras and the indicated applications. In addition, there are connections to other logics, subsumption as a part of special kind of algebraic logic, finite Boolean algebras and switching circuit theory and Boolean matrices. In 'Boolean Algebra' variables are binary by nature, taking only two values '0' and '1' called constants.

Applications : 'Boolean Algebra' is a complete system of logical operations – it was named after George Boole, who first defined an algebraic system of logic in the mid 19th century. Boolean algebra has many applications in analysis of electronics system, electrical system, computer hardware system and software system and is the base of digital electronics. In 1938, Claude Shanner showed how electric circuits with relays were a model for Boolean logic. This fact soon proved enormously consequential with the emergence of the electronic computer. In analyzing reliability (Koo, 1990), to study reliability of a electrical system (Coyle, Arno, Hare), for computing reliability of a computer network system (Fratta, Montanari, 1973), methodology of 'Boolean Algebra' is widely applied.

A truth table is a mathematical table used in logic specifically in connection with Boolean algebra, Boolean functions and propositional calculus – to compute the functional values of logical expressions on each of their functional arguments, that is, on each combination of values taken by their logical variables. In particular, truth tables can be used to tell whether a propositional expression is true for all legitimate input values, that is logically valid. Truth tables are used to compute the values of propositional expressions in an effective manner that is sometimes referred to as a decision procedure. A propositional expression is either an atomic formula – a propositional constant, propositional variable or propositional function (for example $P(x)$) or built up from atomic formulas by mean of logical operators, for example AND, OR, NOT.

Truth table for classical logical are limited to Boolean logical systems in which only two logical values are possible – True or False, functioning or non-functioning, on or off, 1 or 0 respectively. Logical conjunction or AND is an operation on two logical values, typically the values of two propositions that produces true or functioning or on or 1 state if and only if both of its operands are true, functioning or on or 1 state.

DISCUSSION

From mathematical model (1) it is clear that Q will take value 1 only when C = 1, S = 1, T = 1, L = 1, M = 1 and Q will be 0, if at least one of C, S, T, L, M is zero. In an explicit way truth table-1 explains the functional dependence of different system components with dependent binary variable Q. Following logic gate (AND) also helps in estimating reliability of the govt. aided school education system through
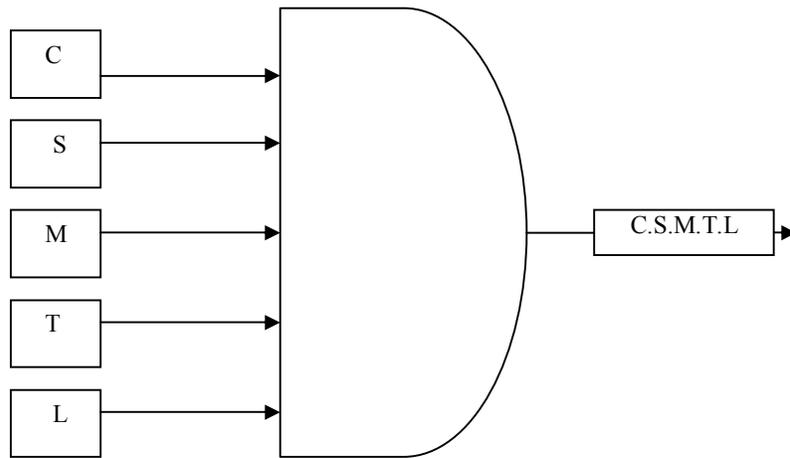
switching circuit diagram (Fig. 2), which is the diagrammatic representation of logical operations and logical expressions widely used in Boolean Algebra, to exhibit the functional dependence of different input devices with output devices.

AND gate function is used if the output is the product of Input binary variables. In this study Q is the product of system components or subsystem C, S, M, T, and L. That is why multi-inputs AND gate function has been used to show the relation of Q and C, S, M, T and L.

Truth Table-1

C	S	T	M	L	Q	C	S	T	M	L	Q
0	0	0	0	0	0	1	0	0	0	0	0
0	0	0	0	1	0	1	0	0	0	1	0
0	0	0	1	0	0	1	0	0	1	0	0
0	0	0	1	1	0	1	0	0	1	1	0
0	0	1	0	0	0	1	0	1	0	0	0
0	0	1	0	1	0	1	0	1	0	1	0
0	0	1	1	0	0	1	0	1	1	0	0
0	0	1	1	1	0	1	0	1	1	1	0
0	1	0	0	0	0	1	1	0	0	0	0
0	1	0	0	1	0	1	1	0	0	1	0
0	1	0	1	0	0	1	1	0	1	0	0
0	1	0	1	1	0	1	1	0	1	1	0
0	1	1	0	0	0	1	1	1	0	0	0
0	1	1	0	1	0	1	1	1	0	1	0
0	1	1	1	0	0	1	1	1	1	0	0
0	1	1	1	1	0	1	1	1	1	1	1

Fig. 2. Switching circuit diagram using Boolean AND gate function

Conclusion

Boolean Algebra approach for estimating reliability of govt. aided school education system in two points scale (0 and 1) establish that the said education system will be reliable if all the system components are reliable. If at least one component is not reliable aims and objectives of education will not be completely fulfilled and entire system will be unreliable. To make the system reliable every component should be given priority.

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Potentiality of Teaching and In-service Teacher Education Curriculum

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Abstract : *The present paper has been designed to represent some exposure of in-service teacher education. For being attaining quality, in-service teacher education must be reshaped. The paper has directed to focus some historical development of in-service teacher education with its present need leading to effective teacher.*

Key words : *In-service teacher education, Curriculum.*

Introduction

The quality of education depends upon the teachers of a nation. For this education of teachers has to be considered as an integral part of the system of education. It has to focus its attention on the new role of teachers and teacher educators. Hence, education is a potent instrumentation for bridging about the desired changes in the society and teacher are to play a crucial role in this novel venture. Human rights can be achieved and sustained mostly through education and training. In this context, the UNESCO-ILO document on status of teachers (1967) states that – *"It should be recognized that the advancement in education depends largely on the qualification and ability of the teaching staff in general and on the human, pedagogical and technical qualities of the individual teachers".* So, with a view to promoting quality and quantity of education, it was felt essential to develop the professional competencies of teachers through a planned programme of improved training.

India has a large system of education. There are nearly 5.98 lakh primary schools, 1.76 lakh elementary schools and 98 thousand high / higher secondary schools in the country; about 1300 teacher education institutions for elementary teachers and nearly 700 colleges of education / university departments preparing teachers for secondary and higher secondary schools. Out of about 4.52 million teachers in the country nearly 3 million are teaching at the primary / elementary level. A sizeable number of them are untrained or under trained. In certain regions, like the North East, there are even under qualified teachers. In this situation, if we want to improve the quality of education, the first essential task is to provide proper training for teachers and in this matter in service teacher education is only key instrument which can serve this purpose.

Before independence, the condition of in service teacher education was not very good in India. A very few committees and commissions have emphasized on in service teacher education. As for example we can say that the Hartog Committee (1929) was the first committee which has greatly emphasized the importance of in service teacher education. As a result, some sporadic attempts at in service training were

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made here and there by the U. P. government which started a scheme of refresher courses for school teachers. After that Wood Abbott Report (1937) and Sargent Report (1944) gave their important suggestions regarding in service education for teachers. However, though the committees have given many important suggestions for improving the quality of in service education for teachers, but no strong agencies or institutions of in service teacher education have been established in pre-independent India.

After independence, there are so many changes have been occurred in the field of education in India. Various Committees and commissions, organizations and institutions of in service teacher education have been established by the Indian government. Such as the University Education Commission (1948-49), the Secondary Education Commission (1952-53) and the Kothari Education Commission (1964-66) have given their important suggestions regarding in service education for teachers. Among these commissions, the Kothari Education Commission is the most important commission because this commission has widely stressed upon the in service teacher education. The commission recommended that "A sound programme of professional education of teachers is essential for the qualitative improvement of education". (Report of the Education Commission, 1964-66).

On the basis of the recommendations of Kothari Education Commission, the National Policy on Education (NPE-1986) and the revised NPE (POA-1992) have emphasized the professional growth of teachers. As a result, many important agencies and institution of in service teacher education have been established. Such as SCERTs, IASEs, SIEs, CTEs, DIETs etc. Except these agencies and institutions, NCERT, NUEPA, CABE, RIEs etc. are also engaged in providing in service education and training for teachers.

The International Commission on Education Report "*Learning to be*" (1972) and the UNESCO Commissions "*The learning: The treasure within"* (1996) have laid stress on the professional growth of teachers for making them capable of discharging their duties and responsibilities efficiently and effectively. For the professional growth of teachers, a host of programmes and strategies have been experimented and found successful in India. The programmes which are worked upon for development of competencies of teachers are in service training, workshops seminars, symposium, conferences, refresher courses, orientation courses etc.

However, Indian in service teacher education programme have so many problems, like lack of motivation and interest of teachers, lack of incentives, inadequate training of teacher educators, inadequate methods and techniques, curriculum and courses, Organizational problems, financial problems and so on. As a result in service teacher education programme can not achieve its ultimate goals and objectives.

Emergence of the Problem

"A teacher can never truly teach, unless he is still learning himself. A lamp can never light another lamp unless it continues to burn its own flames" – Rabindranath Tagore.

From the above remarks of Tagore, it clearly indicates that a teacher should go on continuing self-learning in order to keep himself/herself abreast with the latest trends and developments in the spheres of multifarious subjects. In the age of science and information technology, it is not wise to sit on the fence of knowledge, rather try to update their knowledge and skills for discharging their duties satisfactorily. In-service education is the right mode to acquaint teachers with the latest trends and practices in different fields of education. Further, to continue working effectively, teacher requires continuous personal and professional renewal in knowledge and teaching skills and redirection of task and expertise at the changing or emerging society necessitates. In this respect, training on job is highly essential.

After post-independence, many Indian committees and commissions have emphasized on professional growth and in-service education for teachers. As for example – this manner, "*In all the professions there is need to improve further training and special course of study, on a continuing basis, after initial*

professional preparation. The need is most urgent in the teaching profession because of the rapid advance in all fields of knowledge and continuing evolution of pedagogical theory and practice".

On the subject of teacher education, the National Policy on Education, (1986) states as follows :

"Teacher education is a continuous process, and its pre-service & in-service components are inseparable. As the first step, the system of teacher education will be overhauled. The new programmes of teacher education will emphasis continuing education and the need for teachers to meet the thrusts envisaged in this policy".

In pursuance of the statements contained in the NPE, 1986 and the programme of action (POA, 1992) on the subject of teacher education number of schemes have been suggested during the seventh plan period, important among them being the mass orientation of about five lakh teachers annually to make them aware of their role in the context of the new policy thrusts and also to improve their professional competence, strengthening of State Council of Educational Research and Training, establishment of about 400 District Institutes of Education Institutions, 50 would be upgraded as Institutes of Advanced Studies in Education (IASE) for the qualitative improvement of school education by raising the standard of teaching.

Though, various Indian commissions and committees have emphasized on in-service teacher education, and given many suggestions in regarding to improve the programmes of in-service teacher education, but that is not enough. There are so many problems of in-service teacher education in India, but no suitable steps have been taken by Indian Govt. to solve these problems. Moreover, there has not been enough research study conducted so far for the improvement of in-service teacher education programme. In this context, the present researcher is interested to review the background, progress, policy, programmes, committees-commissions and present status of in-service teacher education in India.

Objectives of the Study
1. To review the progress of in-service teacher education in free India.
2. To identify the different programmes/schemes of in-service education for teachers.
3. To identify the different agencies or institutions of in-service teacher education.
4. To examine recommendations of various commissions and committees on in-service teacher education.
5. To identify the problems of in-service teacher education in India.
6. To provide suggestions for improving the in-service teacher education programmes.

Methodology
The nature of the research is Historical. The researcher has conducted the work in the following ways :
1. Collection of primary and secondary sources.
2. Examining the sources whether they are reliable and valid.
3. Then making generalization from the valid sources.

The method of historical research is used in the present study. It is a survey study based on official documentary evidence. The basic hypothesis was that in post independent India adequate emphasis was given to in-service teacher education. Therefore, the recommendations of the various education commissions and the implementation of these recommendations by the government both administratively and financially were examined. The conclusion made in this study were based on published government reports, news paper reports and articles published by different authors in books and journals.

Sources : Like other type of researches in historical research also two types of sources (data) are used.

(a) Primary sources : These sources are eye witness accounts. The original documents come under the category of primary sources. As a primary source, the reports of the different commissions and committees have been used by the researcher in this present study.

(b) Secondary sources : These are accounts of an event provided by a person who did not directly observed that event, object or condition. Here the researcher has conducted his study on the basis of secondary sources. These are i) Published books of different writers, ii) Articles and different magazines, iii) Different journals, iv) Internet.

Delimitation

The development of in-service teacher education is a vast area of study. Due to lack of time the researcher can not cover all areas of the topic. So, this study has been restricted to the analysis of some selected aspects of in-service teacher education in India. History of in-service teacher education; recommendations of various commissions and committees on in-service teacher education; programmes of in service teacher education; and problems of INSET programmes have been selected by the researcher in this present study. The in-service teacher education programmes at elementary and secondary level has been discussed in this present study. In-service teacher education programme at pre-primary and higher education level has not been included at present study.

Significance of the Study

Education is a powerful tool and fundamental force in the life of man. It plays an instructional role in shaping the destiny of the individual and the future of mankind. After the introduction of formal education, teachers occupy a pivotal position in the system of education. Teachers are surely arbiters of human resource development. The quality of education is a direct consequence and outcome of the quality of teachers and teacher education system. It is now well established that cultural, social and economic progress of the country is dependent on masterful classroom teaching by outstanding teachers. Teachers are torch bearers in creating social cohesion, national integration and a learning society. They not only disseminate knowledge but also create and generate new knowledge.

In India population is ever increasing. By 2015, there would be approximately 120 crores of people. Besides, food and shelter we need to provide education to millions of people. We need more teachers and quality teachers. Although defining and measuring teacher quality remains difficult, a growing consensus is developing about some of the characteristics of high quality teachers. Research studies have found that teacher more effectively teach and improve students achievement, if they themselves have strong academic skills, appropriate formal training in the field in which they teach. Previously it was believed that "*Quality teachers are born not made*", but this concept have changed in recent times. It is now well established that only a few teachers have innate capacity of masterful teaching but we can develop quality teachers by providing quality education to the teachers. A person academically highly competent in the subject matter, may not be a good teacher, in the class room. But proper education, guidance and in-service exposure to the new development in the content and pedagogy of the subject can make most teachers high quality teachers. With explosion of knowledge in all fields of study and introduction of newer concept and pedagogical techniques, there is the necessity of proper training and education before a person can be a true quality teacher. That is the reason that teachers are not born but can also be made through good programmes of pre-service and in-service teacher education.

The meaning of the term in service education refers to the education a teacher receives when he / she has entered the teaching profession. In-service training is understood as a tool to professionalized teaching, improve quality and efficiency of the new educational system and promote scientific and technological advances and innovations. In service teacher training is the only tool to face the new technological, social and cultural changes. In-service education help teachers to improve their knowledge, providing their ways

to help them improve their effectiveness in the classroom and by instilling in them a desire to do a better job of teaching. In-service training can upgrade the knowledge of the student teacher. So, in-service education and training is one of the most important process by which an unqualified teacher can make himself / herself as a qualified teacher. So we can say, in-service education is very important in the career of a teacher.

Findings and Conclusion
1. Structural presentation of in-service teacher education should be implemented for developing teachers' potentiality.
2. In-service Teacher education may be constructed within the framework of the institution and abroad.
3. Teaching for construction of knowledge should be encouraged within teacher education.
4. Research in teacher education should be integral part of teacher education for making quality in teacher education.
5. Different activity based curricula should be involved in teacher education.

In-service teacher education does not mean training of the teachers through different time bound courses. But it is the process through which teacher can develop their potentiality and can be used for making the system globalised & productive.

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Education and Women Empowerment : A Study

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Abstract : *Empowering women is a pre-requisite condition for creating a good nation when women are empowered, society with stability is assured. Empowerment of women is essential as there thoughts and their value systems lead to the development to the development of a family, good society and ultimately a good nation.*

Key word : *Woman empowerment.*

Introduction

Discrimination of women is well known all over the world, in communities across time and space, are constituted distinctly unequal categories as compared to men. Women are usually seen have more deprived status in terms of access to resources and enjoyment of rights and freedom that together enhance the quality of human life. The national perspective plan for women 1988–2000 AD (1988) gives us the following profiles of women in India: There is continued inequality and vulnerability in all sectors – economic, social, political, education, health care, nutrition and legal. Women are oppressed in the spheres of life and as such they need to be empowered in all social contexts. This is also tellingly brought out in the following observation recorded by the United Nations:

"Women : half of mankind, they perform two-third of the world's working hours. But are registered as constitution one-third of total labour force, receive one tenth of total remuneration, own only one percent of world's material goods". The International Labour Organization says that women represent 50% of the population, 30% of the labour force, perform 60% of all working hours, receive 10% of the world's income and own less than 1% of the world's property.

The disparities based on gender lead to another lead to another grave handicap affecting women: their relative power to conduct their lives as autonomous and self-reliant beings. This characteristic of women lives is found to be common to almost all societies in greater and lesser degree. That is why, "women's empowerment and their full participation on the basis of equality in all spheres of society including participation in the decision making process and access to power, are fundamental for the achievement, equality, development and peace" (Beijing Declaration, 1995). The paper will focus on meaning of women empowerment.

Understanding Empowerment

Woman empowerment is a global issue. This concept of women empowerment appears to be the outcome of several important critiques, discussion, dialogues and debates generated by the woman movement throughout the world, especially in the third world countries (feminist) Empower is a term widely use in the context of development, particularly women's development. The empowerment approach was first clearly activated in 1985 by Development Alternatives with Women for a New era (DAWN). In the mid 1980's the term empowerment became popular in the field of development, especially with reference to women.

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'Power's is the key word of the term 'Empowerment' which means control over material assets, intellectual resources and ideology. The material assets over which control can be established may be of any type – physical (land, water and forests), human (people's bodies, labour and skills), financial such as (money and access to money). Knowledge, information, ideas can be included in intellectual resources.

The core element of empowerment is power. The prefix 'em' is attached to the noun 'Power' to create a verb (empower). According to Webster's new World Dictionary (1982) this prefix is used to form a verb meaning "to make, make into or like, cause to be". Thus "to empower" is to make or cause power. Staples defines this term as; to gain power; to develop power; to make or seize power; to facilitate or enable power; to give, grant or permit power. Hence, the noun 'empowerment' which is not listed in Webster's New World Dictionary (1982) refers to the process by which power is gained, developed, seized, facilitated or given. An individual or group moves from a condition of relative power through the empowerment process. In this sense empowerment is the product of the same process.

Two noted feminist authors, Gita Sen and Srilatha Bathiwala (1994), looked upon empowerment as 'the process by which the powerless has gained greater control over the circumstances of their life. It includes both control over resources (physical, human, intellectual, financial) and over ideology (beliefs, values and attitudes). It means not only greater extrinsic control but also a growing intrinsic capability, greater self confidence and an inner transformation of one's consciousness that enables one to overcome external barriers in accessing resources in a changing traditional ideology'.

According to Pillai (1995), "Empowerment is an active multi-dimensional process which enables women to realize their full identity and power in all spheres of life. Power is not a commodity to be transacted, nor can it be given away as aims. Power has to be acquired, and once acquired, it needs to be exercised, sustained and preserved".

The World Bank has defined empowerment in the following way :

'Empowerment is the process of increasing the capacity of individuals of groups of making choices and to transform those choices into desired actions and outcomes.' (The World Bank, 2006). Empowerment is the process of enabling authorities or an individual to think, behave, take action and control work in an autonomous way. It is the state of feelings of self empowered to take control of one's own destiny. It includes both controls over resources (physical, human, intellectual and financial) and over ideology (belief, values and attitudes (Batliwala, 1994).

Karl (1995) feels that, Empowerment is a word widely used, but seldom defined. Long before the world became popular, women were speaking about gaining control over their lives, and participating in the decisions that affect them in the home and community, in government and international development policies. The word 'empowerment' captures this sense of gaining control, of participating in decision making. More recently, the word has entered the vocabulary of development agencies, including international organizations and the United Nation.

Empowerment broadly refers to the expansion of freedom of choice and action to shape one's life. It implies control over resources and decisions. The meaning is more significant in context of the marginalized people whose freedom is severely denied or curtained by their voicelessness and powerlessness in relation to the state, community, house held, educational institutions or markets. It develops participation of weak, marginalized and excluded sections in the process of development. It has the capacity of creating new dimensions of lives of marginalized and excluded groups to set access to different social development paradigms. Thus, empowerment is the expansion of resources, capabilities, abilities, choices, and decision making of people to participate in, negotiate with influence, central, and held accountable institution that affect their life.

Empowerment in the context of education as human rights minimally touches upon educational access, retention and success of some marginalized people who find no access to education for satisfying their

needs and aspirations and who does not discover any meaning for educational achievement that is rendered by schooling.

Therefore, Empowerment stands for acquiring the power to think, to speak, to act freely, to exercise choice, to raise voice and to be able to take a decision. This is equally true for both men and women. Empowerment is a process and the process of empowerment is both individual and collective, since it is through involvement in groups that people most often began to develop their awareness and the ability to organize, to take action and bring about change. Empowerment is a process of awareness and capacity building leading to greater participation, to greater decision making power and control, and to transformative action. Empowerment, in a nutshell, is a way of defining, challenging and overcoming barriers in one's life through which an individual increases his or her ability to shape his or her life and environment.

Empowerment refers to the capacity to mobilize resources to produce beneficial social change. Three critical dimensions characterize the empowerment process. The first level is individual consciousness raising, the second is the development of collective consciousness; the third – mobilization – builds on the previous two levels and is where collective skills and resources are translated into political and legal action (Margaret Schuler, 1986). The term 'empowerment refers to a range of activities from individuals self assertion to collective resistance, protest and mobilization that challenge basic power relations. Their access to resources and power, their empowerment begins when they not only recognize the systemic forces that oppress them but act to change existing power relationships' (Sharma, Kumud, 1991). Empowerment refers to the enabling of poor people to decide upon the action which they perceive to be key of their development. Empowerment is concerned with organizing people to gain more control both politically and economically over resources and institutions, and tackling the root causes of poverty (Westergaard, Kirsten, 1994). As Ela Bhatt explained (1989), 'To organize means to bring people together, to think through their common problems, to agree on their common issues, to decide on common action and to forge common ideologies'.

Meaning and Concept of Women Empowerment

Empowerment, in its simplest form, is manifestation of redistribution of power that challenges patriarchal ideology and the male dominance (Chandra, 1997). It is a process that enables women to gain access to and control of material as well as information resource. It is both process and result of the process. Empowerment is an active process enabling women to realize their full identity and power in all spheres of life (UNDP, 1994). Empowerment is defined as 'a process which enables individuals or groups to change balance of power in social, economic and political relations in society'. The goals of women empowerment are to challenge patriarchal ideology to transform the structures and institutions that reinforce and perpetuate gender discrimination and social inequality and to enable poor women to gain access to and control of, both material and informational resources (Gita Sen and Srilatha Battiwala, 1994). Empowerment implies :

- a set of mind and attitude of a person. An empowered women has a positive self image and takes an active part in decision making related to herself, her family and the community,
- greater access to knowledge and resources, greater autonomy in decision making and greater ability to overcome restrictions and constrained imposed by customs, beliefs and practices, self confidence and understanding of the importance of human values, rights and privilege, conducive for a more dignify and satisfactory way of life (Rajammal P. D., 1999).

At a workshop of Pacific Women entitled 'Women, Development and Empowerment (1987)', Venessa Griffen spoke about what empowerment means to her : To me, the word simply means, adding to women's power and it means :

- having control, organizing further control.
- having a say and being listened to.
- being able to define and create from women's perspective.
- being able to influence social choices and decisions affecting the whole society (not just areas of society accepted as a women's place).
- being organized and respected as equal citizens and human being with a contribution to make.

According to Kamala Bhasin (1992), empowerment of women means :
- recognizing women's contribution and knowledge.
- helping women fight their own fears and feelings of inadequacy and inferiority.
- women enhancing their self respect and self dignity.
- women controlling their own bodies.
- women becoming economically independent and self reliant.
- women controlling resourced like land and property.
- reducing women's burden of work, especially within the home.
- creating and strengthening women's group and organization.
- promoting qualities of maturing, caring gentleness, not just in women but also men.

The UNESCO recognizes the empowerment of the women is a pre-condition for national development and progress and identified the following five critical areas :
- Equal access to education for women and girls.
- Women's contribution to peace.
- Women's access to the media and their image in the media.
- Women's contribution to the management of natural resources and environmental protection.
- The girl child with regard to access to education and literacy to be given priority in all its endeavors to the development of world.

Women's empowerment can be viewed as a continuum of several interrelation and mutually reinforcing components :
- Awareness building about women's situation, discrimination and rights and opportunities as a step towards gender equality. Collective awareness building provides a sense of group identity and the power of working as a group.
- Capacity building and skills development, especially the ability to plan, make decisions, organize, manage and carry out activities to deal with people and institutions in the world around them.
- Participation and greater control and decision making power in the home, community and society.
- Action to bring about greater equality between men and women.

The National Police on Education (1986) has laid a Programme of Action for its implementation. This Programme of Action spells out the meaning of women empowerment by saying "women become empowered through collective reflection and decision making". The parameters of empowerment are :
- Building a positive self image and self confidence.
- Developing ability to think critically.
- Building up group cohesion and fostering decision making and action.
- Ensuring equal participation in the process of bringing about social change.

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- Encouraging group action in order to bring about change in the society.
- Providing the wherewithal for economic independence.

Specially, the empowerment of women involves the interplay of four interrelated and mutually reinforcing components : collective awareness building, capacity building and skills development, participation and greater control and decision making power, and action to bring about gender equality (Marilee Karl, 1995) in conceptualizing women's status is autonomy. Three dimensions of inequality are commonly considered – inequality in prestige, in power and in access to, or control over resources (Simeen and Johnson, 1994) Schuler, Sidney Ruth and Syed Mesbahuddin Hashemi (1993) identified six domains in which women have traditionally been subordinated and in which empowerment is believed to be taking place. The order of the domains suggests a linear process of empowerment whereby a women's individual consciousness leads to increased mobility, greater likelihood of engaging in a wage employment, more decision making power in the household and eventually, higher levels of community participation.

Understanding empowerment for the women is a complex issue with varying interpretations in different social, natural and cultural contents. However, some common indicators of women empowerment across all nations can be expressed as participation in crucial decision making progress at the level of the individual woman and her household and work place, the community and organizational levels, at the national level and if possible in international level.

Women empowerment is a process of social change. It is synonymous with the achievement of equality and equal mildness in society. It will enable women to maintain stronger functioning position. It enables autonomy and control over their lives. The empowered women became agents of their own development, able to exercise choice to set their own agenda and be strong enough to challenge and change their subordinate position in the society. Empowerment is self esteemed and collective mobilization for challenging basic power relation like social injustice and mobilization of resources. It is self-governance, self-sufficiency and self-maintenance.

In a broader sense, empowerment of a women means two things – liberty from her subordination in the family and release from her sub-alternate in the society. It represents three types of freedom – freedom from ignorance, freedom from exploitation and freedom from inequality and injustice. Empowerment has become the key solution to many social problems like high population growth rate, environmental degradation and low status of women.

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Some Aspects of Leadership and its Influence on Education

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Abstract: *Growth of effective Leadership is very much pertinent in our country for its acquiring vast developments and prosperities through social democratic way. Leadership is a group junction. of mutual stimulation where the leader influences the group and the group influences the leader. t reflect the shifting ground of school leadership and it increasingly globalize context. Leadership had become an urgent policy issues, an integral component of drive for more effective schools, raised achievement and public accountability. As a good Leader can lead the growing personality of the people, to the best possible development and ensure a bright and happy future of the groups. Main functions of leadership are to contribute to the achievement of the group goal and to help hold the group together.*

Key words : *Leadership, Development.*

Introduction

Leadership is a process by which a person influences others to accomplish an object and directs the organization in a way that makes it more cohesive and coherent. It carry out this process by applying their attributes such as beliefs, values, ethics, character, knowledge and skill. Leadership differs that it makes the followers want to achieve high goals, rather than simply bossing people around.

Essentials and desirable social emotional development demands skills as well as attitudes and understanding skills of leadership and group membership, skill in delegating responsibility, in evaluating individual and group contribution to life problems, as also ability to express compassion and sympathy for others, to be able to love selflessly and to have enthusiasm and joy for their work .The most recent work synthesized the main research evidence concerning effective improvement interventions, produced a school improvement guide based upon the most successful school improvement projects and programmers. The successful Leader is he who gives the full credit to the followers and takes the full blame on himself for any failure in a group action. Leadership must take the ultimate responsibility for the decision.

Schools are one of the few remaining institutions to offer partnerships to families in socialization and investment through learning. School education helps people make sense of the changes as well as fostering sustainability, including through lifelong learning. The creation, acquisition, communication and wise use of knowledge are of particular importance. In this situation of high expectations of each country's educational provision, those leading schools have an enormous responsibility. School leadership of decentralization is quite extensive and indicates that while assumptions about the role of school leaders in decentralized settings.

Researcher found school structure, participative decision making grounded in teacher empowerment, shared commitment and collaborative activity, knowledge and skills, leadership, and feedback and accountability. The element effective leadership includes being a good entrepreneur and salesperson, the accountability element requires the principal to have expertise in performance management systems and

relating the results to performance-linked pay, and for decentralization effective leadership includes building a collaborative culture and ensuring that community develop sophisticated group problem-solving skills. A leader exceeds the average member of his group in such qualities as intelligence, scholarship, dependability, activity and social participate, knowing how to get things done and insight into situations. The researcher indentifies the effective leadership has a strong relationship with academic achievement. Democratic and socialistic country needs proper leaders for school to progress the value academic achievement, attitude, personality etc.

Objective of the Study

1. To find out factors regarding effective leadership.
2. To find out the relationship among factors of effective leadership and academic achievement.
3. To find out the influence leadership on education.

Characteristic of Leadership :

Academic Leadership characteristics are :

1. Self-reliant, independent assertive, dominant, ambitions, self-sufficient.
2. Establishes a safe environment.
3. Monitors school performance.
4. Co-ordinates curriculum.
5. Acquires necessary school resources.
6. Invites divergent points of view.
7. Uses participatory management approaches.
8. Selects and participates of professional development.
9. Trusts and treats colleagues as professional.

Factors of Leadership :

Follower : Different people require different styles of Leadership. As for example a new hire requires more supervision than an experienced employee. A person who lacks motivation requires a different approaches then one with a high degree of motivation. The fundamental starting point is having a good understanding of human nature, such as needs, emotions, motivation. They must come to know their employee to be known and do attributes.

Leader : Student must have a honest understanding of who are and what you know and you can do. If they do not lack confidence in their leader, then they will be uninspired. To be successful student have convince student's followers, student, superior that student are worthy of being followed.

Communication : Student lead through two way communication such of it is non-verbal communicates to student people that he would not ask them to perform any thing that he would not be willing to do.

Situation : All are different student must use that judgment to decide the best course of action and the leadership style needed for each situation. People may need to confront an employee for inappropriate behavior but if the confrontation is too late or too early, too harsh or too weak and result may prove ineffective.

Environment : School organization has a particular work environment which dictates to a considerable degree how its leaders respond to problems and opportunities. Successful organizations have leaders who set high standards and goals across the entire spectrum, such as presentation, productivity quality and reliability.

Monitoring : Decision making, planning, adoptability, and clarifying are key of task oriented behavior's that jointly affect subordinate of resource, assignment of responsibilities, scheduling of activities and allocation of the manager's own time. This dimension involves getting information needed to evaluate the operation of the leadership unit and the performance of individual's subordinates. Successful and well-regarded school leaders who have strong character reputations, commitment to mentoring and their own development as a mentor, commitment to being learners themselves, and time to mentor. Matching mentees with the right mentor is often difficult but is thought to work best when both choice and developmental needs are balanced. Several primary processes are inherent in mentoring. The first and most basic is personal relationship. The second is active guidance, teaching and challenge. The third involves the management and implementation of a planned curriculum especially one that involves the active collaboration of others in the school. These processes of personal relationship and active guidance involve intentionality that is critical to the mentor's strategies and choices. They also need to be reflective and encourage open and honest reflection with their mentees. Keeping journals, shadowing, storytelling, and visioning can all help in this process. Sponsorship involves not only nominating mentees for desirable positions but creating opportunities to allow the men tee's skills to be seen by others.

Creativity : Cronbach creativity is defined as a person's all round effectiveness in activities directed by thought. More creativity people are likely to be effective and good leader. Communication between creativeness and leaders may be impaired of the leader is vastly more intelligent than the group he is trying to lead. Creativity in made up of district things which include honesty, popularity, completeness vision inspiration etc. People want to know where school is going and they want to know what part they play in that vision followers want to see enthusiasm and motivational attributes from their leaders.

Self-Confidence : Self-confident leaders make follower more aware of the importance and value of the work and influence followers to transcend self-interest for the organization. The good leaders develop skills and efficiency to prepare them to assume more responsibility in an empowered organization. Leaders show consideration, acceptance, appreciation to others for effective performance and significant achievement and important contribution to the organization and concern for student needs and feelings. The leaders provide support, encouragement when necessary to maintain enthusiasm and effort in the face of obstacles, difficulties and fatigue.

Motivation : Development of achievement motive is affected by a number of variables in home, schools and society. Home plays an important role in the early training of children for the development of attitudes and motives. Parental expectation and teacher's guidance to the students develop need for high achievement in life. The society communities are achievement oriented. Teacher should provide a proper environment in the class and outside class. The teacher's attitude and enthusiasm will create better environment for academic achievement motive in students. Research on decision making secondary (Mulford et. al.., 2001) schools found that the more positively teachers viewed the decision making processes in higher the degree of influence and control they perceived to be exerted by education groups in the school. Decision making is perceived by teachers in secondary schools as collegial, cooperative and consultative and providing adequate opportunities for participation it will be more likely to lead to positive student perceptions about their school and teachers as well as perceptions about relationships and their own performance than where decision making is more top-down, executive, or does not foster widespread teacher involvement

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Moderns Trends on Academic Leadership :

a) Psychological Aspect of Leadership : General intelligence has largely last its value for the school social science, although it remains indispensable to general discourse. A leading artist may mean only that as written or painter he enjoy greater public acclaim and probably greater sales than do others similarly engaged, but it may also mean that others one aware of her that subtle and the way he exercises an influence upon them. Leaders influence suggests a positive contribution toward the attainment of these goals. The impracticality of democracy is specially apparent in organizations of undergoing conflict with others. During periods of crisis, organizations need firm leadership and precise adherence to orders. The status, perquisites, privileges associated with leadership role serve further to separate leaders from masses.

b) Democracy and Leadership : The relationship between leader and leadership is the most important factor in democratic society. Democratic society the idea of leadership comes naturally to be focused on the same central point and purpose as does the idea of democracy itself,- the unique value of the individual in a society which has as its avowed objectives the assuring of the autonomous value of all persons. Leadership in its deeper meaning machine has the more difficult task of being concerned with what the follower should want may come to what or be brought to want in terms of his own aims as projected against the common good. The democratic society has in observable fact a vast number of potential leadership situations. Such management officers become occasions for leadership behavior in the official takes advantage of the situation and uses the creative and inspiring motives of the leader to bring a true reconciling of personal and corporate. Good executive in action is on should be his success as a leader.

c) Leadership in Organization : The informal organization expressed the personal objectives and goals of the individual membership. Leader's personal qualities, the demands of the situation or combination of these and other factors attract followers who accept their leadership within one or several overlay structures. A leader is a person who influences a group of people towards a specific result. An individually leader who is appointed to a managerial position has the right to command and enforce obedience by virtue of the authority of his position. A manager may be confronted by an emergent leader who can challenge his role in the organization and reduce it to that of a figurehead. Leadership can be defined as one's ability to get others to willingly follow. Leadership communication requires that the content of the communication includes shared and compelling vision of success, a clear set of values, and honestly about performance.

d) Community : Schools are improving is how far they work as a professional learning community within the schools in the study a climate of collaboration existed and this climate was the result of lengthy discussion, development and dialogue amongst those working within and outside the school. They recognized that family, school and community relationships directly affect student outcomes hence the need to connect with the community was of paramount importance to the success of the school. Education Commission (1964-68) observes that the problem of academic achievement is a great concern a developing country. Since Under achievement as a psychological concept refers to a loss of potential man-power.

e) Teacher Leadership: Effective leadership in schools is that leadership is embedded in various organizational contexts within school communities, not centrally vested in person or an office. Principals effects on teachers' community, instructional practices, and careers found no instances of leaders who created extraordinary contexts for teaching by virtue of their own unique visions; nor did the study reveal any common patterns of strong principals' characteristics. Higher teachers were found to rate the school on these dimensions the more positively teachers' work was perceived in classrooms by their students and the better the student outcomes. The sequential factors were :

- establishing a trusting and collaborative climate; followed by having a shared and monitored mission; and then taking initiatives and risks,
- the cognitive processes of reflection and conversation enabled the teachers to become aware of their practices and of those of their colleagues, to assess the desirability of those practices, and to discover new possibilities,
- the affective processes of affirmation and invitation served to create positive working relationships by affirming the professional capabilities of individuals and by valuing the contributions of all staff members.

Educational Influence on Academic Leadership :

Effective school leadership requires an administrator to function as leader in several roles simultaneously. These roles include management instruction, political, social and even moral roles. In society, Good leaders develop through a never ending process of self study, education training and experience. Good leadership are continually working and studying to improve their leadership skill. Leadership is "the process of influencing an organized group toward accomplishing its goals". The school Leaders has changed radically as countries transform the education system to prepare people to function in today's world of rapid technological change, economic globalization and increased migration and mobility.

Alan Keith states that "Leadership is ultimately about creating a way for people to contribute teaching learning performance by achieving key school objectives". Leadership is being defined as particular tasks and behaviours that enable those who are responsible to be accountable for learning outcome and measures of school improvement. Leadership is excellent in teaching and learning programming. This institution position is academic leadership is highly specialized and professional activity.

V. A. Jr. Anfara et. al.. (2006) found that effective leadership is needed to carry successfully those educational reforms that result in improved student achievement is presented in the context of the need to evaluate school leaders for school leaders for school improvement – initiatives and for the personal, professional development of the principal. Developmentally responsive middle level leadership involves three factors: The school, the student, and the teacher.

Daniel Muijis and Alma Horris (2003) concluded that teacher leadership could have beneficial effects on school improvement, school and teacher effectiveness and motivation and retention, but the right conditions need to be in place in order for teacher leadership to flourish. Having a strong community focus may be important for other reasons including in the development of social capital in the community, especially in poor inner city and rural communities. Academic self-concept did not link to other student outcomes, including academic achievement, it does not follow that academic self-concept is not an important student outcome. Anonymity moderated the effects of leadership on group efficacy and satisfaction with the task, transactional leadership was associated with higher group efficacy and satisfaction with the task in the identified condition only verbal facility. Leadership must be conceived in terms of the interaction of variables which one in constant flux and change. Strong transformational leadership was essential in supporting teacher commitment. Effective integrated leadership was determined to enhance teacher leadership and school performance.

Kilpatrick et. al.. (2002) found that leadership for effective school–community partnerships is a process that gradually transfers leadership from the hands of a small number of individuals at the trigger and initiation stages, to a wider group, representative of community interests, at the development, maintenance and sustainability stages. As the group gradually becomes more comfortable working together, there is a greater focus during the development phase on delivery roles, as procedures are put in place to allow the partnership to meet its objectives.

Mulford and Silins (2001) have recently made clearer the secondary schools research demonstrated clearly that the best leadership for organization all earning was a principal skilled in transformational leadership and administrators and teachers who are actively involved in core work of the school. Professional development here would assist a school leader develop values and attitudes consistent with the system, make changes in the structure and function of their school in system-determined directions, work towards system-nominated change outcomes within set budgets, and in gathering and using system-stipulated performance data.

- Individual Support – providing moral support, showing appreciation for the work of individual staff and taking account of their opinions.
- Culture – promoting an atmosphere of caring and trust among staff, setting the tone for respectful interaction with students, and demonstrating a willingness to change practices in the light of new understandings.
- Structure – establishing a school structure that promotes participative decision making, supporting delegation and distributive leadership, and encouraging teacher decision-making autonomy.

Deal and Peterson (1999) found that teachers in schools, with a culture that encourage collaboration are more positive about their profession, have higher expectations for their students, enjoy their jobs more and have greater confidence and commitment to improvement. So the effective leadership should incorporate team membership of individuals who provide the skills of the 5 operational described. School effect takes a scientific approach-using input –output models, case studies of effective schools and class rooms using quantitative and qualitative methods and the developing change processes of school improvement .

Terrence Wendel, (1998) analyses of the effects of teaching on student academic growth is instructive. Individuals teachers are the most important factor in student academic growth; variations in teacher effectiveness one after greater within a single building then across building within school district. It is a "leadership resistant architecture".

Menance, A. L. (1985) stated the improving conditions for principal effectiveness. Factors characteristic of effective school were directly or indirectly related to principle effectiveness and included high expectations for student achievement, a conductive learning climate, emphasis on skills, monitoring of student progress, and a high level of administrative leadership. Early school leadership research revealed that approximately 80 percent of principles work involved personal interaction with other while approximately is 20 percent involved administrative duties.

Findings and Conclusion

- Emphasis being given to the development of individual trainee as well as educational leadership;
- Some convergence of curriculum content in relation to two crucial areas – teaching and learning issues and the personal and interpersonal skills of leadership;
- The emergence of new partnership arrangements that have been formed to design, to implement, to monitor and even to evaluate programmer;
- The need to know more about the matching of methods to learning outcomes; and, drawing together of theory and practice within programmes;
- The need to achieve better balance between learning what the system requires of individual leadership I.

This study suggests that developments their provision of education are reflected in the roles in societies, effectiveness and development of school leadership. The paper first examines how the role of school leadership is changing. It examines if school leadership can strengthen the effectiveness, development and retention of teachers as well as student outcomes. School leadership remains of crucial importance for continued improvement of education. The paper focuses on school leadership effective and professional development that exclusively upon leadership, practices and approaches in schools need to

become learning organizations, consciously and continuously pursuing quality improvement. Schools are learning institution evolve new types of relationship between students; teachers and leaders based include a trusting and collaborative climate. The key relationships in the ways school leadership strengthen teacher recruitment, development and shown to include factors such as teacher satisfaction, school effectiveness, capacity, teacher leadership, distributive leadership, institutional learning, and improvement school.

Leadership can be a major influence on these school-level factors and sometimes contradictory external pressures. A skilled leadership team in schools can help foster a sense of ownership, qualities of academic achievement and purpose in the way that teachers for approach their job. Teacher will improve the quality of the classroom teaching practice as a career profession leadership. School leaders can make a difference in school and student performance if they are granted autonomy to make important decision. Autonomy alone does not automatically lead to improvement unless it is well supported. The core responsibilities of school leaders be clearly defined and delimited an understanding of the practice most likely to improve teaching and learning.

Research suggests from studies of effective school leadership is that authority to lead need not be located in the person of the leader but can be dispersed within the school between among people. Leadership is embedded in various institutional contexts within school communities not centrally vested in a person or an office. Sustainability will depend upon the school's internal capacity to maintain and support improves work for sustaining improvement requires the school leadership capability of the many rather than the few. If the Leadership potential is earmarked at an early stage then it can be helped to growth skills, knowledge and attitudes necessary for effective Leadership through various process like training programmes, seminars etc. to develop leadership qualities, informal leadership position in the regular class-room, in the house activities, playground and various co-curricular activities.

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Cultural Determinants and its Impact on Education

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Abstract : *Every organization has a culture that's history and underling set of unwritten expectations shape everything about that section reflected in the present paper in the form of cultural determinants. In the language of social science culture does not mean performing art culture is a perspective of the world that people come to share as they interact. According to Kingsley Davies, culture refers to cultivation of immaterial thoughts, art, music, beliefs and traditions as well as the material means and methods. Man alone is in the possession of culture that differentiates man from other species. Education for man must equip him with the capabilities, different skill; Powers of communication for his social survival and the objectives of education is to conserve the culture of every man in his social setup and to transmit that to the younger generation.*

Key word : *Cultural determinants.*

Introduction

Our ideas about the world are learned from each other through interaction in families, schools and all forms of human social organization. We seek group support for what we believe, we test our ideas out with each other we accept ideas that are supported by those people with home we interact and who are important to us. We learn our culture but do not seriously think there are other ways of looking control to our ways of thinking. When we enter social organizations such as a school, a gang, and a corporation we come to learn the "right way to think" and if we wish to belong we come to believe in their culture we learn.

Here cultural determinants of school refer the obvious elements of schedules, curriculum, demographics, policies as well as the social interactions. It also includes the set of norms values; beliefs, customs, and behavior, that occur within those structures and give a school its look and feel as "friendly", within those structures and give a school its look and feel as "friendly", "elite", "competitive", "inclusive", and so on. In addition, those schools often have a common professional language, multi sectional stories of success, extensive opportunities for quality professional development, and ceremonies that celebrate improvement, collaboration, and learning. All of these elements build commitment, forge motivation, and foster learning for staff and students.

Therefore the cultural determinants and school influences the ways people think feel and act. Being able to understand and shape the culture is key to a schools success in promoting staff and student learning.

For example every school has a set of expectations about what can be discussed at staff meeting, what constitutes good teaching techniques, how willing the staff is to change, and the importance of student development. Here the work culture generated from the proper utilization of concept culture. The present research interested to friend out different determinants of culture, which can effect our school environment. It is observed that two types of determinants have had expressed in academic atmosphere. They are : (a) Intra-cultural determinants and (b) Inter-cultural determinants.

Each of these determinants may present bridge to change and long lasting implementation of school improvement and students development. It bears repeating, however that the interrelatedness of these facts of the school most strongly affects of those seeking to improve schools and obstacle of educational success. So it is mentioned that cultural determents are directly related the academic atmosphere ending to academic achievement.

Objectives of the Study
1. To study the intra and inter-cultural determinants in a school environments at higher secondary level.
2. To extract factors relating intra-cultural determinants.
3. To find out factors relating to inter-cultural determinants.

Review of Related Studies
Sammons, Hillman & Mortimor (1995) suggests the following component for effective schools environment. a) Professional leadership, b) Focus on teaching and learning, c) Purposeful teaching, d) Shared vision and goals,e) High expectations of all learners, f) Accountability, g) Learning communities.

According to Weinstein, 2004 on his study 'Culturally responsive classroom environment', it is found that a culturally responsive classroom specially acknowledges the presence of culturally diverse students and the need for these students to find relevant connections among themselves and with the subject matter and the task teachers ask them to perform. In such programmes teachers recognize the different styles of their students and develop instructional approaches that will accommodate their demands. He suggests five components which essential to culturally responsive classroom environment which are (a) recognition of one's own biases, (b) knowledge of student's cultural backgrounds, (c) understanding of the broader social economic and political context of our educational system. (d) ability and willingness to use culturally appropriate classroom environment, (e) commitment to building caring classroom communities.

Goodlad's study (1984) 'An examination of school culture' is important because alike as schools may be in many ways, each school has culture of its own and, further its culture may suggest to the careful observer useful approaches to making it a better school.

Patterson, Purkey and Parker (1996) summarize the general knowledge base regarding school culture: School culture does affect the behavior and achievement of elementary and secondary school students.
School culture does not fall from the sky; it is created and thus can be manipulated by people within the school. To the extent that it provides a focus and clear purpose for the school, culture become the cohesion that bonds the school together as it goes about its mission.

According to Gault and Murphy (1987) schools claim to practice culture pluralism, but in reality all students are expected to fit into the white middle class culture. Students with different cultural backgrounds values and skills than those generally valued by schools.

Schein (1985) on his paper "Internationalization of the Culture' emphasized the elements that affect the degree to which culture is internalized are (a) Common language and conceptual categories : If members, cannot communicate with and understand each other, a group is impossible by definition. (b) Group boundaries and criteria for inclusion and exclusion : One of the most important areas of culture is

the shared consensus on who is in and who is out and by what criteria one determines membership. (c) Power and status : Every organization must work out its packing order, its criteria and rules for how one gets, maintains and loses power, consensus in this area is crucial to help member's feelings of aggression. (d) Intimacy, friendship and love : Every organization must work out its rules of the game for peer relationships between the sexes, and for the manner in which openness and intimacy are to be handled in the context of managing the organization's tasks. (e) Rewards and punishments: Every group must know what its heroic and sinful behaviors are ; what get rewarded with property, status and power and what gets punished in the form of withdrawal of rewards and ultimately ex-communication.

Emergence of the Problem
1. The study the new trend global change of school educational research.
2. The study is to make school environment become more effective by enhancing intra and inter cultural determinants in a school within its working environment.

From the review of the related studies it has been found that intra & inter cultural determinates associated with the following factors.

Methodology

The study is basically sociological in nature and information is gathered through a standardized questionnaire. Research methodology is based on survey type of research followed by Factorial analysis for extracting cultural determinants.

Population : The population of this study is students from eight schools (four urban and four rural) of class eleven grade in Bengali Medium H. S. Schools situated in Cooch Behar, Jalpaiguri, Uttar Dinajpur and Malda districts of West Bengal.

Sampling for the Study : Selected schools have been used for sampling. Various techniques have devised for obtaining sampling, which is representative of the population. Here the nature of sampling is purposive type and total number of students. Total number of sampling is 480, number of items is 98. Calculation is done by SPSS Package.

Description of the Test : The test has been administered under normal conditions in familiar classrooms of the students during school hour. Written direction has been given through questionnaire in Bengali language. In each questions there are fine options of which one is toe be selected.

Conclusions

Globally culture is a guiding force for school environment and society too. In a knowledge based society cultural determinants is a root for productive education. In our study it has been exposed that how intra and inter cultural determinants can be able to develop to develop academic output. Intra-culture especially significant to the qualitative improvement of the schools internal system and Inter-cultural system can communicate with the institution in social context.

Different social and cultural determinants are extracted from global and social contexts exposing outcome based education system leading to social progress. The key roots of the multicultural education system support the collaborative practices and constant evaluative process in the educational system. The research work is intended to explain the components of the cultural determinants and its impact on present education system for highest achievement and consequently the effectiveness of teaching learning system in present perspectives with the following significant components:

Intra-Cultural Determinants : Collaboration, Accountability, Collegiality, Professional, Efficacy, Leadership, Values, Schools Time Table, Skills, Relationship (Student Teacher), Common Language, Power and Status, Health & Hygiene, Intimacy, Discipline, Re-enforcement, School Uniform, Equity Pedagogy, Shared Vision.

Inter-Cultural Determinants : Contractual Agreement, Education, Policy Framework, Learning Communities, Teacher Association, Family Background, Parent Teacher Association, Local Needs, Institutional Management, Social Values.

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Mechanism of Effective Teaching Learning System at the Secondary Level Schools in West Bengal : An Experimental Study

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Abstract : *The present paper has intended to express the mechanism of effective teaching learning system through diversification of interest by applying three strategies namely 1) Multiplication of interest 2) Substitution of interest and 3) Shifting of Interest. Any mechanism depends on the process which is implemented in an educational process for the increment of the output trying to elaborate in the paper.*

Introduction

Any effective process is result oriented. We cannot expect result unless it is systematic. Teaching learning system requires the mechanism because of its individual approach as well as it demands the quality which based on dynamics of the system including different affective domain of the learners. Whatever the form of learning it is situational claiming to investigate the actuality exposed through a teaching learning strategy materialized in terms of any teaching learning model.

The informative approach in education based on memorization is not only harmful to the learners but also hampered the creative approach of the learners resulting an average standard of Indian Education. So having better output we are concentrating our education system through the glance of developing interest among the learners so that they can have develop themselves according to their interest. But what are the ways ?

In the present paper we are suggesting three different ways for developing interest among learners. Multiplication is the first point which defines as a medium of developing interest by concentrating one particular point where the learners have had some interest and as a teacher we are considering it as a focal point of the learners and multiplying the subject matter so on. Substitution is the second strategy where we assume interest can be substituted from one teaching point to another teaching point of a particular subject or area.

Shifting is rather difficult if substitution takes place normally interest of learners can be shifted from one particular interest to another area of interest or one subject area to another subject area. Even some times when academic interest are less we are seeking the non academic interest of the learners and starts initially by multiplying their non academic interest so that their non academic interest can be shifted into academic interest.

Mechanism of Teaching-Learning System :
Diagrammatic Presentation of Diversification of Interest is shown in Fig. 1.

(I)	(II)	(III)
Multiplication	Substitution	Shifting of Interest
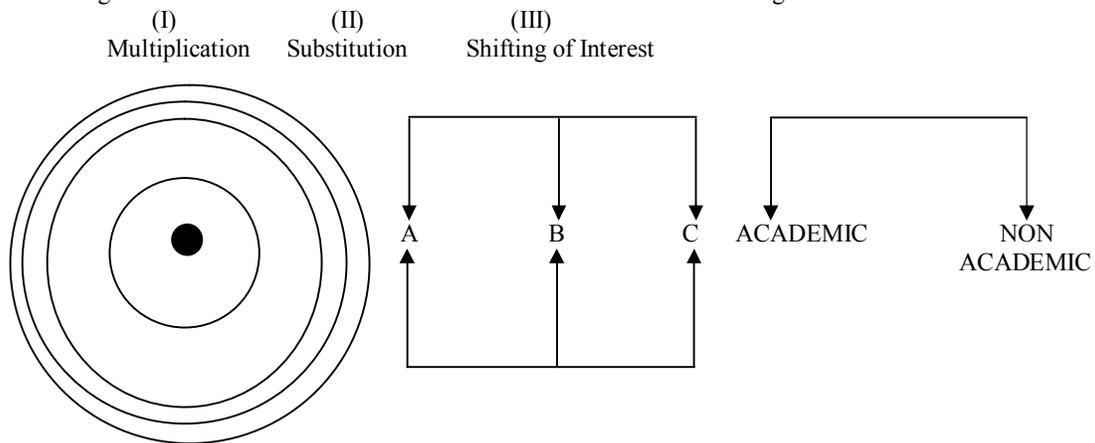
The Variables :
Independent Variables

Diversification of Interest → Multiplication, Substitution, Shifting

Instructional Strategy → Learning Outcome

Dependent Variable
Academic Achievement
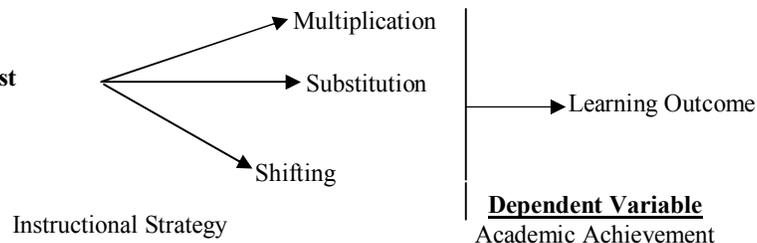
Fig. 1. Diversification of Interest

Instructional Strategy : Lesson plan on the basis of interest diversification model will be the basic instrument for applying operational variables.

Suggested Steps of Interest Diversification Model :
- Phase-one : Development relationship with learners through interaction to generate a positive attitude towards the teacher and the subjects.
- Phase-two : To find out the interest zone of the student at their horizontal surface area to knowledge.
- Phase-three : Multiplication of surface area where the learners' interest are selected.
- Phase-four : Substitution of interest in different dimension of a subject.
- Phase-five : Shifting of interest.
- Phase-six : To develop vertical surface area of knowledge.
- Phase-seven : Evaluation.
- Phase-eight : Reinforcement of interest and academic achievement.

Intervening Variables : These variables are – (i) teacher, (ii) age, (iii) size of the class, (iv) previous experience and (v) other contamination effects, such as motivation, fatigue, anxiety etc. To control the variables the following measures had been taken –

i) School : The school is an independent variable. In the present study the school variation was assessed in the design of the study by the researcher.

ii) Sex : It is also an independent variable. The researcher had taken sex variation into consideration to assess in the design of the study.

iii) Teacher : The investigator himself had taught all the groups. Thus the effect of the teacher variable is minimized.

iv) Previous Experience : Previous experience was an important variable to influence the performance of the students. To avoid this variable the researcher considered an entry level achievement test as initial measures of their performance on the specific content area of curriculum of class-viii prescribed by W. B. B. S. E.

a) **Contamination Effects :** The pupils of all the groups were requested by the investigator not to discuss among themselves or other groups about the subject matter taught or the mode of representation. The investigator also requested the pupils not to take any coaching in their homes, particularly in this content area, but receiving coach behind treatment had not been fully controlled. Pupils were also requested not to do any homework from any other books, but there is no restriction to study the class notes.

Rationale of "Ancova on a Factorial Design":

Table 1. ANCOVA ($2 \times 2 \times 2$) Factorial Analysis

Source of (SS*Y) Variance	Df	SS*	MS*	F
A	1	856.36	856.36	20.39**
S	1	285.87	285.87	6.80*
SEX	1	7.63	7.63	.18

- The main logic behind this technique is that 'Ancova' is the extension of analysis of variance to test the significance between means of final experimental data by taking into account the correlation between dependent variable and covariable or pertinent control variable by adjustment of initial means difference between groups.

A × S	1	.83	.83	.02
A × SEX	1	3.57	3.57	.08
S × SEX	1	8.75	8.75	.21
A × S × SEX	1	51.18	51.18	1.23
ERROR	111	4661.08	41.99	-
TOTAL	118	5875.27		

*Significant at 0.05 level, **Significant at 0.01 level.

- Best stated that analysis of covariance is the method of analysis which helps a researcher to equate the pre-experimental status by some relevant variable like intelligence or previous acquired subject.

Mechanism of Teaching Learning System : The present study has intended (a) to test the effectiveness of interest diversification model in teaching in the present day school condition of West Bengal and also (b) to know if any method of teaching is 'more suitable to a particular type of school than the other, and (c) to find out whether there is any effect of sex factor on the achievement through any particular teaching method.

An alternative model may be suggested in Fig. 2 :
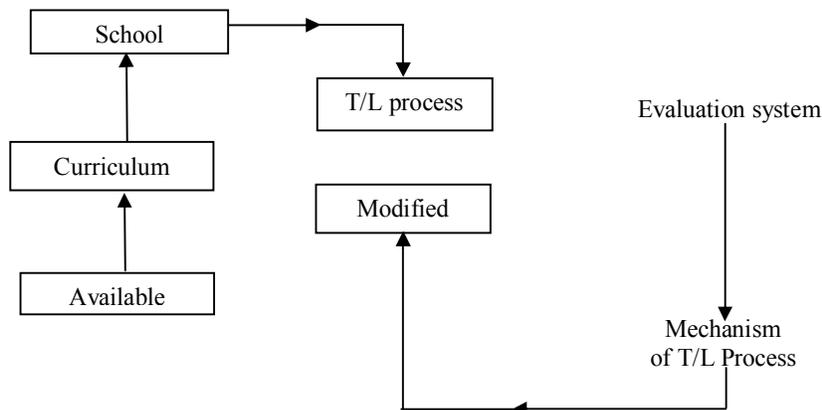
Fig. 2. An alternative model of teaching-learning system

Findings

Relative Effectiveness of Interest Diversification and Traditional Method of Teaching : Hence adjusted mean score of experimental group under the treatment of interest diversification model was greater than the adjusted mean score of control group under the treatment of traditional teaching method, it can be inferred that interest diversification model has better efficiency than the traditional teaching method.

The question may arise, why interest diversification model shows the better efficiency than traditional method of teaching? The plausible answer nay be that the interest diversification model of teaching is well rationalized and designed which helps students to acquire abilities of scientific attitude through development of interest which are essential to learn any science matter easily, and it fits well to the learning style of the students. Besides these, interest diversification model is the process of specifying and producing particular environmental situation, which cause the students to interact in such way that a

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specific change occurs in their behavior. On the other hand traditional method is not psychology-based and so it cannot provide such effective classroom environment that the students can confront with materials and able to assimilate the information.

Effects of School Variation on Achievement in Respect of Criterion Test Scores of Students under Two Treatment Groups : As the adjusted mean score of the criterion test scores of the students was greater than that of the students , so it is evident that the students of. under both treatment group (control group and experimental group) shows better performance in respect of criterion test scores.

Effect of School Variation on Treatment (Interest Diversification Model) in Respect of Achievement in Criterion Test : As the effect of school variation on the treatment (IDM) was significant at 0.01 levels, it can be concluded that the school factor has a significance effect on teaching science through interest diversification model.

Effect of School Variation on Treatment (Diversification Model) in Respect of Achievement in Criterion Test : As the effect of sex variation on the treatment was not significant at .05 level, it can be concluded that the sex factor has no significant effect on the classroom teaching in through interest diversification model.

Interaction Effect of Treatment and Sex on Achievement in Respect of Criterion Test Scores : As the interaction effect of treatment and sex was not significant, so, it is evident that there is no significant interaction effect due to treatment and sex on achievement of the students in respect of criterion test scores.

Interaction Effect of School and Sex on Achievement in Respect of Criterion Test Score : As the interaction effect of school and sex was not significant, so, it is evident that there is no significant interaction effect due to school and sex on the achievement of the students in respect of criterion test scores.

Interaction Effect of Treatment, School and Sex on Achievement in Respect of Criterion Test Score :
As the interaction effect of treatment, school and sex was not significant, it is evident that there is no significant interaction effect due to treatment, school and sex on the achievement of the students in respect of criterion test scores.

From the above discussion, it is evident that the interest diversification model is more effective instructional strategy for teaching in at secondary school level in existing classroom situation than the traditional teaching method. Though school may appear as an important factor in the selection of this model, the interest diversification model of teaching has a wide scope of application, in Indian context, within present limited resources. So, it may accelerate a revolutionary change in our teaching-learning situation, if it is implemented faithfully. School is also an important factor for academic achievement in general. But the sex is not an important factor affecting the achievement at secondary school level as well as the treatment through interest diversification.

Conclusion

An alternative model of interest diversification model may be applied to substitute the traditional method. Experiment proves that interest diversification model will be better than traditional method. Statistics showed that present evaluation system is to be improved and to be more systematic. Under these circumstances we shifted our ideas from cognitive to effective domain in classroom teaching where we can diversify interest of learners through (i) multiplication (ii) substitution and (iii) shifting and then convert learners interest in cognitive domain. An equilibrium is observed between cognitive and affective domain

here. Diversification of interest is resulted trough this equilibrium on the basis of situational factors & availability of sources and other components of teaching & learning system.

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Sub-altern Religious Community of Nadia District – Origin, Evolution and Present State of Culture

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Abstract : *Culture cannot confine itself within a definite boundary for a long time. With the changing course of time the cultural traits of a particular region impart its influence on several others. The change of socio-political state, the development of communication and the occupation – for all these, it has become very hard to confine the culture of a particular region within its territory. But it is true that the importance of that particular region cannot be neglected. So, it is necessary enough to know the place of origin of different religious cultures. The present paper trying to investigated the sub-altern religion of Nadia District, through the history of Nadia district and its religious culture.*

Introduction

There is no significant similarity between the geographical positions of present Nadia and ancient Nadia. It is almost impossible to find out the similarities between present Nadia and ancient Nadia because of the change in the name of Ganges banked Nadia and its border. The name of Nadia cannot be found in the ancient writings of the foreign visitors. There is no reference to the name of either Nadia or Nabadwip in the writings of ancient Greek, Roman or Chinese visitors. Therefore, it is supposed that either there was no existence of Nadia or Nabadwip then, or they were too insignificant to attract the foreign visitors. But the writings of the 'Vaishnab' refer that the name of Nadia was familiar even in the age of "Puran". It is supposed that the name of Nadia has been derived from Nabadwip. But it is controversial also. It is still unknown which name came first into existence. There is controversy on the explanation of the name Nabadwip. Some believe that Nabadwip is the sum of nine islands.

Historical Background :

Some others explain the meaning of 'Nabadwip' differently. According to the 'Nabadwip' means new Island. They believed that this region was a 'char' in the Ganges. As the stream changed its path, the 'char'

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land expanded its area gradually and when it became suitable for living people came to here. Then it became the capital of Banga from small village. Some other believe that in ancient time lamp (pradip) was called 'diya' and 'Na'- meant nine – and the name 'Na-dija' or 'Naba-dwip' have come into being. Those who believe in this opinion say that when people came to live in the Ganges 'Char', a monk used to practise 'Tantrasadhana' in every night, lighting nine lamps. People from distance, showing those nine lamps, began to say 'Na-diya'. Gradually that 'char' came to be familiar as Nadia.

Though there is controversy on the origin on the name of Nadia, it is prominent that Nadia and Nabadwip are names of a single place. Some ancient writings inform that Nadia was a part of the state Gourh. Present Murshidabad, Nadia, Burdwan and some parts of Hooghly were in "Gourh". But from Kalidasa's 'Raghubansha', 'Brihat Sanghita' written in the 6th century, the documentary writings of Pal-Sen era, etc, it is supposed that Nadia was not a part of Gourh for ever. In ancient time, Nadia, for a period, was a part of 'Banga.' The history of 'Banga' during he long 150 years before the Pal rulers is not known in detail. And which can be known is a smoked picture. During the weak kings of Gupta era, two independent, territories came into form in the name of 'Banga' and 'Gourh in Bengal. 'Banga' consisted of East Bengal, South Bengal and a small part of West Bengal, and 'Gourh' consisted of the major part of West Bengal. During the last phase of the Guptas in the last decades of the 6th century, a powerful king namely Shashanka established an independent state at Gourh. His capital was Karnasubarna. This Karnasubarna consisted of some parts of Nadia, Burdwan, Murshidabad and Birbhum. The history of Bengal can be known in detail from the Pal era that is the mid-8th century. The leading part of Bengal selected Gopal as the king of Bengal in 750 AD to abolish the disorder and dark phase in Bengal after the death of Shashanka. During his reign from 750 AD–775 AD, Gopal restore peace and order. After the death of Gopal, his son Dharmapal reigned Bengal in the proper way. During Gopal and Dharmapal Nabadwip or Nadia was under their rule. Nadia or Nabadwip was then under Gourh. When the Pals conquered Gourh, Nabadwip or Nadia became under their dictatorship. Many believe that the Pal kings made a habitat at Nabadwip. They think so from the name of Subarnabihar village i.e. four miles away of Nabadwip, 'Bihar' means "Math". It is believed that as the Pals were Buddhist, they named the village "Subarna-Bihar." From the remnants of that village it is supposed that is the remnants of Pal's palace.

After the Pal rule, came the Sens. The ancient habitat of the Sens was Karnatak (Karnat) in South India. After Samanta Sen and Hemanta Sen, Vijay Sen established vast state. It is supposed that reign was during 1096 AD to 1158 AD. After Vijay Sen's death, his son Ballal Sen (1158-1179) ascended on the throne. Except Gourh, Ballals Sen established his capital at Nabadwip and Subarnagram. At that time the river Bhagirathi flowed by the west of Nabadwip. It is supposed that the river Bhagirathi changed its flow during 1206 AD. Ballal Sen built a palace at the bank of Bhagirathi and spent a major part of his life there. "Ballal Dhibi", discovered at Bamunpukur village near Mayapur, is claimed to be the remnants of his palace. During his peaceful reign, he preached 'Koulinya' custom to form the Hindus in a new mode. After the death of Ballal Sen, Lakshman Sen (1179-1205) came into power. Lakshman established his capital at Nabadwip. As a result the royal lords and servants began to live in. Gradually Nabadwip became a populated city, 'Vaishnaba' follower Lakshman's royal court was ornamented by many virtuous person like Jayadev, Dhoyi, Sharan, Umapati and many others.

At the very beginning of the 13th century Ikhtiuddin Mohammad Bakhtiyar, Khilji invaded Nadia and Lakshman Sen, escaping from Nabadwip, took shelter at Bikrampur in East Bengal. This invasion is referred in the French book "Tabkat-i-Nasiri" by Minhajuddin. With only the cavalry soldiers Bakhtiyar entered Nabadwip and killing the porters / gate-keepers conquered Nabadwip. Bakhtiyar, state only a few days at Nabadwip, set out for Gourh after mass loot, torture and murder at Nabadwip. The Muslim dynasty was introduced in Bengal with the invasion of Khilji in Nadia. At this time there were various dismal states in Bengal. Disobeying the predominance of Delhi the rulers of Bengal announced independence. Samsud Ilias Shah announced independence in 1345 AD and took Bengal in his capture. He was succeeded by his

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son Sikndar Shah, Giyasuddin Azam and Saifuddin Hamza. During Saifuddin Hamza's reign, Ganesh announced independence in Bangadesh. After Ganesh, his son, Jalaluddin ascended the throne. When Jalaluddin's son Samsuddin was killed by the servant Nassiruddin, Ilias Shah dynasty ascended the throne of Bengal. Then Rukunuddin Basbak Shah and Muzaffar Shah ascended the throne. At the end of the 15th century tyrannous Mujaffar Shah began torturing the inhabitants of Nadia and in 1496 AD his prime minister conquered the throne with the help of the Muslim and Hindu jamindars. During Chaitanya's lifetime he was the 'Sultan', and was sympathetic to Chaitanya. During his rule many Hindu were seated at respectable posts in the royal court. Roop Goswami and Sanatan Goswami were employed as 'Dabeerkhas' and Sakar Mallik respectably in his court. Some 'Kazi's were reigning different places of Nadia. Chand Khan, a Kazi stayed at Bamanpukur near Nabadwip; Muluk, another Kazi lived at the bank of the Ganges near Santipur. When Yaban Haridas, giving up Islam religion, took 'diksha' from Vaishnaba religion from Chaitanyadev, Badsha, being conspired by Muluk Kazi sentenced him to death by whipping. But later he achieved resurrection. On the other side, Chand Kazi, in spite of his opposition to Chaitanyadev, later achieved his mercy.

After the death of Hussain Shah, his son Nusrat Shah succeeded on the throne. Like his father he was also a patron of literature and art. The later Sultans were very weak. Taking this opportunity, Sher Shah conquered Gourh and defeating Humayun became the 'Samrat' of India in 1539. But after his death some persons became the rulers of Gourh. In 1556 Akbar winning the second battle of Panipath sent his generals Tadormal and Muhim Khan to Bengal. Munim Khan after reaching there, died of epidemic and Akbar sent Hussainkuli Khan in 1575 to help Tadormal. Due to the invasion of the Mughals, the Pathans had to step backward from Bangadesh. Bangadesh came under the rule of Mughals and Todormal represented the Mughal emperor in Bengal.

At the last stage of Akbar's life a powerful landlord Pratapditya captured the western part of Nadia. The royal force led by Islam Khan was sent to defeat him and Pratapaditya's reign came to an end. On the other side, Jahangeer sent his general Mansingha to Bengal to defeat Pratapaditya. Mansingha was helped by many persons in Bengal. While returning to Delhi with Pratapaditya, he died on the way. At that time Mansingha achieved help from the royal ancestor. Bhabananda Majumder, the eldest son of Ramchandra Samaddar achieved blessings from Jahangeer. In 1606, Bhabananda became the king of Nadia by the charter of 14 'Parganas' by Jahangeer and established Nadia dynasty. The successors of Bhabananda used the title 'Roy'. Bhabananda shifted his capital from Bagwan to Matiyari. Later Nadia-king Rudra Roy transferred his capital from Matiyari to Reui and named it Krishnagar, from the name of Lord Krishna. The best and most famous king of Nadia dynasty was Krishnachandra (1710-1782). During his reign from 1728 to 1782, his court was ornamented with wise and knowledgeable persons like Bharatchandra Ramprasad Sen, Gopal Bharh and others. So he is known as the Vikramaditya of Bengal. During his time Krishnagar as well as Nadia was the centre of Bengali culture. But because of his conspiracy against Siraz-ud-daula he is often called 'Nimak haram'. At the battle of Plassey in 1757, Krishnachandra was in the side of the British, and was rewarded 'Rajendra Bahadur' by Lord Clive. After the defeat of Siraz-ud-daula in 1757, the sun of Bengal's independence was set down. Like other places, Nadia had a great change during the British rule. After 1854 'Nadia Bibhag' was formed. All the areas of later Presidency division except Murshidabad were under 'Nadia Bibhag' of which Krishnagar was the head quarter but later Alipore became the head quarter.

The role of Nadia in the freedom movement is significant also. The 'Neel Revolution' took place here under the leadership of Digambar Biswas and Vishnucharan Biswas. Martyr Basanta Biswas, Martyr Bagha Jatin, Martyr Anantahari Mitra are still immortal in the history of Indian freedom movement as the sons of Nadia. Nadia was also involved in the non-cooperation movement of 1920 and Quit India in 1942. A number of freedom fighters went to jail and tortures for being involved in the movements.

Objectives of the Study
1. To investigate the actual cultural disposition of sub-alterns in a historical perspectives in Nadia district.
2. To discuss critically the actuality of sub-alterns in socio-cultural perspectives in respective to their origin, evolution and present state in Nadia district.

Methodology
    Qualitative analysis has been done for investigation.

Origin and Evolution of Sub-alterns : In 1947 with the division of the country, Nadia also faced the same problem with its division of own. The northern part remains with West Bengal in India. Previously Jassore was in Nadia. But after independence, as a change in the border Jassore was excluded. Faridpur and Kusthia were included in Nadia. Then, after independence, Nadia was again divided. Faridpur and Kusthia became parts of East Pakistan. Though India earned independence on 15th August, 1947, Nadia was incorporated to India three days later on 18th August. If we probe into the history, we see that the border of Nadia was changed time to time.
    In ancient time Nadia was the centre of exercising knowledge, religion and education. Nadia has a bright place in history of education. Nadia, in the field of imparting education, was moving forward with non-stoppable flow like river Ganges. Even 2500 years before, Nadia was saturated with knowledge and education. It is known from the ancient Singhal history "Mahabangoha". Nabadwip was one of the best centres in respect of education. From the history of Kerry and Marshman, it is evident that during the reign of Nabadwip King Adisur, his capital Nabadwip developed itself as the centre of education under his patronage. Poet Bhattanarayan wrote "Beneesanghar" during his period. After the death of Shashanka, Bengal witnessed a great problem and this dark phase brought a temporal end to education. With the coronation of Gopal on Bengal throne in 750 AD by the leaders with their thinking of national progress, peace was restored again with the Pal dynasty. Education was given priority as Subarnabihar was established for Buddhist study, near Krishnagar. Nadia, as the centre of education, bears the heritage. Though the popularities of Buddhism was decreasing almost all over India, during Pal dynasty it continued for some more years. Later in the 13th century, Muslim rule started in Bengal with the invasion of the Turkish by Ikhtiyaruddin Bakhtiyar Khilji. Nadia witnessed the establishment of British rule with the defeat of Siraj-ud-doulla at Plassey in 1757.
    During Sen era, Buddhism was defeated by Barnashrama Hinduism. In spite of social classifications, Sen rule contributed immensely in studying literature and culture. Not only for socio-political aspects, but also Nadia became the centre of studying religion and education. Gradually Nadia became the Oxford of Bengal. The pressure of Barnashrama, the tyranny of Muslim rule, the liberalism of Islam almost vanquished Hinduism. At that very time appeared Shree Chaitanyadev in Nadia. He appeared as the shelter of the tortured and exploited people of Bengal. He, not only freed the exploited people from the exploitation of the 'Bramhana', but also introduced the 'Bhakti' movement led by Chaitnyadev. Disobeying caste, colour and religion people assembled under one umbrella. After Chaitanyadev 'Vaishnava' religion was led by Nityananda and Adwaitya Acharya. But gradually vulgarities and conflicts appeared in it. No religion can achieve expansion all of a sudden, and it is true for the Buddhism. It achieved expansion through the fine hole of the Arya religion.
    In 'Bangaleer Itihas' (Adiparba), Niharranjan Roy supposed that Arya religion came in Bangadesh long after it came in India. This religion never achieved vast expansion as the Arya-culture was limited among the comparatively higher educated persons. It began to expand during 7th and 8th century. Some influence of it is evident in West Bengal but there is no trace of 'Arya' at the eastern and northern bank of the Ganges. It is because of the fact that 'Arya' religion appeared in Bengal. But it did not achieve expansion then. Instead, there was geographical reason, as Bengal is situated at one corner of India. Arya

reached here little later. The neglect of the lower-caste people by the higher-caste people acted as a prohibition on the expansion of Arya religion. So the ancient people were not attracted to the Arya religion. Moreover they opposed to it to stop the expansion of Arya religion. But all oppositions became inactive gradually and the Arya religion and culture began to influence the minds of the people in Bengal. But the people of Bengal adopted it with their own colour. The middle and lower class people of society, being into the tyranny of 'Brahmins' and aggression of Islam, reached to a pitiable state. The Muslim rulers tried their best to Islaminize the Hindu society, as if it would be a noble deed for them. To Islaminize the Hindus, mosques were created by demolishing temples. From "Chaitanya Bhagbat" it is known that the general of Hussain Shah invaded Orissa, desecrate several Hindu temples and tortured the Hindus. Hussain Shah had several Hindu royal servants. His chief servant Sanatan Shah was imprisoned for sometime when he denied to go to Orissa. 'Kalapaharh', a Hindu converted to Muslim, vandalized many temples, idols of gods and goddesses, and tortured tyrannously over the Hindus. Many Hindus became Muslims to make their fortune. From Rajanikanta Chakraborty's "History of Gourh" (2nd) it is known that the Gourh Muslims prohibited the Hindus to follow their religion. Sanatan Goswami and other Hindus began to live at Ramkeli, leaving the capital for this reason. During their Kamrup invasion, the soldiers of Hussain Shah destroyed the temple of "Kamateshwari". Islaminize was at its extreme with the direct and indirect impact of the Muslim rulers. It was evident from the biography of Chaitanya that the Muslims were tyrannous to the Hindus. In this social perspective Chaitanya appeared as if to rescue the exploited downtrodden from the engulfing of Brahmins and Islam. The birth of Chaitanya is the most noteworthy event to them. If he was not born, many Hindus would have taken Islam as their religion. With his appearance, Bengal witnessed the cultural change. Nabadwip was the centre of education even before the birth of Chaitanya. But during Muslim period, devotion decreased in their minds and the pride of false-scholasticism became predominant. All over the country the Hindus followed 'Tantra and Sahajia Buddhists'. A Bengali Buddhist monk used to roam in Bengal with the name of 'Nerha'. Though Buddhism was on the verge of abolition, many mysterious 'Kayaradhan' such as Sahajia Buddhism, Nathdhama Kouladharma and Tantra were celebrated secretly. The 'Tantrik' periphery from Nepal to Orissa was familiar or 'Vishnutrata'. At that time there was famous Tantrik namely Krishananda Agambagish. His famous book "Brihattantrasar" deals with the details of 'Tantrik' religion. People used to worship the deities of many 'Mangal Karya' such as Manasa, Chandi, Dharmad and eat meat & drink wine in the name of Chandibishahari. According to Sukumar Sen, Manasa, Chandi and Lakshmi, once, were a single deity. Later, due to the controversy among the priests, they were separated. There are controversial opinions on the real identities of Dharma. Sharat Chandra Ray thinks that Dharma is the nun-god, Suniti Kumar Chattopadhyay thinks that Dharma is Kurma and Khitish Prasad Chattopadhyay thinks Dharma as Varun. Ashutosh Bhattacharya opines that worshipping of Dharma was similar to th ancient worshipping of sun. The Pundits of the Doms presided over the Dharma-worship. But the priests of the Chandi-worshipping were Brahmins, as subaltern-religion was internally related to casteism. In 15th century in the lowest class in Hindu society, there was a tradition of worshipping country god believing to have magical power. The 'Smarta' Pandits placed these non-vedic cults in the occasion of 'Brata' in Hinduism. Chaitanya's 'Vaishnava' saved the lower and middle class people from casteism and change of religion. The 'Bhakti' movement united them. 'Nabyanyayist' Pandit society. Smarta society and 'Tantrik', 'Shakta' societies opposed the religion of emotional love of Chaitanyadev. But Chaitanyadev, conquering all obstacles, flowed away all the samaskar with the theme of 'Bhakti'. That is why casteism was weakened. He was not a missionary only but a social reformer also. He had a subtle view on every aspect. Raghunath Das was praised by Chaitanya as he ate the remaining of the lower class dishes. For him, Muslims got a place in the 'Vaishnava'. When Yaban Haridas died, Chaitanyadev promoted all the Brahmins who gathered there to eat the 'padodak' of the dead and arranged a respectable funeral for the deceased. But his religion of love was prohibited among the conservative orthodox Brahmins.

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The success which 'Vaishnava' achieved in Bengal was for Chaitanya. But the importance of Nityananda, Adwaita, Shrinivas, Narotham and Shyamananda should not be dishonoured. After Nityananda and Adwaita, Vaishnava, was spread by Shrinivas, Narottam and Shyamananda. They totally denied casteism and opened the temple gate for all. Though Shyamananda was born in a lower caste family 'Vaishnava', societies received him cordially. Again, Narottam, being a 'Kayastha' himself, had many Brahmin disciples. Nityananda's son Birbhadra gave shelter to the lower class Buddhists 'Nerhanerhi' in the Vaishanava society. These make clear that they tried a lot to shelter the lower-caste people in the Vaishanava society. Even outside Bengal they spread Chaitanya's love. Gradually Chaitanyya's 'Nama Samkirtana' spread in every corner of Bengal and controlled the religious conversion. Sharha Goswami of Brindaban, writing poetry, Vaishanava philosophy and 'Smriti', established the Vaishnava society on a strong basis of philosophical belief. In the later age, Gourhean 'Vaishanava' and society were controlled by the same philosophy. 'Raganuga Bhaktism', 'Bhagbhaat' and other 'Bhakti philosophy influenced the people of that age. 'Vaishanava' became weak during the first half of the 18th century. Virhantbir took firm steps against following 'Vaishnava' at Vanavishnupur. He ordered the common tenants to utter a certain number of 'Nama' everyday. He preserved many books on Vaishnava at the manuscript library. But gradually the Goswamis became greedy for power.

In this social perspectives, the sub-altern religions in Bengal appeared. Sukumar Sen wrote in his "History of Bengali literature" (First Part) – "Before the end of 16th century, Vaishnava religion began to attract non-Vaishnava worshippers like Yogi, Tantrik and Sufi. In the 17th century, such communities externally the rites and behaviour of the 'Vaishnava Vairagi'. Basically through these communities, the increasing rites and worshipping of Chaitanya, keeping distance from the scriptures, landed down in the country and began a latent flow. Thus it clear why the lower class people created sub-altern religion. In 18th century, a Dravid devotee Totarama came to Nabadwip to study the art of logic or reasoning. Being attracted to prayer and worshipping, suddenly he went to Brindavan. Then when he returned to Nabadwip, Krishnachandra, the King of Nadia gave him a land to dwell in. He began his prayer and worshipping by establishing "Barha-Ankhra". But he was disturbed as the sub-altern communities became more influential. So, depressed and angry Totaram announced –

"Aul Baul Kartabhaja nerha darbesh sai.
Sahajiya sakhibhavaki smarta jaat gosai.
Ati barhi churhadharee Gouranga nagari
Tota kahe ei teror sanga nahi kar."

It is clear that, 13 sub-altern religious communities became influential in the society, among which 'Gourh Nagari" and "Jaat Gosai" are mentioned. Totaram said of 13 sub-altern religion, but gradually the number began to increase. About three subaltern religions originated in Bengal. Though much is not known about these it is supposed that most of them were interested in sexual rites. In latter age, some Buddhist yogas of physic were added to it, and a bit of 'Natha' and 'Sufi'. An effort to communicate or adjust thoughts of Hindus and Muslims is notable. As a result some of sub-altern religions originated in Bengal. Most of these sub-altern religions of 18th century are lost today. The spread of Brahmin religion, "Brahma" and Christianity is responsible for this. With the opposition of these religions, the sub-altern religions became weak. Hence, the sub-altern religious were lost in 19th century. To know about the subaltern religions of Nadia, a proper evaluation of the religious atmosphere of Nadia in 18th century is needed. Kumudnath Mallic in his 'Nadia Kahini' said – "The Hindu inhabitants of Nadia are divided into many base religion and branch religion such as "Shaktav", "Shaiba", Vaishava and Kartabhaja, Balarambhaja etc. Among them, the place of origin of Chaitanya's "Vaishnava" and "Kastabhaja", "Batarambhaja" communities is Nadia. The Vaishnavas are more in numbers than the 'Shakta' or 'Shaiba'. Almost all the brahmins are either 'Shakta' or 'Shiba'. Once these two developed a lot in Nadia, but now, they are weak."

According to him, general Hindu families follow the 'Simarta' doctrine of Raghunanda. The common people of Nadia, except the a sectised and pure Vaishnavan, stayed away from the communal disharmony. Financial crisis prevented many people to perform the rituals and 'brata', though they wished to do so. He said about the then "Vaishnava" that "Among the four communities – 'Ramanuja', 'Vishnuswami', 'Maddhacharyaa' and 'Nimbaditya' – of Vaishnavas only 'Maddhaists' were visible, as Sri Gourangadev was indoctrinated from Iswarpuri of 'Maddhacharyaa', and the 'Vaishnav' which is visible in the modern time in this region follow the doctrine of Sri Chaitanyadev. This Vaishnava community can be divided into four. First, those who worship Vishnu, and do not follow the doctrine of Sri Gouranga. Second, those who following Sri Gouranga doctrine worship Sri Krishna. Third, those who worship Sri Gouranga. Fourth, those who are Vaishnava in name but follow totally different doctrine. The first group was in negligible number. The second and third were almost equal. The fourth group was highest in number. Chaitanyadev never wrote any book indicating this doctrine. The advices which Chaitanya preached to his disciples were written by his disciples. From these we come to know his commands and desires in following this religion. Among these, eight verses are famous as 'Shiksha stock' in the Vaishnava society and these are the best possessions of the Vaishnava society. Chaitanyadev was adorning enough to "Sree Madbhag Vadgita", "Astadashpuran", "Brahma Sanghita", "Upanishada", "Shrute" etc. He thought God as almighty and believed Sri Krishna as complete God and for this he ordered his disciples to worship Sri Krishna. The different 'Sadhyas' which Ramananda Roy preached systematically were permitted by Chaitanyadev. 'Jnansumya Bhakti, 'Prembhakti', 'Dasyaprem', 'Sakhaprem', 'Batsatyaprem', 'Kamtabhaba'. These are the gradually developed methods. Radha's love or 'Mahabhava Samadhi' is the keen for this reason.

In the post-Chaitanya period, Chaitanya was the 'avtaar' of Sri Krishna to most of the Vaishnavas of Nabadwip. So they worshiped Chaitanya as their saviour. This class of Vaishnavas are in highest number in modern time. They ascribed 'avtaars' not only on Chaitanya, but on Adwaita Acharyaa and Nityananda. According to them Nityananda is Balaram and Adwaita Acharyaa is Sadoshiva. 'Bhakti' and 'Love' were everything to those Vaishnava. They believed that every living being has the right of 'Bhakti' and love. They acknowledged 'Shanta', 'Sakeshya', 'Darya', 'Madhurya' and 'Batsalya' as the five moods of love. The prime worship of this 'Vaishnava' was 'Namasangkirtana'. They acknowledged the necessities of 'Guru' in every worshipping. They offered 'mantra' to the married Vaishnav. Sometimes the 'mantras' of Krishna and sometimes that of Chaitanya. These Vaishnavas perform the religious rituals living in family. Those who want to accept stoicism leaving everything they have to be asceticised. But today the asceticised Vaishnavas can also marry, in which case the bride exchange the holy necklace and takes amount. In this occasion, 'Mahapraphu bhog' and grand festivals are arranged. Although widow marriage is customary in our modern society, it is not recognized in the Vaishnavas society.

Conclusion

1. People's concept about sub-altern religion is not transparent. Upper class people do not prefer these religions. According to them sub-altern religion is physic-based, perverted taste and unscriptural practice. The neglected and exploited people of sub-altern community hide themselves in the corner of a village for their self-protection. They follow ordinary popular practice but their answers to the questions of common man in a mocked way. They unite people of all profession by not distinguishing caste, colour and religion.

2. In the pre-Chaitanya era the lower caste people felt disinterested in the upper class scriptures and their religions. Almost all these tortured and exploited people were illiterate. The so-called scriptures or religions could not show the way for them. Moreover they were exploited by these. They were not touched by priestism in the name of scripture, giving much importance on temple and mosque than idol worshipping. Chaitanyadev appeared to them as the saviour. The trodden and exploited people

found the meaning of living in the liberal humanism of Chaitanyadev. They became united irrespective of caste, colour and religion. Being in the scriptural behaviour, they tried to feel everything with thoughts and emotions.

3. At this time the presence of Sufi missionaries was felt in Nadia. In the post-Chaitanya period the liberal Vaishnism blended with Sufism appeared in the form of subaltern religion. They practised religious ritual and selected their 'Guru' totally in their own way. They continued their worshipping in extreme secrecy. Idol worship, to make mind disinterested in physique, and to establish 'Guru' and 'Guruism' by protesting against. Casteism were the basis of this religion. They tried to express all these through their songs. So, the songs celebrating the doctrine that the body, which is the seat of all truths, is an important parts of these sub-altern religion. Actually, sub-altern religion originated from a kind of protest. Worldly life rather than life after death, body rather than soul, songs rather than 'mantras', 'Guru' rather than God get more importance in this religion.

4. To protest the higher religions, they introduced many superhuman stories about their pioneer. They preferred people in practising religion. But gradually there appear in this religion prevention, false-preaching and effort to collect money from the disciples. It we probe into the history of Nadia district, we come to know that about 200 years ago, some powerful subaltern religions originated in this district like 'Sahebdhani' community or the room of Dindayal established to Sahebdhani, Balarami Group or Balaharhi community established by Balaram, Khusi Biswas community established by Khushi Biswas, Kartabhaja community established by Aulechand, Lalan Shahi community established by Lalan, Aul community and Baul community.

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A Study on Effective Teaching Learning System at the Secondary Level Schools in West Bengal

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Abstract : *The present paper concentrated on highlighting effective school, effective teaching, and effective leadership in an integrated way to identify the components as the output of the total system. It is now a common practice through over the world to evaluate the effective measures of teaching learning system to promote the better quality of education presenting the paper in an experimental basis.*

Key words : *Effective Teaching Learning System, Synchronous Model.*

Introduction

Teaching learning system is a highly complex procedure demanding the investigation of Teaching Learning Process with its components and mechanism relating to the subsystems of it. Here we are trying to concentrate ourselves the complexity of the Teaching Learning process with the help of various bits of information collecting from different schools in West Bengal.. A holistic approach has been considered for conducting the study involving effective school, effective teaching & effective leadership. An integrated approach is being suggested in the study for the betterment of Teaching Learning System effectively. In different research findings it is observed that any particular dimension related to the system that mostly fails to upgrade the process as a whole.

Review of Related Studies

Teaching Learning System (2002) by Roy Lee Foley : The process of system dynamics for a teaching-learning system consists of five stages.

- **First stage :** It is the description or mapping of the system. It requires taking various bits of information about teaching-learning systems in the real world and turning them into a unified theory.

- **Second stage :** The formulation and construction of a simulation model is performed. The system description is translated and converted into the level and rate equations of a system dynamics model by providing the requisite parameters. Creating the simulation model requires that the rather general and incomplete description of the first stage be made explicit.
- **Third stage :** Simulation of the model will start after the equations of the previous stage pass the logical criteria of an operable model, such as all variables being defined and consistent units of measures. The first simulations at this stage will raise questions that cause repeated returns to the prior stage until the model becomes adequate for the purpose under consideration.
- **Fourth stage :** Some policy alternatives are chosen for testing.
- **Fifth stage :** Proposal policy changes will be tried to the model to maintain or obtain sustainable improvement in performance while considering the feasibility of implementing these changes in its real world. If the model is relevant and persuasive, then the process can be concluded for the necessary evaluations.

According to N. Eftekhar and D. R. Strong, 2008 Dynamic modeling of a Teaching Learning system can be mentioned as follows :

Description of System Structure

1. The analysis of the dynamic behaviour of a learning process is undertaken using what is termed a "System approach". This approach calls for the consideration of a "Complex" set of relationship as a system. "Complexity" refers to a higher-order, multiple-loop, nonlinear feed back structure. All social systems belong to this class. Educational systems and specifically a learning teaching process that is a complicated set of interrelationships and activities has all the characteristics of a complex system.

2. Application of system analysis to a learning process requires the definition of the structure of interacting functions. The definitions of the structure must identify not only the separate functions but also their methods of interconnection. According to the theory of system structure, the four conceptual hierarchies are the closed boundary, components of the system especially stock level and flow rate variables, feedback loops, and policy structure.

3. The closed boundary defines the higher layer of the model. In fact, it is the control system of our interest. In this study, the boundary encloses a single system for a single student learning process. Interaction between this system and other sub-systems in a learning environment is simplified at this stage. The model structure developed is basically includes a main center-part for a learning process and some arbitrarily supporting infra-structures inside the defined boundary. Parts of the infra-structure represent sub-models and interact with the center-part.

4. The next hierarchy of system structure is the components of the system. These are four basic components of building blocks in the system: the stocks, the flows, the converters and the connectors. Stock levels and low rates relate to the accumulations and activities within the system. Stocks can be referred to as system state variables. They are integrations or accumulations of system flows that represent measurements of the state of the system at any given point in time. Flows are the instantaneous rates of flows that represent the means by which the system is controlled and represent activity points in the system. Converters are auxiliary functions converting states to system activities. They represent the decision process in the system. Finally the connectors are links that connect the components forming are that influence the flows that regulate the system.

5. Feedback loops represent the structural setting which all decisions are made. It is any structure of two or more casually related components that close back or themselves. Thus, the feedback loops provide a format for identifying flows of information and the relevant variables which articulate the system giving rise to cause and effect. For example, information about student achievement can provide an input to decisions concerning degree of student comfort, which in turn, controls the demand of student's effort. Any system which has a purpose has an internal structure of feedback loops through which the system is controlled. Entire feedback loops, as well as the individual relationships within a loop, are described as either positive or negative. When any variable in a positive loop changes, the resulting interactions cause that variable to change further in the same direction. The positive loop, in other words, characteristically produces self-reinforcing change (unrestrained growth). By contrast, when any variable in a negative loop is changed, then the loop causes the variable to readjust in the opposite direction. The negative loop produces self-regulating change (controlling and restorative behavior).

6. Implicit in rate equations, therefore, are the actions and policies which reflect the administration of the learning process. For example, the learning rate equation which controls the amount learned by a student reflects the policy of the student regarding the standards required for acquiring knowledge. Thus the last hierarchy in a general system structure can be defined as policy structure. Decisions are made for a purpose which, in turn, implies a goal which, in turn, implies a goal which the decision process in trying to achieve. Policy structure is mainly reflected in the definition of the rate variables.

To apply the ideals of a positive classroom climate, according to the Indiana University center for Adolescent Studies, is to create suitable classroom environment with the following guidelines:
1. Genuine interest regarding students.
2. Communicate classroom clearly.
3. Be objective, not judgmental.
4. Humanistic approach.
5. Successful communication.
6. Address problem behavior directly and immediately.
7. Collaborative approach (Hawley, 1997).

Significance of the Study
A holistic approach has been suggested for explaining the Effective Teaching Learning System. Mostly we are talking about the effective teaching or sometimes effective school or effective management or administration etc. but what is our observation is that one variable is highly related to another or summation of all the variables makes the system. Therefore we are interested to develop the system as a whole and try to prescribe for better school. We should have an effective system not only a single dimension but in the plural way crystallizing the system to produce maximum output.

• The output of the system is dependent on its effectiveness. Effectiveness of a system is therefore a professionalized pattern relevant to the present day teaching learning scenario.
• In developing countries like India, system approach is very much significant in controlling the quantity and quality ratio; as well it accelerates the quality of education in the present globalized system.

The complexity of teaching and learning can not be removed by mere technology as numerable components are interrelated and interdependent on it. Therefore an alternative may be focused through this approach with the help of technology and humanizing the system too.

Objectives
1. To investigate the model of Effective Teaching Learning System in the context of secondary level schools in West Bengal.
2. To find out the components of Effective Teaching Learning System.
3. To determine factors relevant for Effective Teaching.
4. To find out significant factors for Effective School.
5. To investigate the relevant factors for Effective Leadership.
6. To find out the mechanism of Effective Teaching Learning System.

Methodology
    The study is survey type descriptive research. For finding out the components of the Teaching Learning System, statistically factorial analysis has been conducted with other descriptive statistics.
Tools : A Standardized Questionnaire regarding Effective Teaching Learning System will be used for conducting the project.

Population and Sample : Secondary level schools of West Bengal are the population and some selected schools out of the different districts will be the sample.

Components of Effective Teaching Learning System
Table 1. Data of Experimental and Control Group of Pre and Post Test

Pre test		Post test		Pre test		Post test	
Experimental	Control	Experimental	Control	Experimental	Control	Experimental	Control
89	83.5	66.00	45.75	71	58	42.75	43.88
90	89	63.00	58.50	65.5	71	55.50	50.63
76	90	68.63	58.50	62	71	45.00	38.25
82	72	58.50	51.75	67	46	34.88	32.63
83.5	86	65.25	45.75	56.5	69	61.88	30.00
81	62	60.75	50.63	67	58	60.75	36.00
83.5	67	55.50	54.00	76	53	45.00	13.50
80	58	60.75	41.63	68	72	50.25	56.25
82	82	72.00	47.25	69	37	51.75	49.50
83.5	81	22.50	39.38	63	35	24.75	41.63
77	81	60.75	45.00	77	38.5	38.25	39.38
64	83.5	69.75	47.25	46	24	31.50	28.13
82	67	55.50	54.00	32	77	21.38	36.00
67	85	51.75	45.00	40	40	27.00	31.50
81	82	57.75	47.25	28	28	49.50	22.50
73	54	64.13	45.00	35	32	31.50	41.63
64	65.5	61.88	28.13	22	33	34.88	40.50
85	64	53.25	31.50	28	28	45.75	13.50

Pre test		Post test		Pre test		Post test	
Experimental	Control	Experimental	Control	Experimental	Control	Experimental	Control
77	68	39.38	36.00	31	31	42.75	31.50
67	64	60.75	56.25	23	37	22.50	29.25
72	68	48.38	22.50	38.5	27	33.75	16.50
67	59	56.25	27.00	23	15	21.38	13.50
63	77	39.38	45.00	27	28	36.75	39.38
71	67	60.75	31.50				

Table 2. Analysis of Covariance of Pre-Test and Post-Test of Experimental and Control Groups

Pretest (X)

Groups	Count	Sum	Average	Variance	SD
Experimental	47	2956	62.89	421.98	20.54
Control	47	2764	58.81	437.72	20.92
	94	5720			

ANOVA

Source of Variation	SS	df	MS	F	P-value	F crit	F at 0.01
Between Groups	392.17	1	392.17	0.91	0.34	3.94	6.92
Within Groups	39546.24	92	429.85				
Total	39938.41	93					

F is not significant at both levels

Post Test (Y)

Groups	Count	Sum	Average	Variance	SD
Experimental	47	2281.88	48.55	210.28	14.50
Control	47	1830.00	38.94	145.35	12.06
	94	4111.88			

ANOVA

Source of Variation	SS	df	MS	F	P-value	F at 0.05	F at 0.01
Between Groups	2172.24	1	2172.24	12.22	0.00	3.94	6.92
Within Groups	16359.24	92	177.82				
Total	18531.48	93					

F is significant at 0.01 level
Correction Term C_{xy} =   250211.97

Analysis of Covariance

Source of Variation	df	$SS_{x.y}$	$SS_{y.x}$	$Ms_{y.x}(V_{y.x})$	$F_{y.x}$	F at 0.05	F at 0.01	$SD_{y.x}$
Among Group Means	1	922.98	1502.74	1502.74	13.08	3.92	6.86	
Within Group SS	91	15277.62	10457.14	114.91				10.72
Total	92	16200.59	11959.88					

F is significant at 0.01 levels
Regression (b_{within})   0.39
Calculation of Adjusted Y Means

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Groups	N	M_x	M_y	$M_{y.x}$(adj.)
Experimental	47	62.89	48.55	47.76
Control	47	58.81	38.94	39.73
General Means		60.85	43.74	43.74

Significant of differences among adjusted Y means

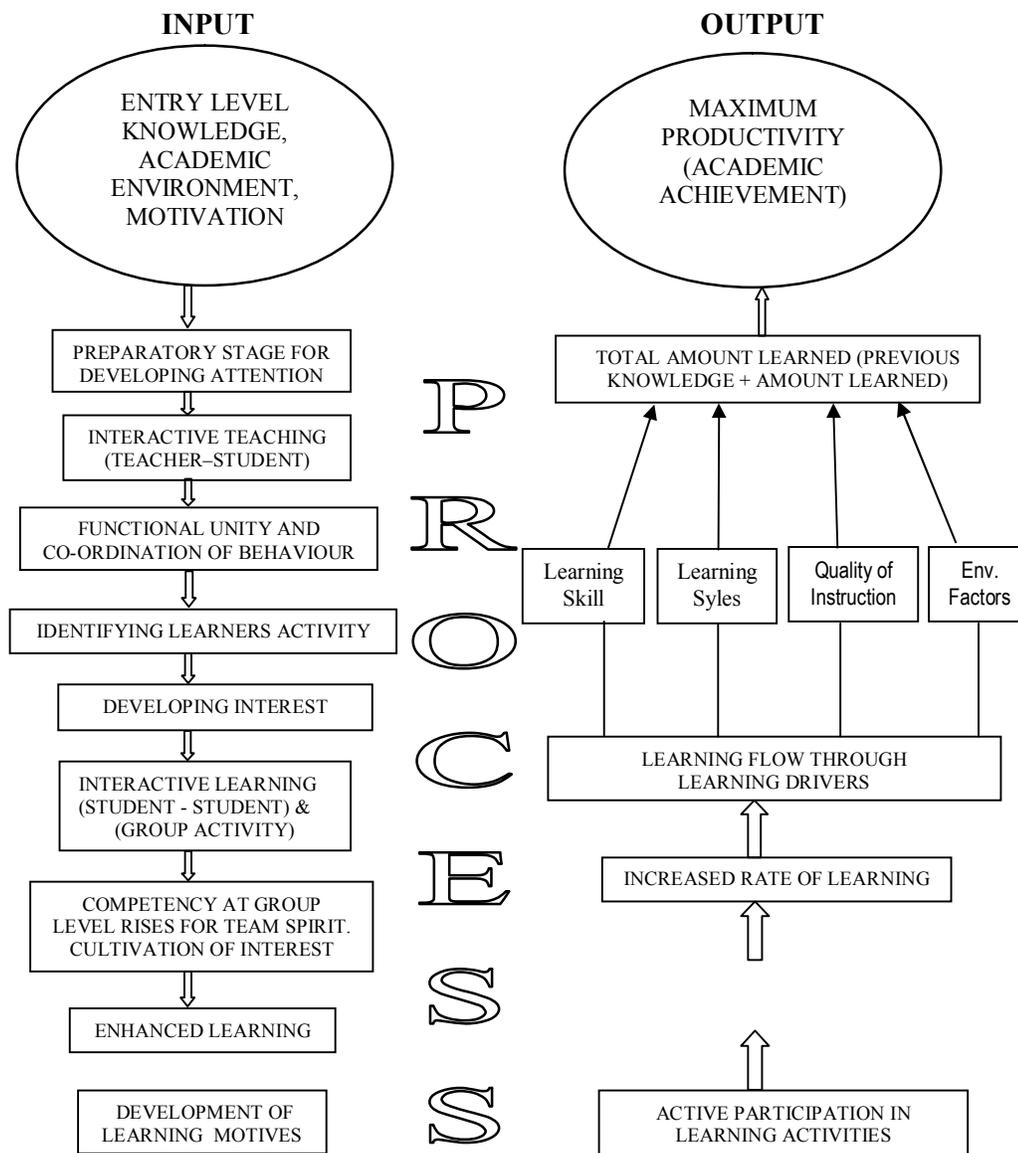|			
SE_D	2.21	Sig. diff. at 0.05 level	4.39
Df	91	Sig. diff. at 0.01 level	5.82
$t_{.05}$	1.99	Mean Diff Exp. vs. Control	8.04**
$t_{.01}$	2.63	* is Sig. at 0.05 level, ** is Sig. at 0.01 level, NS is Non-Significant	

Conclusion

With the growing complexity of the educational system due to the tremendous achievement of information in various educational fields teaching learning system which accompanies with mechanism of it makes the teaching learning system more relevant and productive experimented with the synchronous model of teaching with the help of the components extracted from factorial analysis. Because of the interdisciplinary relevance a holistic approach has been used to identify the effectiveness of the system to investigate the components and the mechanism of the system to have its better results. We consider three compartments namely effective teaching, effective school, and effective leadership for ensuring effectiveness in teaching learning system. The study is interdisciplinary relevant as because the present output based education system is rooted from the components from various discipline mentioned above involving professionalized educational system and human rights in education too reflected through following teaching learning components extracted mostly from review of related studies:
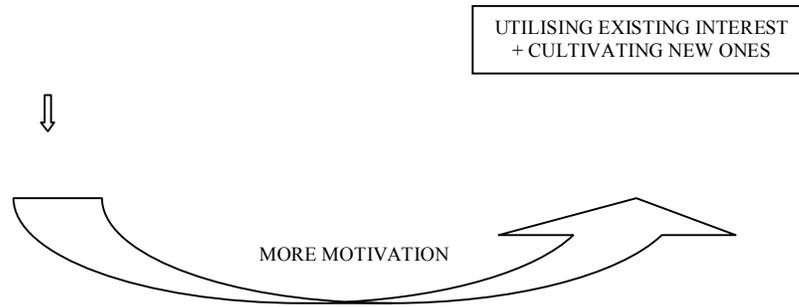
1) Significant Components Extracted From Factor Analysis

Factors	Components
	Effective School
8	Effective schools consider time spent on academic and non-academic teaching.
3	In an effective school ground rules are imposed for respectful behaviour.
11	Balanced workload
17	Effective school accommodates physical, personal ,social , discipline based and interdisciplinary learning.
15	In effective school, student resource package provides focus on student needs, encourages innovation, targeting fund for them.
6	Structured classroom routines provide stability and direction for effective school.
	Effective Teaching
1	Class period: In effective teaching it is necessary to break the class period into two or three different activities.
8	Institutional Management: For effective teaching heads should exercise a change of interpersonal and intrapersonal skills and able to analyze, evaluate, articulate and communicate a range of agencies locally and nationally.
10	Return demonstration: Return demonstration by the students is the chance to be creative – promotes learning and as a whole highlights effective teaching.
13	Praising the students success : Effective teaching is "praising students' success" – as it

	associates the desired learning goal.
17	Moment of teaching : To satisfy the immediate need for information i.e., to seize the moment is the key factor for effective teaching.
5	Class size : Effective teaching depends upon the class size.
Effective Leadership	
6	Emphasis on culture of leadership.
27	School leadership is sensitive to exam statistics to improve instruction.
8	Effective leadership change culture of school to invite parent involvement.
15	Effective leadership develop relations with teacher.
10	Effective leadership manage time effectively in our school.
20	A focus on student learning is always established by leadership in our school.
16	Effective leadership create organizational structure that involve all faculty in decision making for collaboration.
14	Effective leadership try to balance the workload among the staff.

2) Mechanism : Synchronous Model of Effective Teaching Learning System :

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┌─────────────────────────────┐
│   UTILISING EXISTING INTEREST │
│   + CULTIVATING NEW ONES     │
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MORE MOTIVATION

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   1. Sharma, G. S. (1975). *Legislation and Cases on Untouchability and Scheduled Castes in India*, Allied Publisher, Bombay.

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