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Research Abstracts

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Editor's Note

Dear Friends,

With great pleasure and satisfaction, we present before you the issue of the Indian Journal of Educational Research, a peer-reviewed research journal published annually since 2012 by the Department of Education, University of Calcutta.

For this edition we received a large number of research papers, but due to pandemic the publication process got delayed. Through peer review process fifteen articles from them have been chosen which bring forth various pertinent issues in education. They cover diverse fields of education related to quality of self-financed teacher education institution, digital divide in higher education, mathematics' perception and anxiety, ICT, special education, women empowerment, professional capacity building, achievement motivation, quality context, community development, museum learning experience, learning through thinking, leadership in school, etc. The research methods used are both empirical and non-empirical. Thesis abstracts of young researchers who have received their Ph.D. degree in the last year have also been included. All the papers in the journal are expected to enhance the quality of research in education. We congratulate all whose works are published and hope they continue to pursue quality research. It is to note that soft copy of the journal can be found in our university website (caluniv.ac.in).

Our whole-hearted thanks to the authorities of the University, our colleagues in the department, the contributors, the panel of reviewers and the readers. We are really fortunate to have a highly esteemed peer-review committee who, in spite of their very busy schedule, provided their thorough and critical inputs for each and every paper, we specially like to thank both the Editors of the earlier issues, Professor Debjani Sengupta and Professor Nimai Chand Maiti for their initiation and development of the journal. We hope continue this journey with their help and guidance.

We expect, this will serve as a forum for international researchers and thinkers to continue their research work in the field of education in the near future.

With warm regards,

Md. Kutubuddin Halder
Professor, Department of Education,
University of Calcutta

Indian Journal of Educational Research, ISSN 2277-3819
Volume-VIII, March 2019, Pp. 207-209

Research Abstracts

Higher Education: Relationship of Body Mass Index with Adjustment Pattern and Academic Achievement

Title	A Study on The Relationship of Body Mass Index with Adjustment Pattern and Academic Achievement of The Under-Graduates
Research Scholar	Sucharita Roy Chowdhury
Supervisor	Jayanti Das
Department	Department of Education, University of Calcutta
Degree Awarded	Ph.D. 2019
Availability	Central Library, Calcutta University

According to the World Health Organisation, health refers to the complete physical, mental and social well-being. Therefore, maintaining good physical health can elevate mental and social development of the individual. Body Mass Index develops a body image in the individual. Undergraduate is the course when the higher secondary students come to a different set of educational environments with lot of dreams about their future life. But poor health or overweight or obesity can be a hindrance to fulfil their dream. The present study aims to find out the nature and characteristics features of underweight, normal weight, overweight and obese under-graduates, to study their adjustment pattern , to find out whether there is any significant difference among the under-graduates at different levels of BMI with regard to academic achievement and also to find out whether gender has any impact on their academic achievement.

Need of the study

Home, health, social and emotional adjustment have been considered as the parameters of adjustment. The progress in education is measured through academic achievement. It is important to know whether there is any fixed relationship between Body Mass Index, academic achievement and adjustment and if so, how the relationship exactly is. This study is also important as it focuses into the nature and characteristic features of individuals falling in different categories of Body Mass Index. Therefore, it is worthy to study the present problem.

Objectives of the Study

i. To find out the nature & characteristic features of underweight, normal weight, overweight and obese under-graduates.

ii. To study the adjustment pattern (related to home, health, social and emotional) of the underweight, normal weight, overweight and obese under-graduates.

iii. To find out whether there is any significant difference among the under-graduates at different levels of BMI with regard to academic achievement.

iv. Whether gender has any impact on the academic achievement.

Sample

400 undergraduate students were selected from several undergraduate degree colleges in and around Kolkata. Sample consisted of obese, overweight, normal weight and underweight students and both male and female students.

Analysis

The collected data were analysed qualitatively and quantitatively. For quantitative analysis Pearson correlation, t-test, ANOVA and S-N-K Post Hoc test were administered.

Tools

1. A questionnaire has been prepared by the researcher to find out the nature & characteristic features of underweight, normal weight, overweight and obese under-graduates.
2. Indian Adaptation of Bell's Adjustment Inventory by Dr. (Smt) Lalita Sharma (Head, Home Science Department- D. D. MahilaMahavidyalaya, Firozabad) has been used to identify the adjustment pattern of underweight, normal weight, overweight and obese under-graduates.
3. Academic record of underweight, normal weight, overweight and obese under-graduates have been collected from colleges to know about the academic achievement.

Findings

It was found that skipping regular meals was a trend among the undergraduates, though majority of normal weight students took regular meals. A health condition like restlessness was prevalent among the students irrespective of their Body Mass Index. BMI was directly related to the characteristic features of the undergraduates and it is reflected on their adjustment and academic achievement.

Home, health, social and emotional adjustment of the underweight, normal weight, overweight and obese students were found to be significantly and positively related to each other. The study showed that gender has no significant impact on the academic achievement of underweight, normal weight, overweight undergraduates.

Conclusion

Frequent medical campaigning in the educational institutions would be helpful in spreading awareness on BMI and related risks. Good adjustment related to home, health, social and emotional areas always lead to mental peace, concentration and attention which are very much needed for academic achievement. Therefore, any type of adjustment problems must be solved.

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Volume-VIII, March 2019, Pp. 210-212

Research Abstracts

Teacher Education: Primary Teacher Educators' Job Satisfaction, Personality and their Organizational Climate

Title	Job Satisfaction of Teacher Educators in Relation to Personality and Organizational Climate
Research Scholar	Goutam Maiti
Supervisor	Nimai Chand Maiti
Joint Supervisor	Md. Kutubuddin Halder
Department	Education, University of Calcutta
Degree Awarded	Ph.D. 2018
Availability of the Thesis	Central Library, Calcutta University

Job satisfaction, personality of teacher educators and organizational climate of Primary Teacher Education Institutions (PTEIs) were the major variables of quality education. The present research tries to assess the intra and inter-relationship among job satisfaction, personality of Primary Teacher Educators (PTEs) and their organizational climate.

Objectives

1. To assess the job satisfaction of teacher educators of primary teacher education institutions.
2. To compare the job satisfaction of govt. and non- govt. primary teacher educators.
3. To compare the job satisfaction of male and female primary teacher educators.
4. To assess the personality of teacher educators of primary teacher education institutions.
5. To compare the personality of primary teacher educators of govt. and non-govt. institutions.
6. To compare the personality of male and female primary teacher educators.

7. To study the organizational climate of the primary teacher education institutions as perceived by their teacher educators.
8. To study the relationship of job satisfaction and personality of teacher educators of the primary teacher education institutions.
9. To study the relationship of job satisfaction of teacher educators and organizational climate of primary teacher education institutions.
10. To study the relationship of personality of teacher educators and organizational climate of primary teacher education institutions.
11. To study the interrelationship among job satisfaction and personality of teacher educators with organizational climate of the primary teacher education institution.

Sample

Simple random sampling technique was adopted. Sample of the present study shows that 200 (non-govt. 150 and govt. 50) teacher educators out of 44 (31 non-govt. and 13 govt.) PTEIs participated in this study which was affiliated by West Bengal Board of Primary Education.

Tools

1. Teacher Educator Job Satisfaction Questionnaire prepared and standardized by the investigator.
2. Sixteen Personality Factor (16 PF) Questionnaire by the Cattle (1968) in Form C, was locally adapted by Bose, S. and Chatterjee, A. K. (1984).
3. School Organizational Climate Description Questionnaire by Sharma (1973) was used. Its applicability in PTEIs was tested by Kolmogorov Smirnov Two Sample Test.

Analysis of Data

The obtained data were analyzed by Mean, SD, Standard Score(10Z+50), Percentage, Person's Correlation Co-efficient (r), t-test and Multiple Correlation (R) was applied.

Findings

1. Most of the Primary Teacher Educators (PTEs) was moderately satisfied in their job. Only low satisfied PTEs belonged to non-government institutions and there were no PTEs in govt. institution who was low satisfied. However, most of the satisfied PTEs belonged to the Familiar climate.

2. Significant differences were found between the job satisfaction of govt. and non-govt. PTEs. It means govt. teacher educators are more satisfied than non-govt. teacher educators.
3. There was no significant difference between the job satisfaction of male and female PTEs.
4. The Personality Profile (16 PF) study depicts that overall PTEs had extreme low score (Sten 1-3) on H (Shy); but extreme high score (Sten 8-10) on Q_2 (Self-Sufficient) and Q_3 (Controlled) factors. Only govt. PTEs had no extreme low score on 16 PF.
5. Significant differences were found between the personality of govt. and non-govt. PTEs.
6. There was no significant difference between the personality of male and female PTEs.
7. Majority of the non-govt. PTEIs and their teacher educators belonged to close climate. On the other hand, majority of the govt. PTEIs and their teacher educators belonged to open climate. Control climate and Close climate were not found in govt. PTEIs. The overall organizational climate of PTEIs was open climate. Present study found that the both Familiar climate and Controlled climate did not differ from their openness.
8. Significant relationship was found between job satisfaction and personality of PTEs.
9. Significant relationship was found between job satisfaction and organizational climate among the teacher educators who were working in PTEIs.
10. There was no significant relationship between personality of teacher educators and their organizational climate of PTEIs.
11. Open climate, Controlled climate and Paternal climate had significant inter-relationship with job satisfaction, personality of PTEs and their organizational climate. But Autonomous climate, Familiar climate and Close climate had no significant inter-relationship with job satisfaction, personality of PTEs and their organizational climate. Moreover, there was significant inter-relationship among job satisfaction, personality of teacher educators and their organizational climate of PTEIs in West Bengal.

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Research Abstracts

Specially Abled Children: Probable Risk Factors of Autism Spectrum Disorder

Title	Investigating the Probable Risk Factors of Autism Spectrum Disorder and the Barriers Faced by the Parents
Research Scholar	Bappaditya Adak
Supervisor	Santoshi Halder
Department	Education, University of Calcutta
Degree Awarded	Ph.D. 2018
Availability	Central Library, University of Calcutta and SodhGanga

The Objectives

The study focused on the following research objectives:

1. To investigate the prevalence of Autism Spectrum Disorder with respect to gender and Socio-economic status (SES).
2. To explore the probable risk factors for Autism Spectrum Disorder.
3. To explore the barrier faced by the parents (i.e. mothers) of the identified children.

The Hypotheses

There will be no significant difference in the prevalence of Autism Spectrum Disorder with respect to gender and socio-economic status (SES).

Tools

1. Tools originally used
   (a) Childhood Autism Rating Scale (CARS)
2. Tools developed by the researcher
   (a) General Information Schedule (GIS)
   (b) Risk Factors for Autism Spectrum Disorder Interview Schedule (RFASDIS)

(c) Barrier Faced by the Mother Questionnaire (BFMQ)

(d) Barrier Faced by the Mother Questionnaire (BFMQ)

Sample

School based data were collected from 13 special educational centres (SEC) from in and around Kolkata area. Also 100 children with ASD and their biological mothers and 100 typically developed child/children and their mothers were included in the study. Meanwhile

Findings

The findings indicate that gender and SES were significantly associated with ASD. According to regression analysis factors namely abusive family and work environment, diabetes, abortion, frequent indigestion, medicine for insomnia, skin infection, prolonged labour, premature birth, delayed cry, depression in family members, and emotional/behavioural disorder were found significant as risk factors of ASD. Qualitative analysis also shows that mothers experiences greater stress and challenges in the areas of medical, financial, educational, social, psychological, informational and day to day challenges.

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Volume-VIII, March 2019, Pp. 215-216

Research Abstracts

Pre-School Children: Parental Belief

Title	Parental Belief About Child Development and Early Schooling its Relationship with Early School Adaptive Behaviour
Research Scholar	Sampa Ray Bagchi
Supervisor	Debasri Banerjee
Department	Education, University of Calcutta
Degree Awarded	Ph.D. 2018
Availability of the Thesis	Central Library, Calcutta University

Objectives

To explore beliefs of young parents about their child's development and their child's early education.

To find out how far the belief of Parents is positive regarding their child's development in learning, cognition and maturation.

Sample

410 mothers and fathers of children from the nursery schools who have been admitted for the first time were taken. The sample was randomly collected from schools in the southern part of Kolkata.

Variables

Independent Variable

(A) Gender of parent.
(B) Gender of the child.
(C) Age of the child.

Dependent Variable

(A) Early School adaptive belief.
(B) Early School behaviour early.
(C) Early schooling.
(D) Early child development.

Tools of the Study

Parental belief about developmental questionnaire developed by Johnson and Martin (1986) internal consistency reliability were computed on the subscale score, the alphas on the learning, maturation and cognitive developmental subscales were will within the acceptable ranges-.81,.85,.74 respectively.

Parental belief about early schooling focusing on six parameters of education like cognition, aesthetics, physical , economy, social and independence was developed by the researcher and then standardised.

Checklist for assessing child's school adaptive behaviour was developed by the researcher following OsgoodsSemantique Differential Technique . Initially it was 69 items then on expert rating it came down to 65 items.

Interview schedule / sheet for parents regarding their child's age,gender , number of children was taken and their own gender and qualification was taken .

Data Analysis

Analysis was done in three parts:

A. Descriptive analysis

B. Inferential Statistics by ANOVA and

C. Corelational.

Findings

School adaptive belief of parents positively related to age of the child emphasizing early education. School going behaviour differs with gender of the child. It was also found that children lacks in social role playing.

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Volume-VIII, March 2019, Pp. 217-218

Research Abstracts

Special Education: School Attachment And Achievement

Title	School Attachment And Achievement: A Study On KMC Schools With Special Emphasis On Slow Learners
Research Scholar	Anupriya Basu
Supervisor	Debjani Sengupta
Joint Supervisor	Debasri Banerjee
Department	Education, University of Calcutta
Degree Awarded	Ph.D. 2018
Availability of the Thesis	Central Library, Calcutta University

The modern education system aims to make the entire teaching-learning process child centric and inclusive. In this connection school plays a pivotal role for being the first stepping stone of the formal education. But unfortunately a sort of apathy towards school is often noticed among the learners specially belonging to the under privileged section of the society and those who are academically weak.

Keeping this context in view the major objectives of the present research work were – (a) to study the relation between school attachment and achievement of the students by emphasising specially the slow learners. (b) to develop an intervention programme for the betterment of academic achievement by strengthening the school attachment (c) to study its impact on the school attachment, academic achievement of the students including slow learners and the sociometric status among classmates of the latter. Intensive study of related literature helped to know the major components of the school attachment, areas of learning difficulties of the slow learners and about innovative teaching-learning process. To meet the objectives pre-test–post-test quasi experimental design has been used followed by case study approach. Participants were 277 students of class I studying in Kolkata Municipal Corporation Schools, randomly selected from the list of Bengali Medium Kolkata Corporation Schools. Two Criterion Referenced Tests on Bengali and Mathematics were administered to the students of the said class. The students, who scored below 25 in these tests, have been

identified as slow learners. The total numbers of such students from eight sample schools were 56. The intervention programme continued for ten months. To appraise the effectiveness of the intervention programme, t- test, Wilcoxon Signed Rank Test, Pearson's Correlation method and qualitative analysis were applied and for intense study eight case studies on slow learners were conducted. The major findings of the present study are– 1. Positive correlation exists between school attachment and academic achievement. 2. Intervention programme has put significant positive changes in strengthening school attachment and accelerating academic achievement of students including slow learners.3. Sociometric status of the slow learners has been improved substantially with the effect of intervention programme.

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Volume-VIII, March 2019, Pp. 219-221

Research Abstracts

Teacher Education : Personality, Emotional Intelligence, Adversity Quotient And Achievement Motivation

Title	Personality, Emotional Intelligence, Adversity Quotient And Achievement Motivation Of Teacher Trainees In West Bengal
Research Scholar	Rakheebrita Biswas
Supervisor	Debjani Sengupta
Joint Supervisor	Debasri Banerjee
Department	Education, University of Calcutta
Degree Awarded	Ph.D. 2018
Availability of the Thesis	Central Library, Calcutta University

Introduction

Teachers are indeed the backbone of our society as they nurture and nourish the students, who are the future citizens of our nation. Thus, the personal as well as professional qualities of the teachers are being always transmitted both directly and indirectly to their students that ultimately lead to their character formation. Through review of related literature as no such work was found based on adversity quotient (AQ) of the B.Ed. teacher trainees, specifically in India and West Bengal, the study intends to explore the following problem entitled: 'Personality, Emotional Intelligence, Adversity Quotient and Achievement Motivation of Teacher Trainees in West Bengal'

Objectives

The study aimed at assessing the personality traits that prevail in the B.Ed. teacher trainees of West Bengal along with their degree or level of emotional intelligence (EI), adversity quotient (AQ) and achievement – motivation (Ach-motivation) according to their mode of training (i.e. formal and non-formal mode of B.Ed. training), gender variation (i.e. both the male and female) and type of service (i.e. in-service and pre-service).

Method

Sample comprised total 652 [out of which 326 (163 male and 163 female) were formally trained as well as 326 (163 male and 163 female) were non-formally trained B.Ed. teacher trainees of different (five) districts of West Bengal (namely Kolkata, Howrah, South 24 parganas, North 24 Parganas and Hooghly). Out of this entire sample 488 B.Ed. teacher trainees were in-service and 164 B.Ed. teacher trainees were pre-service as per the categories of B.Ed. teacher trainees according to their type of service.

Standardized Questionnaires [Dimensional Personality Inventory (DPI- BM), (1994): English Version by Dr. Mahesh Bhargava, Emotional Intelligence Inventory (2004): Constructed and standardized by Dr. S. K. Mangal, Guest Faculty, Department of Education, M. D. University, Rohtak and Mrs. SubhraMangal, Principal, C.R.S. College of Education, Noida, DEO-MOHAN Achievement Motivation (n-Ach) Scale (1985): By Dr. (Mrs.) PratibhaDeo, Professor and Head (Retd.), Department of Education, Bombay University, Bombay and Asha Mohan, Lecturer of Education, Punjab University, Chandigarh and Adversity Quotient (AQ) Scale developed by the researcher] were applied to collect the data and that was analyzed by using Mann-Whitney U Test along with other necessary analytical measures like mean (for describing the sample) as well as Pearson's Coefficient of Correlation etc. according to the need of the study. Quasi experimental research was also conducted on a small group of the same sample [sample size: 120 = 60 formally trained B.Ed. teacher trainees + 60 non-formally trained B.Ed. teacher trainees] to find out the influence/positive impact of the school internship/ practice teaching programme of our present B.Ed. curriculum to accelerate the adversity quotient (AQ) level of both the formally as well as non-formally trained B.Ed. teacher trainees with the help of related samples Wilcoxon Signed Rank Test and Mean.

Results

The study revealed that in terms of overall Emotional Intelligence, Adversity Quotient (AQ) and Achievement-Motivation the non-formally trained B.Ed. teacher trainees are many steps ahead of the formally trained B.Ed. teacher trainees. It was also found that the male B.Ed. teacher trainees are lagging behind the female B.Ed. teacher trainees regarding their overall emotional intelligence, adversity quotient (AQ) and achievement-motivation; however, from the type of service wise analysis it can be stated that the in-service B.Ed. teacher trainees are much ahead of the pre-service B.Ed. teacher trainees in relation to their overall adversity quotient (AQ) level along with achievement-motivation.

According to the presence of different personality traits it can be enumerated from the present study that the female B.Ed. teacher trainees are far more active, enthusiastic and trusting rather than the male B.Ed. teacher trainees whereas, the male B.Ed. teacher trainees are more assertive, non-depressive and emotionally stable than the female ones.

In terms of correlation it was also observed that there lies a strong as well as positive affinity amongst the variables namely Emotional Intelligence (EI), Adversity Quotient (AQ), and Achievement-Motivation of the B.Ed. teacher trainees.

From the Quasi-experimental part of the present research work, it can also be consolidated that the school internship/ practice teaching programme of the present B.Ed. course definitely plays pivotal as well as positive role to uplift the Adversity Quotient (AQ) level of all our B.Ed. teacher trainees, who receive their teacher education either through formal mode or non-formal mode that might be considered as a significant issue for evaluating the present status of the teacher education programmes in today's society and world from wider perspectives.

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Academic Excellence of General Degree Colleges in West Bengal: A Geographical Approach

Sohini Das**[*] and L. N. Satpati**[**]

Abstract

Excellence in higher education actually is the quality that reveals the efficiencies and effectiveness of the higher educational institutions. This is an essential aspect of development as well as social wellbeing of any society. Keeping it in mind, in independent India, several national policies have been implemented to promote the excellence in this very sector. Formation of UGC, a statutory regulatory body and subsequent formation of NAAC with the extended power of the former are two most momentous steps regarding this. Very recently, the union government of the country has introduced NIRF ranking method also to evaluate the yearly performance of the same. The present paper aims to study the district wise spatial variation along with the underlying causes regarding this, so that, viable ways may be find out to minimize this disparity for overall enhancement of the quality of general degree higher education in the state. For this, the outcome of the assessment and accreditation by NAAC as well NIRF has been studied from the information, available in the reports published by UGC, NAAC and Department of Higher Education, Government of West Bengal. It has been found that the districts either with proximity to Kolkata Metropolis or having larger number of institutes of missionary supervision, have performed consistently well in the present context. Exchange of ideas and augmentation of infrastructure would have to be the basic solutions to this present problem.

Key Words **:** UGC, NAAC, NIRF, AISHE, Collegiate education.

Introduction

In present days, higher education primarily refers to the education that is to obtain with the duration of minimum 3 years fulltime course completing the 12 years of schooling or equivalent education. General degree is one of its nature/ kind that are other than vocational, technical and professional ones (AISHE, 2013: p. 8).

Actually, sustained economic growth and subsequent national progress takes place in a consistent way, principally through the acquisition of requisite knowledge

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as well skill. Providing these, education plays a momentous role in the task of nation-building (Kumar, 2013: p. 44). Inevitably, the developed nations of the world are the educated ones. Therefore, this is the obvious strength of a nation with eternity (Shaguri, 2013: p. 3). Consequently, the three basic pillars of education-expansion, equity especially the excellence has a considerable function in this regards (Kumar, 2013: p. 44). Usually, excellence is defined as an outstanding, as a quality that surpasses a defined threshold in a particular field, fundamentally exhibiting the outstanding characteristics (Komureigil, 2013). Again, quality in higher education is a multidimensional, multilevel, and dynamic concept that relates to the contextual settings of an educational model, to the institutional mission and objectives, as well as specific standards within a given system, institution, programme, or discipline (Viasceanu, Grunberg and Parlea, 2004). Thus, quality effectively refers to the level of excellence in a region (Dahiya, 2012: p. 20).

Role of Colleges in Higher Education in India

According to the UGC Act, 1956, "college" means any institution, whether known as such or by any other name to provide a course of study of the specific degree programme for obtaining any qualification from a university strictly in accordance with the rules and regulations of the same, is recognized as proficient to provide such course of study and present students have to endure such course for the examination to be awarded with such qualification (UGC Act, 1956: p. 12). Therefore, these institutions have a mandatory attachment with the parent university to award degree to the students. Fundamentally, these may be of affiliated type that is to be established and admitted to the privilege of the university as by the recommendation and evaluation of them parent university award degree to the students. They can only be achieved by the autonomous status as per section 2(f) and 12 (b) of the UGC Act, 1956 on the basis of the excellence under the criteria like academic reputation and previous performance in the university examinations, academic / extension achievements of the faculty along with the motivation and involvement in promotion of innovation reforms, financial management and quality of governing body, adequacy of infrastructure etc. These later type of college can confer degree under their title with the seal of the university after completion of 3 years of terms (AISHE, 2013: p. 10). Those colleges may also have off-campus centre and/ or PG centre even outside the state as constituent units with proper facilities, academic as well administrative staffs. These ones are usually a centre of university outside the main campus of the colleges established by the prior approval of the concerned university. Besides, regional centers can exist also to provide both regular and distance mode maintained as study centre recognized by

the concerned university. Evening sessions are also present in some colleges, if necessary, to impart higher education with similar infrastructure of other sessions but with completely different entity (AISHE, 2013: p. 11).

Academic Quality of Higher Education at College Level

The Indian Education Commission (1882-83) was precluded from reporting on university education noticing a considerable collapse of University administration (Purkait, 1992: p.83). As per the recommendation of the respective commission, in favour of gradual decrease of the control of the government on this field, Indian private entrepreneurs got their entry in this field. Subsequently, private colleges became empowered to determine the college fees (Purkait, 1992: p. 64 and p. 65). On 27th of January, 1902 Curzon appointed the University Education Commission, to find out the exact scenario as well as the prospects of the Universities in the country. Colleges with individual governing bodies each would have sufficient number of academic staff - strongly favoured in the recommendations of the said commission (Purkait, 1992: p. 84). Colleges would have to be coordinated in a coherent manner and would offer the undergraduate studies only (Govt of West Bengal, 2000: p. 32). Indian University Act, 1904 was formulated with the foundation of the report, documented by the Indian University Commission (Govt of West Bengal, 2000: p. 32). The 27th Article of this act, formulated the necessary rules and regulations to establish and specify the pattern of interrelation and interaction between the universities and their affiliated colleges (Agarwal, 2004: p. 240). Thus, affiliation and disaffiliation of the colleges would be subjected to be approved ultimately by the respective Governments (Banerjee, 2004-2005: p. 141).

After independence, Government of India set up a University Education Commission (1948-1949) under the chairmanship of Dr. S. Radhakrishnan, appointing a number of eminent academicians from different parts of the country as well abroad as its members (Purkait, 1992: p. 150). This commission emphasized on the introduction of general education in colleges and universities and recommended to include the university education in the concurrent list (Purkait, 1992: p. 157). Thus, the Central Government became responsible for all kind of financial provisions, co-ordination of facilities, and determination of standard and adoption of national policies concerning the higher education (Purkait, 1992: p. 157 and Banerjee, 2004-2005: p. 49). Govermnent colleges would be transformed to constituent colleges of university. The affiliated colleges to universities should be so organized as to develop themselves into the form of a Federal Universities (Agarwal, 2004: p. 248). To implement the National Educational policies as well as to distribute the Government grants, UGC was set up very quickly. For the up

gradation of higher education, the universities would receive grants from both of the central and state governments. One third of the salaries of the teachers should be shouldered by the government, and additional one hundred million rupees should have to spend on the same purpose for the colleges. Otherwise there would be no financial supports for the colleges at all (Purkait, 1992: p. 157). The private colleges may receive grants only for the construction of the buildings, purchase of the required materials to meet the recurring expenditure of the institutes (Govt. of West Bengal, 2000: p. 35). Afterwards, UGC was severally reformed with extended power by different acts in 1953, 1955, 1956 and so on (Banerjee, 2004-2005: p. 48 and p. 49). In 1955, Central grants for university education turn into its disposal. The commission disburses the amount according to its own plans (Banerjee, 2004-2005: p. 145). In 1956, under the UGC act, 1956, the commission achieved the statutory status of it. It started to perform a number of other functions of higher education, being a paying, allocating as well as dispensing organization. Introduction of the three year degree course at under graduate level along with the revision of pay scales, improvement of libraries and laboratories, promotion of research works were the remarkable activities of the commission as measures of the promotion of the standard of higher education of the country (Agarwal, 2004: p. 244). On 12th July, 1974, Recognition of college in terms of Regulations, 1974 as sub part of UGC act, 1956, was framed by UGC exclusively for the colleges. The commission stated that the colleges would be recognized under clause 2(f) only alter the consultation with the concerned authority of the respective affiliating university. The colleges can provide instructions up to a Bachelor's degree or up to post graduate degree or only for the later one following the university status as well as the UGC regulation entirely. They can also offer the diploma courses of the duration of minimum one academic year, to which the eligibility of admission would be as same as the undergraduate courses (UGC, 2002: p. 26, p. 37, p. 39, p. 40 and p. 41). Additional facilities were provided to avail for the weaker sections of the society and in the backward areas. For this, evening colleges were established. Correspondence courses, private studies were encouraged and initiated (Purkait, 1992: p. 433 and p. 434).

But unfortunately, the policies, that offer the economic concessions to the students, do not have focus on intelligence plus effort is equal to merit, instead of mediocrity and money equating merit (Dahiya, 2012: p. 19 and p. 20).

After independence, the government of West Bengal had an attempt to ensure positive changes in terms of both quantity and quality with some limited resources. The major financing agency is the state government while the union governments

disburse and allocate grants through UGC. Besides, the local bodies' private individuals also provide financial supports and assistances for educational developments of this state (Govt. of West Bengal, 2000: p. 104). In 1979, the state government introduced a remarkable change for the undergraduate colleges. The academic as well as the administrative staff of the government aided or sponsored colleges were brought within the fold of the pay packet schemes (Purkait, 1992: p. 468). The most glaring instance of such anomaly is that while sponsored colleges are allowed retaining in full their income from fees, non governments have to surrender 50% of their income to state government (Purkait, 1992: p. 468).

On 15th of July, 1981, the state government appointed the commission under the chairmanship of Dr. Bhabotosh Dutta to exclusively review the conditions of higher education as well to recommend the solutions as per contemporary UGC regulations. The committee submitted their report on 4th of April, 1984 containing 226 recommendations (Govt. of West Bengal, 2006: p. 172). They observed that there was a rapid growth in terms of the number of colleges since independence. But most of those had no infrastructural facilities along with the hostel, canteen, playground etc. Even some of the colleges became compelled to introduce the additional shifts to meet the demand of the admission of the eligible students (Govt. of West Bengal, 2000: p. 36). All of the colleges must have flexible under graduate courses to increase the assistance to the students (Govt of West Bengal, 2000: p. 37). But it was quite impossible to coordinate to teach the honours courses for the colleges within the same neighborhood due to dissimilarity in terms of the offered honors courses, strength and accommodation capacity of the respective departments along with the availability of the infrastructures, quality of the students etc (Govt of West Bengal, 2006: p. 172). Establishment of more colleges in North Bengal, Bankura, Puruliya, Midnapore and Puruliya was also recommended in the report (Govt of West Bengal, 2006: p. 172). At the end of the report, establishment of state commission for higher education and increase of budgetary allocation from the state government were supported strongly (Govt of West Bengal, 2006: p. 173). The commission stated that the recruitment of the teachers of government and government-aided colleges would be governed by the Public Service Commission and College Service Commission respectively (Banerjee, 2004-2005: p. 474). In 1990s, the Government of West Bengal introduced pension scheme for both of the academic and administrative staff of government aided colleges also (Govt of West Bengal, 2000: p. 94).

Imposition of educational cess and enhancement of the tuition fees and hostel charges were advised in the report of Mitra Commission (1991) in West Bengal

under the chairmanship of Dr. Ashok Mitra (Govt. of West Bengal, 2006: p. 173 and p. 174). They were in support of receiving financial assistance from the banks, chambers of commerce, to ensure supply of the funds (Govt. of West Bengal, 2000: p. 39). At the fag end of the 20th century (1998-2000), UGC decided unexpectedly on contrary to meet the demand of higher education (Govt. of West Bengal, 2000: p. 44). Another important one was to link the funding with the mandatory assessment and accreditation of the institutes by National Assessment and Accreditation Council (NAAC). All the universities and colleges themselves must have to be accredited by 31st December, 2003 (Govt. of West Bengal, 2000: p. 45).

In 2017, by The West Bengal Universities and Colleges (Administration and Regulations) Act, 2017, chapter I 2 (ii) state government stated that the act shall apply to all colleges not excluding the minorities or missionaries ones provisions of the constitutions of India and which are receiving financial assistance on a regular basis from the state government through the Pay Packet Scheme (Govt of West Bengal, 2017: p. 2). According to the 3(ii), the colleges would realize and / or earn the tuition fees, fines and other charges from the students that would be considerd as the "Actual Income" or the fund of those institutes (Govt of West Bengal, 2017: p. 2).

The National Assessment and Accreditation Council (NAAC), the organization, that assesses and accredits the higher educational institutes in India, was established in 1994 in response to recommendations of National Policy in Education (1986). This autonomous body came into action, headquartered at Bangalore, of which parent agency is UGC and parent department is Ministry of Human Resource Development, Government of India (Prasad, 2004: pp. 9). Actually, since 1980s, UGC was empowered with planning, reform in academic standards and examination systems, research, and other matter of importance (Purkait, 1992: p. 160).

The union government of India introduced National Institutional Ranking Framework (NIRF), to rank the higher educational institutes throughout the country in each and every year, first approving the method on 29th of September, 2015 by MHRD. The alike ministry set up a committee, who detected the parameters to priorities and pay attention teaching and learning resources, research and professional practices, graduation outcome, number of faculty with the qualifications and eligibility as per UGC recommendation, perception etc. Since 2017, the parameters remained unchanged, but the category included discipline specific rank along with the common overall rank of 2016 (NIRF, 2019).

An Overview of the Study Area

Recently, the state of West Bengal has a total of 21 districts with a total population of about 91,276,115 within the total area of 88,752sq km (Census of India, 2011). In West Bengal, the higher educational institutes are distributed unevenly across the state, in spite of very recent growth of the number (NUEPA, 2013-2014). The table about the regional disparity of University Grants Commission (UGC) shows that in terms of access parameter (formal system) in higher education, this state is within the range from 3 to 5.69%, which is lower than that of national average of 5.75% (Dahiya, 2012: p. 20). The number of degree awarding institutions (university/ university level institutes) is lower here-26 only (rank-9th in India), in relation to the other states like Tamilnadu (59), Uttar Pradesh (58), Andhra Pradesh (46), Rajasthan (48), Maharashtra (44) etc. (Shaguri, 2013: p. 6). Almost similar scenario is revealed in terms of college density (number of colleges/ lakh population of age 18-23 years: 8 only) also (MHRD, 2013). Consequently, the Gross Enrollment Ratio (GER) count (7.8% at present) is unsatisfactory in relation to national average (16%) as well as global average (26%) in this state (Dahiya, 2012). More specifically, the young population (18-23 years) counts 10971915 (general), 2684937 (SC), 663237 (ST) (Census of India, 2011), while the category wise GER count is low- 12.8%, 8.6% and 5.9% respectively in the state (MHRD, 2013). Number of institutes of national importance is again unsatisfactory here-4 only, in relation to the other state in India (MHRD, 2013).

Aims and objectives

Being motivated by the above considerations, the present study has the following primary objectives. Elementarily it is to reveal the scenario of the level of excellence of general degree colleges in the districts of the state. Afterwards, the study has to focus on the district wise spatial distinction in this context with a precise review of the geographical factors especially the physical and demographical ones responsible for it. Finally, the viable ways are to be determined in this perspective to pick up the overall status of this particular sector in a well defined approach.

Methodology and Database

The indicators of NAAC accreditation and assessment are very much practical, quantifiable, self assessed in nature; method of accreditation is quite acceptable, transparent as well as justifiable, and the grading system is not complex. So, the outcome of the accreditation and assessment of NAAC is one of the most significant bases to analyze the scenario of quality of the higher educational institutes especially, offering general degree courses in India. The total number of accredited institutes,

grade -wise number of colleges in each district have been considered and analyzed for the accurate perceptive. In addition to this, NIRF is one of the ways to rank the Indian higher educational institutes introduced by the Ministry of Human Resource Development of the union government at very recent past. This is done in each and every year; completely on the basis of the most fundamental requirements for the quality enhancement of this sector. All of these aforesaid necessary information have been collected from the websites of UGC, NAAC, MHRD and Department of Higher Education of Government of West Bengal and on the websites of the individual institutes (IQAC-SSR reports for the period: 2014- 2019 mainly). To make the demographical analysis website of Census of India also was consulted. The available information is analyzed with the help of some viable simple quantitative techniques to represent the scenario more vividly. For the mapping purpose ARC GIS software has been used as mapping tools.

Scenario of Excellence of the Colleges in West Bengal

Status of Assessment and Accreditation by NAAC

The first phase was from 1994-1997. No institutes from West Bengal participated in this event at that phase; as the change in conventional practice was difficult to accept both for the teaching faculty and administrators (Prasad, 2004: p. 56).

The second phase was from 1998 to 2001, when the assessment process was implemented and the field experience strengthened the NAAC's efforts. Principally some of the missionary colleges from Kolkata and Hugli participated for the accreditation. Since, 15th March, 2002, introduced the nine point scale with a combination of letter grades and plusses, which was implemented for the next cycle of assessment of all the institutes replacing the previous star marking (Prasad, 2004: p. 61).

The third phase was initiated since the year of 2002 (Prasad, 2004: p. 66). A large number of colleges attended their first cycle of accreditation in this phase. So, more than 60% of the colleges are at their second cycle of accreditation at present (as on July, 2017) in the state with the five year validity of the accreditation.

There are a large number (more than 50%) of colleges in the state without NAAC accreditation till now. The number of colleges (only 5; Kolkata: 3, West Medinipur: 1, North 24 Parganas: 1) is also very low at their third cycle of accreditation presently. Only 70.20% and 27.75% colleges are at their 2nd and 1st cycle of accreditation respectively as a whole in the state. So, it is clear that the maximum colleges are at the second cycle of their accreditation at present.

Table 1: Consistency of Quality Assessment of the Colleges

SL no.	Districts	% of colleges in different cycles		
		1st cycle	2nd cycle	3rd cycle
1.	Darjeeling		100	
2.	Jalpaiguri	66.67	33.33	
3.	Kochbihar	33.33		66.67
4.	N. Dinajpur	66.67		33.33
5.	S. Dinajpur		100	
6.	Maldah	40	60	
7.	Murshidabad	22.22	77.78	
8.	Nadia	10	90	
9.	Birbhum	50	50	
10.	Bankura	45.45	54.55	
11.	Barddhaman	44.44	55.56	
12.	Puruliya	50	50	
13.	Haora	28.57	71.43	
14.	Hugli	10.53	89.47	
15.	N 24 pgs	31.58	63.16	5.26
16.	S 24 pgs	25	75	
17.	W. Medinipur	46.15	46.15	7.6
18.	E. Medinipur	26.67	73.33	
19.	Kolkata	12.50	82.81	4.69

Source: www.naac.gov.in, (July, 2017) retrieved in April, 2018

The above table reveals the number of colleges in different cycles of accreditation with respect to the total accredited colleges in respective district. Except the three districts (North 24 parganas, Kolkata and West Medinipur) none have colleges that have reached the 3rd cycle of accreditation of their own. Actually, initiation of the accreditation process from the sides of the colleges is also very low in most of the districts. So, number of colleges in the 3rd cycle is amazingly lower in comparison to that in the 2nd cycle. Again, the number of colleges in the 1st cycle is also surprisingly lower in relation to that in the 2nd cycle. Therefore, it would not be unsound to state that continuity has not been maintained properly in almost all of the districts in the present context. Inevitably, it would lead to the unwanted fluctuation in enrichment and consequent deterioration of the quality of the general degree colleges in this state.

In terms of total accredited colleges in the state very few are with A++ (0.41%), A+ (0.41%) grade, some are with A (15.92%), B++ (11.84%), and B+ (20%) grade, considerably large ones are with B grade (47.35%) and only 4.08% are with C grade. That refers that B grade colleges are found to be the maximum and A++, A+ grade colleges are the minimum in the state.

Table 2: Outcome of the Quality of the Colleges in West Bengal

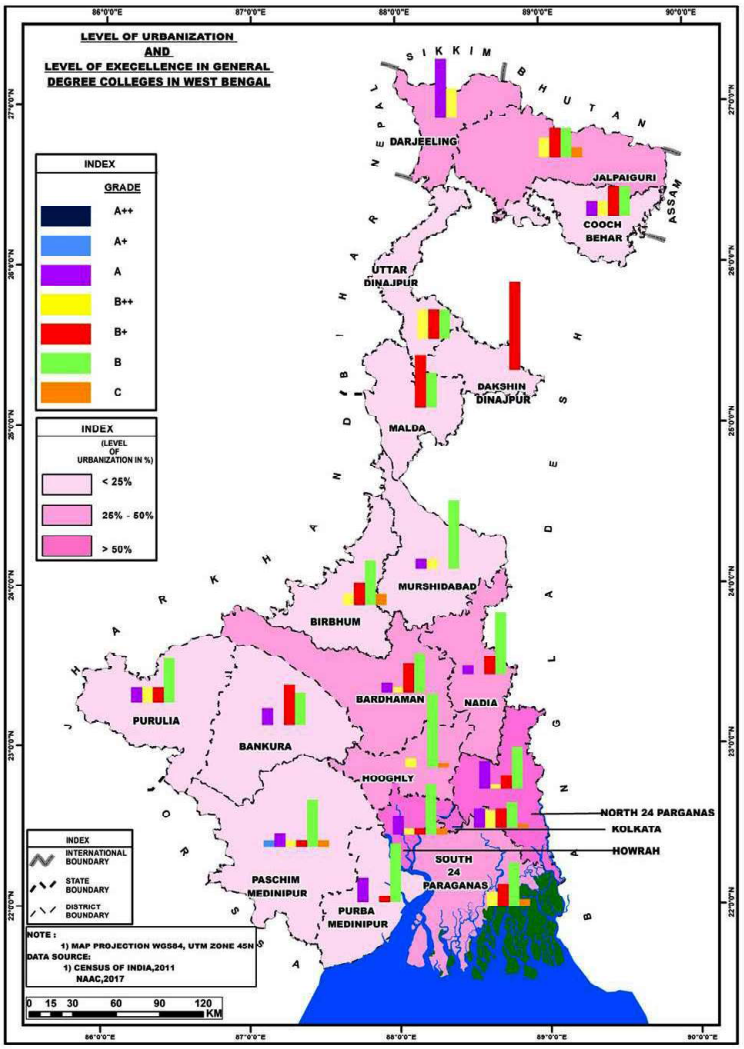
SL no.	Districts	Total Colleges (%)	Concentration of NAAC accredited colleges (L.Q values)	Grade-wise % in the districts with respect to state						
				A++	A+	A	B++	B+	B	C
1.	Darjeeling	5.43	0.22	-	-	5.13	3.45	-	-	-
2.	Jalpaiguri	4.13	0.88	-	-		6.90	2.59	2.59	10
3.	Kochbihar	3.48	0.70	-	-	2.56	3.45	4.08	1.72	-
4.	N. Dinajpur	1.30	0.94	-	-		3.45	2.04	0.09	-
5.	S. Dinajpur	1.30	0.31	-	-			2.04	-	-
6.	Maldah	2.39	0.85	-	-			6.12	1.72	
7.	Murshidabad	5.65	0.65	-	-	2.56	3.45		6.03	
8.	Nadia	5.22	0.78	-	-	2.56		4.08	6.03	
9.	Birbhum	4.57	0.72	-	-		3.45	4.08	3.45	10
10.	Bankura	5.87	0.76	-	-	5.13	10.20	3.45		
11.	Barddhaman	6.09	1.21	-	-	5.13	3.45	12.24	6.90	10
12.	Puruliya	4.78	0.51	-	-	2.56	3.45	2.04	2.59	
13.	Haora	3.70	1.55	-	-	7.69	3.45	2.04	6.09	10
14.	Hugli	5.65	1.37	-	-		6.90		13.79	10
15.	N 24 pgs	8.26	0.94	-	-	15.38	3.45	6.12	7.76	
16.	S 24 pgs	4.13	1.19	-	-		6.90	6.12	5.17	10
17.	W.Medinipur	7.83	0.68	-	100	5.13	3.45	2.04	6.03	10
18.	E.Medinipur	4.57	1.34	-	-	10.26		2.04	8.62	
19.	Kolkata	15.65	1.67	100	-	35.9	44.83	28.57	16.38	30

Source: www.naac.gov.in, (July, 2017) retrieved in April, 2018

www.wbhed.ac.in, (2017) retrieved in December, 2018

Concentration of NAAC accredited colleges with respect to the state is higher in the districts of Kolkata (highest concentration), East Medinipur, Haora, Hugli, South 24 parganas and Barddhaman. All of the other districts that indicate 68.42% of the total districts in the state are with the lower concentration of the NAAC accredited colleges in the state level.

In the concerned state, A++ graded and A+ graded-college are found to be located only in the districts of Kolkata and West Medinipur respectively. The A graded colleges are also very low in number except in the district of Kolkata, North 24 parganas, and East Medinipur. Unfortunately, till date a large number of districts are also there in the state having either very low percent or no A grade and/or B++ grade colleges in terms of state total under the concerned high grades.



The above map is to present the level of urbanization and number of colleges with different grades with respect to the total of the accredited colleges in the respective districts. The districts with greater level of urbanization usually have either greater number of colleges with higher grades (A++, A+, A, B++) or balanced number of colleges with all the grades.

Status of the NIRF Rankings

In the year of 2015, the Ministry of Human Resource Development of the union government approved this method of ranking of the higher educational institutes. This method was first implemented in the next year of 2016.

The scenario is too much disappointing here in this state in the context of this recently introduced ranking method. A very few number of colleges have participated in this method from only Kolkata and/ or Haora district. Most of the participant colleges are administrated by the missionaries. So, in terms of performance, they stand outstanding securing the noticeably high ranks.

Discussion on Findings

In terms of concentration of accredited colleges, number of colleges with higher grades both at state level and respective district level and consistency of quality maintenance southern part always performs better then that of the northern part of the state. This zone wise differentiation is mainly due to the geographical factors like dominance of plains, prevalence of comparatively favourable climatic conditions, fairly lower occurrence of hazards like landslide and /or earthquake, flood etc, relatively favourable circumstances to upgrade the transport especially railways, ferry services as well communication network along with electrification, in the southern part of the state. That denotes the greater availability of the amenities and infrastructural facilities in the most of the districts in the southern part of the state. Consequently, this part of the state experiences greater level of urbanization in the most of the districts. Therefore, secondary and tertiary sectors of economy are found to be dominant here in this part of the state. On the other hand, urbanization promotes higher level of HDI (Human Development Index) with 75.70% positive correlation with it (Anisujjaman, 2015: p. 8). Inescapably, the socio-cultural and economic status along with the level of literacy, level of aspiration as well awareness- all are higher in the most of the districts of this part of the state.

In the northern part of the state, Darjeeling is the one and only districts where colleges with A and B++ grade are found to be located. This remarkable high level is mainly due to the higher literacy level of the district (79.56%), comparatively

higher level of urbanization (38.99%) and higher HDI (0.65; ranks 4th in state) as the obvious consequences of the up gradation of tourism industry and tea industry and above all presence of older, affiliating university since 1960-70 within the territorial boundary of the district.

The other districts in this part of the state have considerably lower level of literacy (ranging from 59% to 74%), lower level of urbanization (ranging from 10% to 20%) as well lower HDI (ranging from 0.49 to 0.53) even at the present days. So, level of excellence in the college level is also very low in those districts.

The district of Kolkata maintains its apex position in the state till now as the colleges from this district are consistently performing well securing high scores and maintain and/ or upgrade their considerably high position in both of the assessment process at national level. Actually, this district has always achieved a great preference and precedence of the authorities and good quality of students and staffs from the very beginning. It was the national capital of the British period, and has maintained its position as the primate city of the concerned state for a long. The level of urbanization (100%), the HDI (0.78) both are highest here within the state. Therefore, most of the amenities along with the infrastructural facilities are readily available here in the city within more or less physical arrangements.

Haora and Hugli being the inseparable parts of the Kolkata Metropolitan Area are familiar with the maintenance of the considerably high level of higher education in spite of having no university within their own territorial boundary for a long time since independence. Both of the literacy level (Haora 83.31% and Hugli 81.80%) and level of urbanization (Haora 63.60%, Hugli 38.62%) are very high in those districts. Consequently, the HDI (Haora 0.68 and Hugli 0.63; ranks 2nd and 6th respectively) values are inevitably high there. So, it can be expected, that in near future, these two districts would definitely occupy distinctive positions in the circumstances of higher education in general degree colleges.

Although the district of North 24 parganas has higher level of urbanization (57.59%), higher level of literacy (84.06%) and higher HDI (0.66; ranks 3rd); presence of the higher grade colleges is very low here both in terms of state total and individual district total mainly due to non existence of affiliating university for a long period of time since independence and remote location of some of the colleges near international border with tainted communication network.

Similarly, South 24 parganas has lower number of higher grade (no college with A++, A+, A grade and very low % of B++ grade) colleges in spite of higher literacy rate (77.51%) principally due to the lower level of urbanization (25.61%),

comparatively lower level of HDI (0.60; ranks 8th) and existence of islands of Sundarban with very high possibility to be affected by devastating climatic hazards and subsequent floods covering a large part of the district. Both of the Medinipur have nearly similar scenario with quite similar reasons. But presence of older, affiliating university since 1980-90 with proficient infrastructure, governance and system to administrate and manage the academic activities of a large number of departments of their own as well the colleges affiliated to them makes the scenario quite better in terms of level of excellence of the general degree colleges (presence of A, B++ grade colleges with greater % than that of S 24 parganas) in the districts.

Barddhaman has the maximum colleges with B grade. But, A grade and B++ grade colleges are also found here in the district. Actually, the level of urbanization (39.87%) and literacy rate (76.21%) both are not too high here. The location of this district is not included within the zone of KMA till now. So, existence of high grade college is reasonably lower here. But, presence of affiliating university since 1950-60 and higher HDI (0.64; ranks 5th) make the existence of colleges with higher grade increasingly possible.

Bankura and Purulia are covered by the part of peninsular plateau with ruggedness of topography and thicker vegetation cover. The HDI (Bankura 0.52, Puruliya 0.45) is remarkably low in both of the districts. But, higher literacy level around 70% and presence of missionary colleges pick up the scenario slightly better with a few number of A and B++ at least B+ grade colleges.

The missionary colleges and government colleges are unique in terms of their administration, governance as well as required financial supports. So, irrespective of the location, they perform well consistently. Consequently, the districts like Kolkata, Hugli, Haora, Barddhaman, West Medinipur and Darjeeling have suffered least concerning this having comparatively large number of government and missionary colleges of high (A++, A+, A) grade.

Conclusion

It may be concluded from the above discussion, that greater the level of urbanization greater is the level of excellence of the institutions of general higher education in the state. Actually, the urban campuses have good accessibility and almost all kind of academic and other facilities in comparison to the rural ones. Period of the sustenance of the universities also have a positive correlation with the quality of the same. Availability of NAAC accredited degree awarding institutes within a particular district boundary also leads to the relatively better performance and excellence of the affiliated colleges. In addition to these, the northern part of the state constantly vestiges in a backward position in contrast to that of the Southern

part regarding this. Actually, preference is always in favour of plains with suitable climatic conditions in comparison to that of the proper Himalayas.

So, to improve the performance of colleges, the foremost step would be the greater accessibility of government-aid for the sound restoration and awakening of the infrastructural facilities without increasing the course fees of the institutions. For this, a customary arrangement for the recruitment of both of the academic as well administrative staffs chiefly in the colleges of the state is necessary scrupulously following the regulations and guidelines framed by UGC to make the higher educational services and the teaching-learning processes more regularized and competent. Moreover, affiliating institutes would have to be optimistic to organize a regular assessment of their affiliated colleges on the basis of the criteria determined by the NAAC. If the NIRF raking can be interlinked with financial provisions, it would probably depict a better scenario in this regards. The backward and new ones would have to be encouraged to confer with the parent university or older and mentor colleges for their immediate up gradation to cope up with the contemporary curriculum. These ones which are at the greater distance from the nerve centre of the state would have to be facilitated with good transport and communication network mainly via railways and internet services from the sides of the government. Hence, the private entrepreneurs with an unfortunate approach to commercialize this sector instead of promoting quality would be encouraged no longer to be established to offer the general degree higher education. Rather, the missionaries would have to be salutation to take the new initiatives concerning this. Thus, the meritorious students with low affordability would find it quiet easy to continue their higher education in any district of the state. Simultaneously, the students would have to be encouraged to emphasize on their own choice, preference and skill, while selecting the course of their higher studies. Pass fail system and study of language English should have to be reintroduced at the school level. Thus, it would be relatively easy to ascertain the symmetry between expansion and excellence of this concerned sector at the districts of the state.

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Assessment of Quality of Self-Financed Secondary Teacher Education Colleges

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Abstract **:**

This research paper aims to evaluate of quality of Self-Financed Secondary Teacher Education Colleges in West Bengal. Two types of scales were administered on 90 teacher- educators and 900 student- teachers. The results of the student-teachers in university final examination were collected from the respective universities. Information schedule was used to collect information from the colleges. The data were analysed using descriptive statistics. The findings of the study show that the colleges have good basic infrastructural facilities. Academic performance of the student- teachers of the colleges are good. Most of the teacher- educators are not getting job satisfaction. The student-teachers are satisfied in studying in their respective colleges.

Key words: Evaluation, quality, self-financed college, secondary teacher education, teacher-educator, student- teacher.

Introduction:

In any modern society, education is considered as a very important sector. The development of a nation largely depends on the development of human capital and its effective use in developmental activities. Education plays an important role in transforming a human being to human capital. The elementary and secondary level of education prepares the children of the country for receiving higher education. The success of a system of education is intimately connected with the teaching aptitude of the teacher as well as on the teachers' attitude towards teaching. Teaching efficiency of a teacher is enhanced by proper teacher education and orientation. The quality of an educational system depends largely on securing a fair number of well educated, well equipped and contended teachers.

After independence education has become the responsibility of the state. In later years of independence greater attention was paid to education and teacher education.

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The first step in this direction was setting up of the University Education Commission (1948-49), which made valuable suggestions regarding pre-service and in-service education of teachers. The specific suggestions about the preparation of teachers made by the Secondary Education Commission (1952-53) were accepted and implemented. The necessity of professional preparation of teachers for qualitative improvement of education was emphasized by the Indian Education Commission (1964-66). Various recommendations of the Indian Education Commission were implemented by the State Governments and resulted in considerable improvement in the professional education of teachers. The National Policy on Education (NPE-1986) has suggested establishing District Institutes of Education and Training (DIET), College of Teacher Education (CTE), Institute of Advanced Study in Education (IASE) and Regional Institute of Education(RIE). The statutory National Council for Teacher Education (NCTE) established by an Act of Parliament in 1993 further came out with a Curriculum Frame Work (1998) to provide guidelines in respect of the content and methodology of teacher education.

With the adoption of new economic policies, since the early 1990s, the development approach has taken an about turn with the enhanced role of the private sector and diminishing role of the state. The education sector was not an exception. The mismatch between the expected number of students opting entry into the area of university education and the capability of the government to provide the said educational opportunities to them in the face of financial crisis has resulted in permitting the functioning of "Self-financed" institutions in different streams.

The emergence of private institutions in higher education is a need of the time and cannot simply be wiped away. In the context of limited capacity of the public institutions and the existence of differentiated demand the co-existence of these two types of institutions is to be assured. By this time, it is a well established fact that in different states of India there has been remarkable private initiative in engineering, management, medical, law and teacher education programmes. In West Bengal many secondary teacher education colleges are being established by private initiative and the number of self-financed teacher education colleges has out-numbered the government and government aided colleges and the numbers of self-financed teacher education colleges are increasing.

Need of the Study:

Private initiative in teacher education is an emerging arena in the history of organized teacher education of India. India is moving towards universalization of primary and secondary education. So the expansion of teacher education is imperative.

In the post-globalization period and the period of associated financial crisis the way of expanding teacher education institutions is inviting private initiative in a massive way to meet the continuously growing demand of teachers. The complementary role played by the self-financed teacher education colleges is of immense importance and deserves careful attention. It is expected that policy frame work of universalization of primary and secondary education get strengthened by the supportive role played by these institutions. The policy pursued by both central and state government since the mid 1990's to promote school education at the cost of higher education has almost put brakes on the expansion of public institutions. The private institutions of Secondary Teacher Education Colleges are increasing the access of teacher education. In this perspective the authors like to undertake a research study to find out how effectively Self-Financed Secondary Teacher Education Colleges in West Bengal are functioning. A study has been, therefore, conducted on 'An Evaluation of Quality of Self-Financed Secondary Teacher Education Colleges in West Bengal'.

Operational Definition of Terms:

- ***Self-Financed Colleges*** *– Colleges owned by private individual management or organization and do not receive any financial assistance from the government.*
- ***Secondary Teacher Education*** *– Education imparted to individuals who are teachers and would be teachers of secondary and higher secondary schools and who opt to become teachers.*
- ***Quality*** *– Performance of the colleges in terms of curricular and co-curricular activities and available physical facilities and human resources.*
- ***Academic Performance*** *– Result of University final Bachelor of Education Examination.*

Objectives of the Study :

1. To study the academic performance of the student-teachers of self-financed secondary teacher-education colleges.
2. To study the status of infrastructural facilities of self-financed secondary teacher education colleges.

3. To study the perception of teacher-educators towards quality of self-financed secondary teacher education colleges.
4. To study the perception of student-teachers towards quality of self- financed secondary teacher education colleges.

***Review of Related Literature*:**

The studies made by the scholars in evaluating the impact of teacher education programme on teaching efficiency (Srivastava, 1989, Kahlon and Saini 1989), reveals that teacher education programme had positive impact on teaching efficiency. Akhilesh (2013) has conducted a comparative study on institutional climate of government - aided and self-financed teacher- education institutions and found that teacher educators of government - aided and self-financed institutions do not differ on any one of the dimensions of the institutional climate except on the dimension, satisfaction with the institution. The study also reveals that the. Institutional climate is better in govt. - aided institutions than self-financed teacher education institutions. Anees (2013) has studied the job satisfaction of teacher educators working in private and public funded institutions in relation to their work motivation and occupational aspirations and reported that the teacher educators working in public funded institutions are found highly satisfied in comparison to teacher educators working in private institutions. Anya (2012) has investigated the professional commitment in relation to institutional climate among teacher educators and found that there is no significant difference in professional commitment of teacher educators of government aided and self financed institutions and there is no significant difference in the institutional climate of govt.-aided and self-financed institutions. Kumar (2006) has studied the influence of institutional climate perception on teachers' morale of teacher educators and found that significant difference exists between teacher morale among the teacher educators working in different types of B.Ed. colleges.

Mukhopadhyay and Bhusan (2004) have shown that there has been significant private initiative in higher education in several states in teacher education programmes. They have talked about gross commercialization of education by many of these institutions, providing low quality education at a much higher cost. Gupta (2005) discusses about the role of self-financed colleges in relieving some of the burden on central and state governments and help the economy by providing professionally trained personnel. Tilak (2006) has stated that the large growth of private institutions represent commercialization of Higher Education. Prakesh (2007) highlights that in India there is an increasing trend both in the number of

private higher education institutions and enrolment in recent years. Panigrahi (2010) has found that majority of self-financing teacher training institutes have good basic infrastructural facility, have good status of both out-door and indoor environmental facilities, arrangement of classes are good but have very low academic achievement of B. Ed. Students. Most of the institutes have well qualified teachers according to NCTE norm majority of teacher educators are not well experienced, these institutes are purely concerned about profit making, well qualified teachers are not interested to join self-financing institutions. The perception of pupil-teachers is that maximum institutes do not have good infrastructural facilities. Teacher educators do not care about the students' attendance in the college and these institutions are inclined towards the financial benefits. Priyadarshni and Rout (2010-11) have highlighted some practical problems related to infrastructure, library facility, staff recruitment, syllabus, attendance etc. and opines that number of self financing colleges should be delimited. Pandya (2010 – 2011) is of the opinion that to meet growing demands of students opting for teacher education and to fulfil the growing need of teachers for secondary education the only feasible way is privatization of teacher education. Sridevi (2011) has found that teacher educators of unaided colleges have lower job satisfaction.

The research studies conducted to study the impact of secondary teacher education programme on professional development of teacher trainees arrive at the conclusion that training has positive influence on teaching aptitude. It is revealed from the studies that in different states, there has been significant private initiative in teacher education programme. It has also been said that to meet up the growing demand of students who are opting for teacher education, the only feasible way is to privatize teacher education.

It is a well established fact that in India, the Central Government has permitted self-financing courses to operate and thus introduced a dual system of education in India. In West Bengal, many self-financed secondary teacher education colleges are functioning to meet the growing needs of the students who are opting for this education. The establishment of these institutions of teacher education is of recent origin. There remains the scope to carry out a comparative study on the efficacy of self-financed and government-aided secondary teacher education colleges in West Bengal which is the per view of the present study.

***Research methodology*:**

The descriptive survey method was used for the study.

***Population of the study**:*

All Self-Financed Secondary Teacher Education Colleges of West Bengal recognized by National Council for Teacher Education (N.C.T.E.).

Sample:

Amongst the Self-Financed Secondary Teacher Education Colleges, which are recognized by N.C.T.E. 18 Colleges from 3 universities were taken up for the present study. The colleges of the selected 3 Universities, namely Calcutta University (C. U.), West Bengal State University (W.B.S.U.) and Vidyasagar University (V.U.) were randomly selected. From each of the universities 6 self-financed colleges were selected. The total number of teacher-educators selected for the study was 90, total number of student-teachers selected was 900 and they were selected randomly.

***Research Tools* :**

Results of the student-teachers of the colleges in University Final Bachelor of Education Examination were collected from the respective universities to which the colleges are affiliated to study the academic performance of the student-teachers. An Information Schedule on Infrastructural Facilities is prepared by the researcher for collecting data from the colleges. Two separate scales viz, (1) 'Perception of Teacher-Educators towards Quality of Teacher Education Colleges.' and (2)'Perception of Student-Teachers towards Quality of Teacher Education Colleges.' were prepared by the researchers taking into account the Quality Indicators for Teacher Education published by National Assessment and Accreditation Council (NAAC) in collaboration with Commonwealth of Learning (COL) 2006, in modified form. The Likert-type perception scale of teacher-educators consisted of 30 items (in form of statements) and comprised of 6 key areas and 16 quality aspects. Likert-type perception scale of student-teachers consisted of 30 items (in form of statements) and comprised of 6 key areas and 14 quality aspects. The researchers developed the Likert type 3- point scale ranging from "Disagree" to "Agree" (Disagree='1', Undecided='2', Agree='3'). The reliability of the perception scale of teacher-educators was determined by Cronbach's Alpha which is 0.841. The reliability of the perception scale of student-teachers was determined by Cronbach's Alpha which is 0.770. Face and Content validity of both the scales were ascertained by expert opinion.

***Data Collection* :**

Results of the student-teachers of the colleges in University final Bachelor of Education Examination for the selected colleges were collected from respective universities. Information Schedule on Infrastructural Facilities of the colleges was used to collect information of the colleges. Data on perception of teacher-educators and student-teachers towards quality of their respective colleges were collected by administering the scales on the teacher-educators and student-teachers. Data were collected for the session 2014-2015.

***Analysis and Interpretation of Data*:**

An analysis of collected available primary and secondary data has been done on the basis of the objectives of the study. First of all, the academic performance of the students of self-financed secondary teacher education colleges has been studied. Then status of infrastructural facilities of self-financed secondary teacher education colleges, perception of teacher-educators of self-financed colleges towards quality of their respective colleges and the perception of student-teachers of self- financed secondary teacher education colleges towards quality of their respective colleges have been studied.

***Academic performance of the Student-Teachers*:**

Academic performance of the student-teachers of the selected secondary teacher education colleges under study has been studied with the help of the results of the student-teachers in University final Bachelor of Education Examination. The results for the academic year 2013-2014 and 2014 - 2015 have been analysed. This has been done University wise.

Table1: Results of Student-teachers for the Academic Year 2013-2014

University	Appeared	Passed	Class/Grade
C.U.	577	576 (99.82%)	B-A
W.B.S.U.	572	572 (100%)	1
V.U.	566	566 (100%)	1

It is seen from table-1 that the percentage of pass is 100% or close to 100%. All the passed students- teachers have secured marks more than 60%. It can be said that the academic performance of the student-teachers of the colleges for the academic year 2013-14 are good.

Table2: Results of Student-teachers for the Academic Year 2014-2015

University	Appeared	Passed	Class/Grade
C.U.	598	594 (99.33%)	B-A
W.B.S.U.	574	573 (98.82%)	1
V.U.	597	597 (100%)	1

It is found from table-2 that the percentage of pass is 100% or close to 100%. All the passed student- teachers have secured marks more than 60%. It can be said that the academic performance of the student-teachers of the colleges for the academic year 2014-15 are good.

Status of Infrastructural Facilities of Self-Financed Secondary Teacher Education Colleges: Infrastructural facilities of the selected colleges have been studied with the help of information collected through Information Schedule on Infrastructural Facilities. These are analysed in the following manner.

Table 3: Basic Infrastructural Facilities available in the colleges

Facilities	***YES***	***NO***
Drinking water facility	18 (100%)	X
Separate toilet facility	18 (100%)	X
First-aid facility	18(100%)	X
College Library with adequate no. of books as per NCTE norm	17 (94.44%)	1 (5.56%)
Seminar Hall	17 (94.44%)	1 (5.56%)
Canteen facility for students, teachers and staff	18 (100%)	X
Fire extinguisher measures	15 (83.33%)	3(16.67%)
Ramp for PWD students	7 (38.89%)	11(61.11%)
Playground	18 (100%)	X

Table – 3 reveals that all the 18 colleges have good drinking water facility, separate toilet facility for boys, girls, teacher and staff, canteen facility for students, teachers and staff as well as first aid facility. 94.44% colleges have adequate number of books in their libraries as per N.C.T.E. norm. Only 38.89% colleges have Ramp for PWD students. 94.44% colleges have seminar hall. 83.33% colleges have fire

extinguishing measures. All the 18 colleges have playground. It can be said that the colleges under study have more or less good basic infrastructural facilities.

Table-4: Status of landed property of the self-financed secondary teacher-education colleges

Landed property of the college is :	Number of college
Less than ½ acre	1(5.56%)
½ acre – 1 acre	3(16.67%)
1 – 2 acres	6(33.33%)
More than 2 acres	8(44.44%)

Table – 4 reveals that out of 18 colleges, 5.56% college have landed property less-than ½ acre, 16.67% colleges have a landed property ½ acre to 1 acre, 33.33% colleges have landed property of 1-2 acres and and 44.44% colleges have landed property more than 2 acres.

Table-5: Status of classroom in secondary -teacher education colleges

Sl No.	Classroom available	Number of college
1.	Number of colleges having 4 classrooms	4 (22.22%)
2.	Number of colleges having 5 classrooms	1 (5.56%)
3.	Number of colleges having 6 classrooms	1 (5.56%)
4.	Number of colleges having more than 6 classrooms	12 (66.66%)

It is seen from table-5 that in 22.22% colleges the number of classrooms is 4. 5.56% colleges have 5 classrooms. The number of classrooms is 6 in case of 5.56% college. Out of total 18 (100%) colleges 12 (66.67%) colleges have more than 6 classrooms. It can be said that all the colleges have adequate number of classrooms as per N.C.T.E. norm.

Table – 6: Indoor facilities of the secondary teacher- education colleges

Sl. No.	The room available meant for the purposes:	Number of college
1.	Principal Room	18 (100%)
2.	Faculty Room	18 (100%)
3.	Library Room	18 (100%)
4.	Reading Room	18 (100%)
5.	Office Room	18 (100%)

6.	Educational Technology Room	18 (100%)
7.	Psychology Laboratory	18 (100%)
8.	Separate Common Room	18 (100%)
9.	Language Laboratory	18 (100%)
10.	Physical Science Laboratory	17 (94.44)
11.	Life Science Laboratory	18 (100%)
12.	Geography Laboratory	18 (100%)
13.	Work Education Laboratory	16 (88.88%)

It is seen from table – 6 reveals that 100% colleges have principal's room, faculty room, library room, reading room, educational technology room, psychology laboratory and language laboratory. 94.44% colleges have physical science laboratory and 100% colleges have life science laboratory and geography laboratory. 88.88% colleges have work education laboratory. Only 5.56% college do not offer physical science as method subject. Of all the colleges, 2 colleges do not offer work education as a method subject in their college. It is to be mentioned that number of facilities available in Principal's room, faculty room and office room vary in-between the colleges.

Table – 7: Faculty status of Secondary teacher-education colleges

Sl. No.	Faculty Status	Number
1.	College having fulltime faculty 8 or more	15 (83.33%)
2.	Fulltime faculty	144 (68.57%)
3.	Contractual Full-time faculty	5 (2.38%)
4.	Part-time faculty	50 (28.31%)
5.	Guest faculty	11(5.24%)
6.	Faculty with Ph.D. degree	34 (16.19%)
7.	Faculty with M.Phil. degree	34(16.19%)
8.	Faculty with M.Ed. degree	140 (66.6%)
9.	Faculty with SET/NET	21(10%)
10.	Faculty with M.A in Education and B.Ed.	32 (15.24%)

Table-7 reveals that number of full-time faculty is 8 or more in 83.33% colleges. Amongst 210 total faculties of the colleges, 16.19% are having M.Phil. and 16.19% are having Ph.D. Most of the faculty (66.66%) have M.Ed. degree as per requirement of N.C.T.E. Amongst 210 total faculty of the colleges, 10% are NET/

SET qualified. It can be said that all the colleges have duly qualified faculty as per N.C.T.E norm.

Perception of Teacher-Educators towards Quality of their respective colleges: To accomplish the research objectives concerning the perception of teacher-educators towards quality of their respective colleges, data were collected by the standardized Likert-type scale on 'Perception of Teacher-Educators towards Quality of Teacher Education Colleges.' These were presented to the respondents to assess their perception. In course of statistical analysis response of 1 respondent was not considered for incomplete information.

Table- 8: Perception of Teacher-Educators towards Quality of Teacher-Education Colleges

Sl. No.	Statements	Disagree	Undecided	Agree
1	The physical infrastructure of the college is suitable and adequate for effectively implementing the programme	10 (11.24%)	1 (1.12%)	78 (87.64%)
2	The teachers have access to information and use of technology	18 (20.22%)	11 (12.36%)	60 (67.42%)
3	The college has necessary infrastructural facilities for social, cultural and leisure time activities for the students	13 (14.61%)	8 (8.99%)	68 (76.40%)
4	The teaching-learning material, ICT facilities, laboratories and library facilities are available and utilized on a regular basis	13 (14.61%)	15 (16.85%)	61 (68.54%)
5	The teacher-educators are getting job satisfaction	25 (28.08%)	24 (26.97%)	40 (44.95%)
6	The teacher-educators are getting pay as per government rules	43 (48.31%)	18 (20.22%)	28 (31.47%)
7	The teachers are accessible to the students for guidance and consultation	4 (4.49%)	3 (3.37%)	82 (92.14%)
8	There exists a concern and initiative for up gradation of professional skills and competency of teacher-educators	18 (20.22%)	24 (26.97%)	47 (52.81%)
9	There is good inter-personal relationship among the teacher educators	10 (11.24%)	7 (7.86%)	72 (80.90%)
10	The college encourages the teachers for development of instructional materials	8 (8.99%)	13 (14.61%)	68 (76.40%)
11	There exists an interest in monitoring the progress of students	12 (13.48%)	10 (11.24%)	67 (75.28%)

12	The college has an academic calendar that reflects all the activities of the programme	9 (10.11%)	5 (5.62%)	75 (84.27%)
13	The activities contained in academic calendar for optimizing students' educational achievement is appropriate	13 (14.61%)	21 (23.60%)	55 (61.79%)
14	Interaction and participation of students in the transaction of curriculum is ensured	7 (7.86%)	24 (26.97%)	58 (65.17%)
15	The instructional processes are geared to develop reflective thinking	6 (6.74%)	24 (26.97%)	59 (66.29%)
16	Organization and supervision of practice teaching is sufficient	10 (11.24%)	30 (33.70%)	49 (55.06%)
17	Periodical assessment and evaluation made for improving skills and enhancing competencies of the students is sufficient	5 (5.62%)	34 (38.20%)	50 (56.18%)
18	Preparation and planning for implementing practical experiences is comprehensive	8 (8.99%)	37 (41.57%)	44 (49.44%)
19	Student-teacher relationship is favourable to create learning environment	17 (19.10%)	11 (12.36%)	61 (68.54%)
20	The results of the students in University examinations are satisfactory	6 (6.74%)	11 (12.36%)	72 (80.90%)
21	The principal is monitoring each and every activity of the college	36 (40.45%)	12 (13.49%)	41 (46.06%)
22	The students actively participate in social and cultural activities of the college	6 (6.74%)	7 (7.86%)	76 (85.40%)
23	Organization of sports in the college is regular	22 (24.72%	13 (14.61%)	54 (60.67%)
24	Seminars on educational issues are held in the college	21 (23.60%)	21 (23.60%)	47 (52.80%)
25	Students actively participate in celebration of important days	3 (3.37%)	15 (16.85%)	71 (79.78%)
26	Organization of co-curricular activities in the college is regular and students' participation is adequate	6 (6.74%)	13 (14.61%)	70 (78.65%)
27.	The college is organizing educational trip every year	10 (11.24%)	14 (15.73%)	65 (73.03%)
28	The teacher-educators are involved in management of the programme and the institution	16 (17.98%)	16 (17.98%)	57 (64.04%)
29.	The performance of every teacher-educator is regularly appraised by the college	30 (33.70%)	28 (31.46%)	31 (34.83%)
30	The institution has mechanisms to undertake internal academic audit of the programme	17 (19.10%)	22 (24.72%)	50 (56.18%)

Table – 8 reflects that 87.64% of the teacher-educators agree that the colleges have good physical infrastructure and 76.40% agree that the colleges have necessary infrastructural facility for social, cultural and leisure time activities for the student-teachers. It is agreed by 67.24% teacher-educators that they have access to information and use of technology. Most of the teacher-educators (68.54%) are of the opinion that teaching learning material and ICT facilities are utilized on a regular basis. However, only 44.95% teacher-educators agree that they are getting pay as per government rules. Most of the teacher-educators (84.27%) agree that instructional materials are developed by them. It is also seen (75.28%) teacher-educators agree that progresses of students are monitored. The fact that student-teacher relationship is favourable to create learning environment is agreed by 68.54% teacher-educators. However, 52.80% teacher-educators agree that seminar on educational issues are held in the college. Most of the teacher-educators (80.90%) are of the opinion that result of the student-teachers in university final examination is satisfactory. 55.06% teacher-educators are of the opinion that organization and supervision of practice teaching is sufficient. 92.14% teacher-educators agree that teachers are accessible to the student for guidance and consultation.

***Perception of Student – Teachers towards quality of their respective colleges*:** To accomplish the research objectives concerning the perception of student - teachers towards quality of their respective colleges data were collected by the standardized Likert-type scale on 'Perception of Student-Teachers towards Quality of Teacher-Education Colleges.' These were presented to the respondents to assess their perception. In course of statistical analysis response of 1 respondent was not considered for incomplete information.

Table – 9: Perception of Student-teachers towards Quality of Teacher Education Colleges

Sl. No.	Statements	Disagree	Undecided	Agree
1	The physical infrastructure of the college is suitable and adequate for effectively implementing the programme	133 (14.79%)	92 (10.23%)	674 (74.98%)
2	The college is providing good facilities to students for their studies	75 (8.34%)	150 (16.79%)	674 (74.97%)
3	The amount of fees charged by the college is reasonable	325 (36.15%)	268 (29.81%)	307 (34.14%)
4	Library facilities provided by the college is sufficient	142 (15.80%)	130 (14.46%)	627 (69.74%)

5	The college has necessary infrastructural facilities for social, cultural and leisure time activities for the students	138 (15.35%)	172 (19.13%)	590 (65.62%)
6	The students have access to information and use of technology	242 (26.91%)	231 (25.70%)	426 (47.39%)
7	The teacher-educators use interactive and participatory approach in transaction of curriculum	111 (12.35%)	156 (17.35%)	632 (70.30%)
8	Preparation and planning for implementing practical experiences is comprehensive	110 (12.24%)	227 (25.25%)	562 (62.51%)
9	Both theoretical and practical classes are regularly held and adequate to meet students' requirement	119 (13.24%)	125 (13.90%)	655 (72.86%)
10	The instructional processes are geared to develop reflective thinking	131 (14.57%)	258 (28.70%)	510 (56.73%)
11	Organization and supervision of practice teaching is regular and mentoring of student-teacher is systematic and planned	93 (10.34%)	150 (16.69%)	656 (72.97%)
12	The school-based experiences are comprehensive and include experiences in performing various functions of a teacher	95 (10.57%)	174 (19.35%)	630 (70.08%)
13	The teacher-educators develop instructional materials and use those in transacting the programme	125 (13.90%)	188 (20.91%)	586 (65.19%)
14	The behaviour of the teachers are friendly	54 (6.00%)	142 (15.80%)	703 (78.20%)
15	The teachers display the professional and human qualities of a role model	98 (10.90%)	170 (18.91%)	631 (70.19%)
16	The teacher-educators have professional competencyrequired for implementing the programme	122 (13.57%)	268 (29.81%)	509 (56.62%)
17	Teachers are indifferent to students' presence in the college	220 (24.47%)	225 (25.03%)	454 (50.50%)
18	Guidance, help and assistance are always available from the teachers	80 (8.90%)	155 (17.24%)	664 (73.86%)
19	Extension lectures are organized in the college for benefit of the students	167 (18.58%)	174 (19.35%)	558 (62.07%)
20	The students are getting scope to fulfil their educational needs	98 (10.90%)	200 (22.25%)	601 (66.85%)
21	Studying in this college gives satisfaction to the students	88 (9.79%)	176 (19.58%)	635 (70.63%)

22	Periodical assessment and evaluation is made for improving students academic achievement	117 (13.01%)	190 (21.13%)	592 (65.86%)
23	The college has an academic calendar that reflects all the activities of the programme	132 (14.68%)	164 (18.24%)	603 (67.08%)
24	The activities contained in academic calendar for optimizing students' educational achievement is followed	125 (13.90%)	251 (27.92%)	523 (58.18%)
25	The college has good reputation about students results in University final examination	68 (7.56%)	136 (15.13%)	695 (77.31%)
26	The students actively and spontaneously participate in social and cultural activities of the college	61 (6.79%)	145 (16.13%)	693 (77.08%)
27	Organization of sports in the college is regular	193 (21.47%)	178 (19.80%)	528 (58.73%)
28	The principal is monitoring each and every activity of the college	110 (12.24%)	153 (17.02%)	636 (70.74%)
29	The college promotes active participation of the students in social and cultural activities of students	65 (7.23%)	140 (15.57%)	694 (77.20%)
30	The college organizes educational trip for students	112 (12.46%)	89 (9.90%)	698 (77.64%)

It is seen from table- 9 that 74.98% of the student-teachers agree that the colleges have good physical infrastructure and the college is providing good facilities to them for their studies. 69.74% student-teachers are of the opinion that the colleges provide good library facilities. 65.62% student-teachers agree that the colleges have necessary facilities for social, cultural and leisure time activities. Most of the student-teachers (72.86%) are of the opinion that classes are regularly held. 72.97% student-teachers agree that organization of practice teaching is regular. Most of the student-teachers (70.30%) agree that teacher-educators use interactive and participatory approach in transacting the curriculum 73.86% student-teachers agree that guidance, help and assistance are always available from the teacher-educators. Majority of the student-teachers (70.63%) are satisfied in studying in their respective colleges and most of them (77.31%) are of the opinion that the colleges have good reputation about students' result in university final examination. 34.14% student-teachers agree that fees charged by the colleges are reasonable.

Considering the opinion of both the teacher-educators and student-teachers on the common statements, it can be said that most of the teacher-educators and

student-teachers agree about good physical facilities of the colleges. Providing guidance and help by the teacher-educators is agreed by most of the teacher-educators and the student-teachers. Most of the teacher-educators and student-teachers talk about favourable learning environment in the colleges. Most of the student-teachers are satisfied in studying at their respective colleges but less than half of the teacher-educators are getting job satisfaction. On the issue of reputation of the college in terms of result of the student-teachers in the university final examination most of the teacher-educators and student-teachers agree.

Major Findings

Academic performance of the student- teachers of all the colleges are good.

All the colleges have good basic infrastructural facilities.

Status of landed property of the colleges are good.

All the colleges have good status of In-door facilities.

The colleges have qualified faculty as per N.C.T.E norm.

Maximum teacher- educators agree that results of the student-teachers are good.

Most of the teacher- educators are not getting job satisfaction.

Most of the student- teachers perceived that fees charged by the college is not reasonable.

Majority of the student- teachers are satisfied in studying in their respective colleges.

Most of the teacher-educators and student- teachers agree that the colleges have favourable teaching-learning environment.

Discussion

It is revealed from present study that academic performance of the student-teachers of the colleges for the academic year 2013-14 and 2014-15 found to be good. The colleges have good physical and instructional facilities. Majority of the student-teachers are satisfied in studying at their respective colleges. Only one third of the student-teachers agree that fees charged by the colleges are reasonable. Majority of the teacher-educators are not getting job satisfaction. Earlier study by Mukhopadhyay and Bhusan (2004) has pointed out that private teacher education institutions are providing low quality education at much higher cost. As regards infrastructural facilities the colleges have more or less good facilities, the colleges have duly qualified faculty as per N.C.T.E. norm. Panigrahi (2010) has found that

majority of self financing teacher training institutes have basic infrastructural facilities, have good status of both out-door and indoor environmental facilities, very low academic achievement of B.Ed. students, most of the institutes have well qualified teachers according to N.C.T.E. The perception of pupil- teachers was that maximum institute did not have good infrastructural facilities. Gupta (2005) discusses about role of self-financed colleges in relieving some of the burden on central government and state governments and help the economy by providing professionally trained persons. Pandya (2010-2011) highlights that to meet growing demand of students opting for teacher education and to fulfil the growing need of teachers for secondary education the only feasible way is privatization of teacher education.

Conclusion

The following conclusions may be drawn:

1. The statistical analysis carried out on the basis of results of student-teachers of the colleges in University final Bachelor of Education Examination2014 and 2015 reveals that academic performance of the student-teachers of the colleges are good. The analysis also depicts that this is true for all the three universities under study for the year 2014 and 2015.
2. Study of infrastructural facilities leads us to conclude that in respect of basic infrastructural facilities the colleges have more or less good basic infrastructural facilities. The landed property of the colleges is adequate. The numbers of classrooms are adequate. Majority of colleges have good indoor facilities. As regard faculty status, the colleges under study have duly qualified faculty as per N.C.T.E. norm. The numbers of full time faculty is adequate in the colleges. The colleges have faculty with M.Ed. degree as per requirement of N.C.T.E. However, the number of faculty having Ph.D. degree and M.Phil. Degree is less. The number of faculty having NET/SET is also less.
3. The teacher-educators perceived that the colleges have good infrastructural facilities, teaching -learning environment is good and results of the student-teachers are good. However most of the teachers are not getting job satisfaction.
4. The student-teachers are of the opinion that the colleges have good infrastructural facilities, the colleges are providing good facilities to fulfil their educational needs. Most of the student-teachers agree that the college has good reputation about students' result in university final examination and they are satisfied in studying in the colleges.

Educational Implications

1. This study may provide authentic information about self-financed secondary teacher-education colleges in West Bengal.
2. This study may help the policy makers, decision makers and private management to establish more self-financed secondary teacher education colleges by taking into consideration the demand of students who are willing to receive teacher education.
3. The empirical study may act as a guide to the existing and prospective management of the college to improve the quality of their colleges.
4. The study may be considered as a source of useful information to the teacher educators to remove the students' problems which they face during the course of study and thus help improve the perception of the student-teachers towards quality of their respective colleges.

Scope for further studies

- ❖ Opinion of the Non-teaching members of the colleges and the college authority regarding quality of the college can be studied for evaluating the quality of the secondary teacher-education colleges.
- ❖ A similar investigation can be conducted on teacher-educators and student-teachers belonging to other levels of teacher education like D.El.Ed and M.Ed.
- ❖ A large scale investigation could be conducted on teacher-educators and student-teachers by drawing sample from other universities of West Bengal and other states of India.

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Educational Ideas of Rokeya Sakhawat Hossain in Her Writings

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Abstract

The history of women's studies in india has had an indigenous growth. It has emerged more as an consequence of the concern of the society towards women's position and problems. Its birth can be traced to the recognition of a failure on the part of social scientists to enquire into women's issues, their lack of questioning of the assumptions, theories and tools of analysis borrowed from the west and to bridge the glaring gaps in data that might help orient policy changes. This was because many of the social scientists and educational planners had found it necessary to re-examine the concepts and methodological approaches in terms of the social reality obtained in India. Women's studies thus started as part of a larger social movement and the growing social concern among few academicians with the widening issues of poverty, unemployment, inequality and underdevelopment. It gradually evolved the aim of bringing about greater knowledge on the social basis of women's inequality, their marginalization in development and their exclusions from power structures. The introduction of women's studies into the University System has been a path breaking event for social scientists and other scholars who wanted to see a comprehensive and balanced presention of our social reality. It is viewed as an instrument for social and academic development that will help the university community and the society at large towards a better understanding of the multi-dimensional roles played by women and would look into the causes for gender disparity. For the past few decades, the world community is focusing on the issues concerning gender disparity leading to serious social imbalances. In this context Rokeya Sakhawat Hossain has written about the women emancipation and explained it through her writings in "Sultana's Dream".

Key Words **:** Inequality, Poverty, Marginalization, Women, Education, Social Reform.

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Introduction

She was born in 1880 in the village of Pairabondh, Mithapukur, Rangpur, present Bangladesh, in what was then the British Indian Empire. Her Father, Jahiruddin Muhammad Abu Ali Haidar Saber, was a highly educated zamindar (landlord) who married four times; his marriage to Rahatunnessa resulted in the birth of Rokeya, who had two sisters and three brothers, one of whom died in childhood. Rokeya's eldest brother Ibrahim Saber, and her immediate elder sister Karimunnesa, both had great influence on her life. Karimunnesa wanted to study Bengali, the language of the majority in Bengal. The family disliked this because many class Muslims of the time preferred to use Arabic and Persian as the media of education, instead of their native language, Bengali. Ibrahim taught English and Bengali to Rokeya and Karimunnesa; both sisters became authors. Rokeya married at the age of sixteen in 1896. Her Urdu speaking husband, Khan Bahadur Sakhawat Hossain, was the deputy magistrate of Bhagalpur, which is now a district under the Indian state of Bihar. Sakhawat did his BAG from England and was a member of Royal Agricultural Society of England. He married Rokeya after the death of his first wife. As he was gentle, liberal-minded and had much interest in female education he encouraged Rokeya to continue her brother's work by encouraging her to keep learning Bengali and English. He also suggested that she write, and on his advice she adopted Bengali as the Principal Language for her literary works because it was the language of the masses. She launched her literary career in 1902 with a Bengali essay entitled Pipasa (Thirst). She also published the books Motichur (1905) and Sultana's Dream (1908) during her husband's lifetime.

Begum Rokeya Sakhawat Hossain, popularly known as Begum. Rokeya was a leading feminist writer and social worker in undivided Bengal during the early 20th century. She is most famous for her efforts on behalf of gender equality and other social issues. She established the first school aimed primarily at Muslim girls, which still exists today. She was a notable Muslim feminist; Begum Rokeya also wrote short stories and novels. Her important works are Sultana's Dream and Padmarag. She dedicated her life to the service of mankind. She fought relentlessly against injustice heedless of the consequence to herself. She worked hard to fulfill all the ideals that she had cherished since her childhood. She was very much involved with her ideas, which were precise and illumined with personal warmth. She claimed for equality of women and she was of the idea that men always wanted to make women inferior for their benefit.

Early Life of Rokeya

Rokeya Sakhawat Hossain was a Muslim feminist and social reformer who dedicated her life to education and the empowerment of women. Born in 1880 in Bangladesh during British colonial rule, Rokeya was brought up in a Muslim family that followed the purdah, a strict set of social rules which required women be secluded from society. However, the support from her brothers and husband would give her the strength to persevere through harsh criticism, and inspire her to become the author of several books and eventually open a school for girls.

Rokeya's father was a rich landowner who had the means to educate his two sons Abul Asad Ibrahim Saber and Khalil Saber. Unfortunately Rokeya's father had little interest in educating any of his daughters. Her brothers, inspired by their Western education, secretly taught Rokeya and her sister Bengali and English. However, before the age of 15, Rokeya's sister would be forced into a child marriage. This would have a strong impact on Rokeya. In one of her personal essays she states "Had society not been so suppressive, Karimunessa would have been a bright gem of this country, as the glow of an electric bulb is dimmed by a thick cover, so the lady described by me could not show her gifts due to the covers of purdah".

Rokeya Sakhawat Hossain was a pioneering feminist writer, educationist and activist in colonial Bengal, who not only sought to emancipate women from the deeply entrenched values of Indian social and cultural patriarchy through her darkly satirical and provocative writings, but also actively pursued her idea of empowering women through education by setting up a school for Muslim girls. . A subject of the British Indian Empire, Rokeya, and many of her colleagues, wrote back to the empire against both colonialism and patriarchy, and created innovative educational discourses and practices. The history of education is inscribed not merely in the formal school that Rokeya founded, but in her larger career as writer and builder of women's associations. An analysis of the enmeshing of women's writing and women's networks thus yields a creative, nuanced history of women's education. Moreover, she was practical enough to reify her vision by taking steps to eradicate women's ignorance and invigorate their sense of self, by setting up a school in Calcutta and by running programmes to educate slum women through the association for Muslim women, Anjuman-i-Khwateen-i-Islam, which she founded in 1916—all at a time when Indian Muslim women were expected to live in confinement in the zenana and any attempt to educate them was seen as blasphemous. In the 19th century the revolution for reformation that took place in education, culture and literature – its effects also entered into the 20th century.

Education for women

Begum rokeya wanted all women to be independent. She exposed the glaring inequalities present between sexes not only among the Muslims but also among other communities. She compared ornaments with the chains of dogs. She was of the view that ornaments are mere marks of slavery. Begum Rokeya wanted women to come out of their confinement and take part in all spheres of life. In her words, "We constitute one half of the society and if we are left behind, how can the society progress? If a person's one leg is tied, how far can he go? The interests of men and women are the same. The goal of life is the same for both." In various articles Rokeya talked about the need for social reformation and showed how that can be achieved. She enumerated the steps to be taken for baby and childcare, for prevention of infant morality and training of housewives for ideal management of the family.

She strongly believed that to gain freedom of women, three things are obvious: education, economic independence and mobility with moderate purdah, and she worked towards that end with the intellect of a teacher, zeal of a social reformer and conscience of a humanitarian throughout her life. Begum Rokeya led the way to empowering and enlightening women by founding two major institutions – sakhawat memorial girl's school and Anjuman-e-Khawatin-e-Islam. She could feel that uniting the womenfolk along with education was important to establish their rights in the society.

Rokeya's personal life was overwhelmed with tragedies with the lack of her mother's affection, early loss of her husband and loss of her two daughters in infancy. But these pathetic incidences couldn't stop her journey for women's right of Muslim community. Begum Rokeya's systematic and undaunted devotion for women liberation from subjugation of the society inspired her to start educational institutes.

Begum Rokeya*: *A fierce feminist critic of patriarchy

Begum Rokeya single-handedly ushered in Muslim women's reform in Bengal. The most interesting element of her work is the duality where she on one hand fiercely criticises patriarchal institutions, rejects religion as authored by men, and displays utter disgust towards institutions of purdah, on the other hand, her reform agenda comes around to follow the similar middle path as the Begum of Bhopal whereby gradual change was introduced in accordance to social reality and with respect to social practices. The most important features that distinguish Rokeya from her male counterpart reformers are her sharp feminist critique of patriarchy

in her writing, her emphasis on women's physical fitness and development of mental faculty, her recognition of women's education as means of economic independence, and finally, her distinction between abarodh and purdah. Whereas abarodh was understood by Rokeya as the negative and extreme application of purdah, the practice of purdah in itself was not condemned, rather welcomed as female propriety. As she dismissed abarodh as a practice where women were "shut off from public space, or any healthy participation in society" (Amin 145, 2001), and purdah as means of female modesty with mobility and public participation, she broke down the demarcation of women into the private sphere in the name of purdah or modesty. It is this sharp analytical ability of Rokeya that echoes in her work and writing that still makes her into the only female feminist icon contemporary Bengali Muslim women look up to even today.

The resilience of Begum Rokeya's social impact lies in that fact that her writings, actions and resistances strategically pin point, analyse, and to some extent resolve gender biased social, cultural and political practices. Besides establishing a girls' school, she was also the founder of Anjuman-e-Khawatin-e-Islam (1916). Rokeya's personal life was overwhelmed with tragedies with the early loss of her husband, and the loss of her two baby daughters in infancy. She suffered immensely from a wave of criticisms and various obstacles in initiating social change for women, but she worked relentlessly literally till her last breath to bring changes to women's downtrodden status. Begum Rokeya offered Bengali Muslim women books instead of kitchen utensils. She told them about the vast world outside the bundles of saris and jewellery, inspired them to break out of the patriarchal framework and taste their own individualities, and finally she called out to them with a sense of feminist sisterhood — Jago Go Bhogini or Wake Up Sisters!

Rokeya Sakhawat Hossain was born in 1880 in Rangpur. Her father was a local zamindar and preferred to maintain strict purdah for the women in his family. Women in the household were taught only Arabic in order to read the Holy Quran, but as Rownak Jahan pointed out, "defying custom, and valuing their Bengali identity over their religious one, Rokeya and her gifted elder sister, Karimunnesa persisted in learning Bangla." Rokeya continued her studies with her elder brother Saber without the knowledge of other members of the family and continued to feed her passion for knowledge after getting married at the age of 16 to Syed Shakhawat Hossain, a widower of 39, in 1896. Rokeya was well-versed in Bangla, English, Urdu, Arabic and Persian, but chose to write the bulk of her literature in Bangla except for a few pieces in English, including her first novel Sultana's Dream (1905). Rokeya started writing her reformist pieces for various different magazines starting

from 1903, which were later published under the title Motichur in 1908. Motichur part two was published in 1921, Padmaraga (novel) in 1924 and Oborodhbashini or the Secluded Ones in 1928. Rokeya Racanavali published by the Bangla Academy in 1973 included her unpublished writings and letters both in Bangla and English including her unpublished poetry. Begum Rokeya died on December 9, 1932, and up until 11 pm on December 8, 1932, she was working on an unfinished article titled, 'Narir Odhikar' or Women's Rights. Two major organisational contributions Rokeya made for attaining women's rights were her school and 'Anjuman-e-Khawatin-e-Islam' (Muslim Women's Association). Sakhawat Memorial Girls' School started off with eight students in 1911 in Kolkata, and by 1915 the number of students increased to 84. By 1930 the school had become a high school, including all 10 grades. The curriculum included physical education, handicrafts, sewing, cooking, nursing, home economics and gardening, in addition to regular courses in Bangla, English, Urdu, Persian and Arabic.

Rokeya emphasised on physical education because she believed that it was important to make women physically stronger, fit and confident. Rokeya also recognised the importance of women's economic independence. Her curriculum therefore, included vocational training in crafts and sewing. She realised the importance organised action for changing women's position and raising public opinion for it, therefore, she founded Anjuman-e-Khawatin-e-Islam in 1916. The activities of this organisation related directly to the disadvantaged and poor women. It offered financial support for widows, rescued and sheltered battered women, helped poor families to marry their daughters, and above all helped poor women to gain literacy. Rokeya ran a slum literacy programme in Kolkata by forming work teams to visit women in the slums to teach them reading, writing, personal hygiene and child care. Even though Rokeya made important contributions through her organisational effort, her writing remains her most significant gift to Bengali Muslim women.

Begum Rokeya believed that men and women were created differently, but equally. In her views, the subjugated position of women was not due to Allah's will, but due to men's immorality, "there is a saying, 'Man proposed, God disposes,' but my bitter experience shows that, 'God gives, Man robs'." Rokeya believed that, "Allah has made no distinction in the general life of male and female — both are equally bound to seek food, drink, sleep and pray five times a day." Rokeya used a fascinating logic to enforce the notion of gender equality within an Islamic framework, "[h]ad God Himself intended women to be inferior, He would have

ordained it so that mothers would have given birth to daughters at the end of the fifth month of pregnancy. The supply of mother's milk would naturally have been half of that in case of a son. But that is not the case. How can it be? Is not God just and most merciful?" Begum Rokeya coined the term 'manoshik dashhotto' or mental slavery to describe the loss of individuality in women, and identified this psychological phenomenon as the main force behind women's subjugation. She believed that social systems like seclusion and purdah intentionally make women unfit and weak for survival in the public realm. Rokeya believed that men deliberately refuse women equal opportunities to cultivate their minds with the purpose of sustaining women's dependence on men and further perpetuating women's dependence on their own inferior status. Rokeya used examples of women who earn more than their husbands, but still submit to the men folk at home to point out that the framework of women's subjugation exceed economic parameters. In Begum Rokeya's view, manoshik dashhotto is at the core of women's subjugated position. She summoned women to overthrow the invisible bondages of our brains, to strip off the transparent patriarchal exploitation, "The seeds of higher attributes have been destroyed in the female minds. Our inside, outside, brain, heart — all have become enslaved (dashi hoiyaa poryiachee)." We are not entitled to have the freedom of our heart or perform the actions of our choice. Neither do we notice any effort to gain our freedom as women. Therefore, I want to say: Jago, Jago Go Bhogini!"

Educational ideas conveyed through Sultana's Dream

Sultana's Dream follows the usual conventions, codes and formulas of a utopian narrative and has a simple and minimal plot outline. Sultana, the first-person narrator of this text comes to Ladyland (the utopia, 'no place' or 'good place') and meets Sister Sara, a scientist, who lets Sultana know of the ways of life and activities of her fellow-citizens in Ladyland. When Sultana returns to her own country, it becomes clear that the journey took place in a dream. For Rokeya, however, the genre is not only a literary or linguistic practice, but also a social practice: new textual attributes and linguistic forms have been employed to highlight her concern for dismantling gender bias in her contemporary patriarchal social formations. Sultana's Dream is generally described as a utopian fiction – 'probably the first such work in Indian Literature.' Sultana's Dream is categorized as a female utopia in the sense that it is a reworking of a classical genre from the female or feminist perspective. Rokeya has inflected the textual conventions of utopian narratives in new ways, replacing the conventional male-supremacist content with the elements that prioritize women's desires and valorize women's capabilities. It is interesting

to note that in Sultana's Dream the narrator's name 'Sultana' means a female sovereign, but ironically she lacks autonomy and has to live in virtual confinement: she rules the fact that women in her native land 'have no hand or voice in the management' of their social affairs. She feels shy and nervous to walk alone on a crowded street in broad daylight without her veil. But this purdanishin woman in her dream meets Sister Sara and the Queen of Ladyland who as her foils show what woman can achieve when they have opportunities for education and can act autonomously. Indeed, Sister Sara, the independent minded, self-confident working woman, and the Queen with her scheme of education for all the women of her country and other social reform programmes and to some extent the Lady Principals are projections of the multiple identities of the author Rokeya Sakhawat Hossain. In her utopian fiction Sultana's Dream Rokeya has presented her vision of womanpower. Rokeya Sakhawat Hossain's Sultana's dream is a unique blend of both the classical or traditional and the technological utopias. It represents an imaginary land, ladyland, its system of governance, social status of and relations between men and women, scientific and technological attainments, norms and practices in trade and commerce, geographical and natural environment. In this utopian narrative Rokeya has reversed the concept of a 'zenana': it is no more a place of seclusion and confinement for women. Women in ladyland have come out of zenana in the public arena and assumed the reponsibilities of governance, education (from the elementary to the university level), scientific researches and technological innovations, military starategy and tactics, and trade and commerce, too – which in Sultana's world are regarded as men's abolishedband replaced with a new signifier – 'mardana'- for now men ('mards') stay indoors secluded from the public space, engaged in the looking after babies, cooking and all other domestic chores. Going through the text her husband's boss Mr. McPherson, the then divisional commissioner in Bhagalpur remarked:

> "The ideas expressed in it are quite delightful and full of originality and they are written in perfect English ..... I wonder if she foretold here the manner in which we may be able to move about in the air at some future time. Her suggestions on this point are most ingenious."

Conclusion

There is little doubt that the Indian women's education like the women's movement would never have become a reality if Indian men in the nineteenth century had not been concerned with modernizing their women's roles. By focusing on female education they had endeavoured to bring women, especially women from their own families, into the new world created by the colonial rule. The outcome was

that women, whether they wanted or not, became part of this new society (Geraldine Forbes, 1998. p. 252). Notwithstanding the courageous attempts made by individual women writers and reformers to seek greater social power for women, it would be fair to say that the patriarchal/nationalist accommodations of the 19th century were more about men changing their ways, and women adjusting to such changes, than any fundamental alteration in the organization of power resulting from initiatives undertaken by women (Sarkar Mahua, 2008, p. 72). The daughters of reform contributed in many ways to the greater visibility of women in educational, social, and political action in the 1920s and 1930s. Some came out of the purdah with the backing of their families. Many were active professionally, in starting schools, in teaching, medicine, and educational and social work among the less fortunate. Some wrote in the magazines and journals that had emerged early in the century, or they became authors of short stories and novels depicting women's lives. Others became involved in the nationalist movement, or worked for other political causes. The men who had championed Muslim women's education and foreseen women who would be better wives, better mothers, and better Muslims had reasons to be satisfied with the outcome of their efforts, and other reasons to be perturbed. Women once given a voice did not always turn out to be dutiful daughters, although most of them did. Elite women had many reasons to uphold the honour and status of their families, and few reasons to defy them. They too knew about the art of the possible (Minault Gail, 1998, pp. 306-330). As more and more educated women participated in the public sphere, the power of the purdah seemed to relegate to the background. Yet, a new concept of the purdah seemed to emerge as the external purdah was internalized in the form of a code of conduct. The concept of spiritual intellectuality free of vibrant sexuality was the new purdah that covered the new woman. Any deviation from this would be frowned upon by a society that was still dominated by the patriarchy. The search for a new identity for the Muslim woman had traversed a long way, but many milestones remained to be covered.

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Educational Thoughts of Swami Pranabananda and its implication in 21st Century

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Abstract

India was under the bondage of the British nearly two hundred years. To liberate the country from this colonial yoke there started a vigorous decolonization movement throughout India. During this period of extreme crisis in every sphere of life mother India produced a galaxy of greatmen who laid down their lives for the sake of the country's salvation and to enrich our national life. **Swami Pranabananda** (1896-1941), the founder of Bharat Sevashram Sangha was one of them. He is still revered very much for his message of universal love, compassion for all humanity and social reforms. He tried to establish 'true Indian ideals' and to build up a glorious nation. He is a universal nation-building prophet at the present age. He said 'students are our future, the backbone of nation and society'. He always wanted to make the life of youths and students as an ideal son of India. He advised the youths that self-confidence, self-reliance, self-respect; self-realization is real asset in life. But recent reports of media show that the atmosphere in educational institution is full of unhealthy competition. This competition sometimes leads to rivalries, jealousy and hatred among the class fellows. Hence the present study may guide the aimless students and will help to build a strong powerful nation that produced a mass of youths having honest and moral character.

***Key Words*:** Colonial yoke, Decolonization, Universal love, Humanity, Social reforms, True Indian ideals' Nation-building prophet, Self-realization, Aimless students, Moral character.

Introduction

India was under the bondage of the British nearly two hundred years. To liberate the country from this colonial yoke there started a vigorous decolonization movement throughout India. The surging wave of this movement also lashed out at every

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nook and corner of Bengal as well as India. During this period of extreme crisis in every sphere of life mother India produced a galaxy of greatmen who laid down their lives for the sake of the country's salvation and to enrich our national life. Swami Pranabananda (1896-1941), the founder of Bharat Sevashram Sangha, was one of these luminaries. Former Justice Sir Manmatha Nath Mukherjee mentioned in 1941, "Today Paramhansa Ramakrishnadeva is no more and Swami Vivekananda also is not in our midst. But Swami Pranabananda was a living combined personality of great spiritualism and dynamic activity. I could not believe that such a towering personality will depart so soon at the age of only 44" (Shantananda, 1975). Swami Pranabananda realized and applied in his life, the principles of Self discipline, self- confidence and daily meditation. He tried to establish Indians on true Indian ideals and thus to build up a glorious India. He is a universal nation-building prophet at the present age. He used to say 'students are our future, the backbone of nation and society'. He always wanted to make the life of youths and students as an ideal son of India. He believed that renunciation, self-control, truth and continence are the highest ideals of life. But recent reports of news paper, media shows that corruption has been spread in every sphere of life. The atmosphere in educational institution is full of unhealthy competition. This competition sometimes leads to rivalries, jealousy and hatred among class fellows. So the study on the educational thoughts of Swami Pranabananda is highly needed for building an ideal society.

Objectives

- To explore Swami Pranabananda's ideas on education.
- To study the aims of education according to Swami Pranabananda.
- To find out the implications of his ideology in present time.
- To help the future researchers by showing the new areas of research in education.

Methodology

In this work, the investigator has attempted a descriptive and analytical study of Swami Pranabananda's thoughts with a view to find out the importance and significance in the present context by applying the philosophical method. Basically content analysis method is used. Historical method is also considered. The descriptive research technique or content analysis method based on intensive library work has been done. Here philosophical method is adapted and qualitative analysis is followed.

Data collection

In this work, both primary and secondary sources are taken into consideration. The primary sources are collected from the 'Sangha Geeta' and letters of Swami Pranabananda by visiting the Head office and branches of Bharat Sevashram Sangha. The secondary sources are taken from several books, journals, newspapers, memorial speeches on Swami Pranabananda.

Research Questions

- What are the educational ideas of Swami Pranabananda?
- Does Pranabananda's philosophy encompass educational ideals?
- What are the aims of education according to Swami Pranabananda?
- What are the suggestions of Swami Pranabananda for the development of individual as well as society?
- What are the unique characteristics of Swami Pranabananda's educational philosophy?

Educational Thoughts of Swami Pranabananda

Swami Pranabananda is a universal nation-building prophet at the present age. His message is also universal and meant to guide the bewildered humanity in the path of security and peace. His divine message is being published in the name of Sangha Geeta. He used to say that the students and the youths are able to get new thought, they can make a strong society and help to make a prosperous country, it is possible if the youths get proper education.

Philosophy of Swami Pranabananda

Swami Pranabananda, the great spiritual preceptor of our country, appeared to preach and propagate the ideals of morality, religion and to proclaim the majesty and glory of renunciation, self-discipline, devotion to truth and continence. He would have to adorn the sacred seat of the ancient Aryan Sages and thereby raise and lead a fallen nation on the path of morality and spirituality, sacrifice and service. His philosophy was published as Sangha Darshan. According to him- (Sangha Geeta, 1997)

Service to man is service to God

Service to suffering humanity is the motto of Swami Pranabananda. His mission is to help the distressed, to nurse the sick, to feed the hungry, to clothe the unclothed and to spread the ideal education.

- **Expansion is life and contraction is death:** this is the guiding principle of Swami Pranabananda. He believed that service to all humanity is life.
- **Renunciation, self-control, truth and continence** are the highest ideals of life. In his words 'Root your life to a very strong base of discipline, restraint, sacrifice and truthfulness. That will make you real men.
- **Unity and integration** is the way to progress and prosperity. He wanted to strive tirelessly and selflessly to awaken and unite all sections of the people to build strong India.
- **Universal emancipation and self-realization:** According to swami Pranabananda "the ultimate salvation and realization of the soul is the aim of life".
- **Self-oblivion is the real death:** it concerns the great obstacle that stands in the way of progress and achievement.
- **Patience, Fortitude, Endurance, and steadiness** are the real strength. Actually mental strength is the true strength.
- **Self confidence, Self-reliance and Self-respect** can be considered as true assets and reliable helpers.
- **Energy, Enthusiasm and Perseverance** are the real friends. Energy is necessary to work. Perseverance is required in the form of incessant endeavour until realization of the objective. This combination determines success in all fields of endeavour.
- **Regularity and Punctuality** are essential requirements of all who aim at development.
- **4M's Philosophy:** He uttered, "this is the age of ***Maha-jagaran***, (Age of Universal Awakening), ***Maha-milon***, (Age of Universal Unification), ***Maha-samanyay***, (Age of Unversal Synthesis) and ***Maha-mukti***,. (Age of Universal Salvation). (Ghosh,1995)

Aims of Education

After scrutinizing the biographical books, letters, journals on Swami Pranabananda, it can be perceived that the aim of education is-

- Spread of ideal education: Swami Pranabananda wanted to spread the ideal education to makes true men and build strong powerful nation.
- Moral and Spiritual Education: He came forward to build up the nation on the basis of spiritual and moral ideas; so he wanted to reintroduce spiritual and moral education.

- Self-realization: The ultimate aim of education is to develop self-realization, universal emancipation.
- Formation of good character: In his words "Moral character is strength, which enables men to struggle valiantly. Weak moral character corrodes a person. Keep it up at all cost".
- Self-control of students and youths. He said " Self control is at the root of health, happiness, peace and power"
- Observation of Brahmacharya: Swami Pranabananda strongly emphasized the need for the students to observe Brahmacharya. Its helps to improve and sharpen various psychological processes such as learning, thinking, remembering etc.
- Nation building Education: He said "Lack of manpower is our severest handicap. Development of manpower is the primary condition for reforming the society and rebuilding the nation. Our efforts shall flounder unless we develop real men. That is why I have taken up this task." (Atmananda.ed.2008. p.26)
- Developing a spirit of renunciation, Shraddha: He believed that without shraddha, spirit of renunciation, an individual can not proceed further.
- To promote Universal Brotherhood: He believed that an ideal system of education is one which imparts universal brotherhood. He declared 'this is age of Maha-milan, Maha-samannay'. So he organized Bharat Sevashram Sangha to promote universal brotherhood.

Curriculum of Education

Swami Pranabananda did not prescribe any specific curriculum, but his instruction seems to support the following curriculum:

- Vedic and Upanisadic studies.
- Spiritual literature.
- Technical and vocational Education.
- Art, culture, ethics.
- Physical education and yoga.
- Activity based curriculum
- Love for the motherland
- Value Education.

Method of Teaching

Swami Pranabananda's love for the poor, distressed, helpless and downtrodden people were unparalleled. He laid stress upon the following methods of teaching: (Adarsha Vidyarthi, 2006)

- Discussion method
- Lecture method
- Activity based method
- Teaching through Mother tongue
- Individual guidance and counseling
- Education through Self-experience
- Education through co-operation
- Nature is the great teacher
- Example is better than precept.

Development of Academic Institution

Swami Pranabananda was not only a visionary thinker but also applied his educational thoughts through different educational institutions. To build up physical, cultural, moral, spiritual and social development of students, his organization has established different educational institutions under different Boards and Universities. Some examples are present here-***Swami Pranabananda Vidyapith*** at Kudghat, Garia, Diamond Harbour, Kove & John (South America), ***Pranabananda Vidyamandir*** at Durgapur, Agartala (Tripura), Lamding, Silchar. ***Pranavananda International School***, Gurgaon, Haryana, ***Swami Pranavananda Centenary Shikshaytan*** at Rajganj, Jalpaiguri. ***Pranabananda Women's College*** at Dimapur (Nagaland), ***The Pranabananda Institute of Management and Technology*** in Kolkata. ***Industrial Training Institute*** at Muluk, Bolpur ***Swami Pranavananda Homoeopathic Medical College and Hospital***, Chhatarpur, M.P. ***Computer training centre*** in different branches. ***Physical and Yoga Education*****:** Pranabananda Byammandir, Karate centre, Yoga Anushilon Kendra. ***Vocational Training*****:** Paramedical course, sewing centre, Psychic and Spiritual Studies for values development.

Implications of the Study in Present Century

In the present century, a number of progressive methods of teaching and a variety of audio-visual aids are implemented to make the teaching-learning process in classroom more effective and attractive, but proper man making and character

building education is not being imparted. In the present system of education students fail to achieve self-reliance, self-confidence, self-sacrifice and self-discipline. Recent reports of media shows that increased violent juvenile crime, mischief, suicide etc have happened causing moral crisis in the society. So the aim of education 'all round drawing out of the best' is not being fulfilled. As a result, unemployment, violation of human rights, religious fanaticism, inhuman treatment of women, caste conflicts prevail to greater extent creating various socio-economic hazards. Swami Pranabananda considered idleness, lethargy, sensual activities to be the greatest enemies of human endeavor. He realized that peace and happiness can come only through unity and understanding among the people. In his words "*Building a moral character is of no less importance for students than the studies. No endeavour succeeds unless you have it.*"

So the present study may guide the aimless, baseless, restless youths and students. The study will create sympathy, fellow feelings, patience, self-reliance, self-control and prevent degradation of values. This work will help to build a strong powerful nation and produce a mass of youths having honest and moral character. Dr. Mukhopadhyay (1996) wrote, "Swami Pranabananda is relevant of the people, by the people, for the people. He is indeed a dynamic light of animation and innovation, organization and coordination, integration and unification".

Conclusion

Swami Pranabananda and his organization have done commendable work in the field of education and cultivation of mind. He dedicated his entire life to education – by his own example and by his teaching and work. He said that the goal of India is not in materialism but the ultimate goal is the need of morality, religion and philosophy. Propagation of religion, re-construction of the religious monuments and temples, service to the people, spreading education, social upliftment and building the nation were his motto of life. He devoted his entire life and energy for the society without much publicity. He said "*Rest is work and work is rest*". *The journey from one work to another is life*." (Atmananda, 1996). So he was beacon in his times and is the guiding spirit for contemporary Indian education.

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Evaluating the Effects of Digital Divide among Male and Female Students Access to and Ability of using Information and Communication Technology

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Abstract

Use of new technologies in higher education is an on-going reality today. However, the inequalities that exist among university students are the source of an important problem. Such inequalities need to be detected and analysed and therefore a study has been conducted on male and female students of the social science department, University of Calcutta to see whether there is a digital divide among these students in terms of ability and accessibility of ICT. The descriptive study seeks to explore the digital divide between male and female students of four social science departments namely, Education, History, Philosophy and Sociology. The term digital divide is conceptualized in three aspects- access to, usage and ability to use ICTs. A total of 400 students were participated in this study where 200 were male and 200 were female. The findings of the study shows that though there are no significant differences were noticed access to and usages of ICTs but there is a notable gender gap in ability of ICTs' usage. The results also found that female students are less efficient in downloading and installing software from internet. Moreover, they are not able to solve the virus related problems and aren't as competent in using MS word, excel and power point as male students are. The main reasons of this gender gap are mental dependency and less learning curiosity of female students in ICT sector.

***Key Words*:** Ability, Access, Digital Divide, Gender Gap, Purpose.

Introduction

Information and Communication Technology (ICT) as a major agent of globalization is one of the most recent "wonders" of the twenty-first century as well as a gift to humanity at large. The idea of global communication has brought the idea of the interdependent world into an everyday reality. ICT provides unlimited access to information in almost all spheres of human endeavour; such as education, business

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and commerce, politics and governance, music, entertainment, food, security, sports, weather, environment etc.

Considering the numerous advantages of ICT, and its vital role in teaching, research, and learning across the globe, ICT availability becomes an indispensable part of educational infrastructure. It is equally true that the growth and development of electronic publication has changed the nature of mode of delivering and accessing information in libraries. Consequently, the traditional print resources nowadays face challenges from their electronic counterparts in faster and timely delivery of information as well as in improved access.

The objectives of the National Mission on Education through ICT includes:

(a) Building connectivity and knowledge network among and within institutions of higher learning in the country with a view of achieving critical mass of researchers in any given field;

(b) Spreading digital literacy for teacher empowerment;

(c) Development of knowledge modules having the right content to take care of the aspirations of academic community and to address to the personalized needs of the learners;

(d) Standardization and quality assurance of e-contents to make them world class;

(e) Research in the field of pedagogy for development of efficient learning modules for disparate groups of learners;

(f) Making available of e-knowledge contents, free of cost to Indians;

(g) Experimentation and field trial in the area of performance optimization of low cost access devices for use of ICT in education;

(h) Providing support for the creation of Virtual Technological University;

(i) Identification and nurturing of talent;

(j) Certification of competencies of the human resources acquired either through formal or non-formal means and the evolution of a legal framework for it; and

(k) Developing and maintaining the database with the profiles of our human resources.

Today's world is changing rapidly with the spread of new information and communication technologies. But everyone has no equal access and ability to use such technologies that create a new kind of inequality named as the digital divide. The term "digital divide" was first used by Larry Irving, Jr. in the mid-1990s, who

was the former US Assistant Secretary of Commerce for Telecommunication and Communication, to define the gap between those who can buy the computer hardware and software and who cannot (Boje and Dragulanescu, 2003). Neither people have equal or universal access to ICTs nor they are equally or universally capable of using ICTs. There are several definitions provided by different researchers from time to time. According to Curtis Kularski, "the digital divide is composed of a skill gap and a gap of physical access to Information Technology (IT) and the two gaps often contribute to each other in circular causation. Without access to technology, it is difficult to develop technical skill and it is redundant to have access to technology without first having the skill to utilise it".

Pippa Norris described the digital divide as shorthand for any and every disparity within the online community, including access between developed and developing nations, the rich and poor, and men and women within those nations. She further describes the digital divide as a democratic divide between those who do and do not use the panoply of digital resources to engage, mobilise and participate in public life. Norris's definition, which differentiates ICT access on the basis of "haves" and "have-nots", has evolved and the digital divide has become a complex phenomenon that can be understood in a myriad of ways.

Van Dijk and Hacker discuss the idea that access to digital resources is a multi-faceted phenomenon consisting of four factors that work to regulate access; psychological, material, skills and usage. What began as a simple concept of there being "haves" and "have-nots" in the digital world, has evolved into a finer-grain conceptual framework.

The 4A perspective—awareness, access, attitudes and applications—focuses on digital gaps at the local/community level in addition to the national/global level, while the access-use definitions highlight the socio-economic factors, such as income and gender, that influence a person's ability to access ICT. The knowledge gap hypothesis similarly posits that people of high socio-economic status are at an advantage because they find out about new sources of information first and because they can afford access to them while they are new. In the study, the term digital divide is conceptualized as disparities in access to and ability in using ICTs.

As in post-modern society, information is power, so belong to this society an individual must have access and learn to use the new and emerging technologies. There can be a variety of digital divides, such as the gender divide, the age divide and the income divide, in a country (Singh, 2010). The paper has tried to examine gender digital divide. The gender digital divide refers to differences between male and students of University of Calcutta in having access to and ability in using ICTs

for educational and personal use. The digital divide has become a dynamic problem with the continuous development of information technologies (Singh, 2015). One of the targets of Sustainable Development Goals (SDGs) is universal access to internet. All over the world, there are 4 billion people having no access to the internet, almost 2 billion people having no mobile phone and approximately half a billion living in areas where exist no mobile signal (World Bank Report 2016).

World Internet Project (2009) found gender differences in internet usage in developed countries. 74% of men and 71% of women in Australia, 55% of men and 46% of women in Czech Republic, 45% of men and 39% of women in Hungary, 71% of men and 64% of women in Israel, 78% of men and 77% of women in New Zealand, 69% of men and 54% of women in Singapore, and 68% of men and 65% of women in United Kingdom are reported to use internet. Though in Sweden and in the United States an exception is found where the percentage of women who use the internet is higher than the percentage of men but men use the internet more frequently and more intensely.

The use of ICT in Higher education

Information and communication technologies consist of hardware, software, network and media for collecting, storing, processing, transmitting and presenting information (voice, data, text and image) as well as related services. ICTs can be divided into two components: Information and Communication Infrastructure (ICI) and Information Technology (IT). The former refers to physical telecommunications system and network (Cellular, voice, mail, radio and television) while the latter refers to hardware and software of information collection, storage, processing and presentation (Sarkar, 2012).

According to UNESCO (2002): ICT now permeates the education environments and underpins the very success of 21st century education. ICT also adds value to the process of learning and to the organization and management of learning institutions. Technologies are a driving force behind much of the development and innovation in both developed and developing countries. ICT is considered as an indispensible part in higher education. ICTs are being used in many areas such as: developing course materials; delivering content and sharing content; communication between learners, teachers and the outside world; creation and delivery of presentation and lectures; academic research; administrative support and student enrolment (Mandal & Mete, 2012). When applying ICT in higher education, learning is no longer confined within schedules and timetables (Hattangdi & Ghosh, 2008).

Digital Divide and Education

Due to technological advancement digital divide is a major problem in modern society. The digital divide typically exists between those in cities and those in rural areas; between the educated and the uneducated; between socioeconomic groups; and, globally, between the more and less industrially developed nations. Even among populations with some access to technology, the digital divide can be evident in the form of lower-performance computers, lower-speed wireless connections, lower-priced connections such as dial - up, and limited access to subscription-based content.

The reality of a separate-access marketplace is problematic because of the rise of services such as video on demand, video conferencing and virtual classrooms, which require access to high-speed, high-quality connections that those on the less-served side of the digital divide cannot access and/or afford. And while adoption of smart phone is growing, even among lower-income and minority groups, the rising costs of data plans and the difficulty of performing tasks and transactions on smart phones continue to inhibit the closing of the gap.

According to recent studies and reports, the digital divide is still very much a reality in Indian scenario.

Proponents for closing the digital divide include those who argue it would improve literacy, democracy, social mobility, economic equality and economic growth.

Measuring the Digital Divide among the Male and Female students

For this study the term 'digital divide' in two ways by the researchers firstly, those who possess a smart phone, personal laptop or desktop computers and Internet access vs. those who don't and those who are able to use smart phones, personal laptop or desktop computers and Internet vs. those who don't.

First order digital divide, in the study, is conceptualized as a gender gap in access to use ICTs measured by having a smart phone, having a laptop or a desktop computer, access to the internet on mobile phone and laptop or desktop computer and second order digital divide is conceptualized as a gender gap in the ability to use ICTs measured by the ability to web browsing, ability to use Microsoft word (Excel, power point), ability to install programs, ability to download software, ability to open and use an e-mail ID, ability to open and use an account on social networking sites. Besides first and second order digital divide, a gender gap in actual use is measured by the purpose of using ICTs (smart phone, laptop or desktop computer, internet) and amount of time spent using the internet/ amount of time spent online.

Few evidences are very interesting. Chen and Wellman (2004) found that gender affects access to and use of the Internet in a significant way. They revealed that females are less likely than males both to access and to use the Internet. Ono and Zavodny (2003) found that a gap in frequency and intensity of Internet use exists between genders. Weaver (2003) found that compared to young men, young women were not sure of their ability with computers. Bimber (2000) explored a gap between men and women in terms of accessing and using the Internet because of their differences in socioeconomic status. Badagliacco, (1990) gender stereotypes prevail in society that men are more interested in and more competent at using ICTs. So, the new technologies are the domain for men.

Objectives

The objectives of the study are to see the gender differences in both access to and ability of using ICTs as well as how male and female students use ICTs differently. The main objectives of the paper are:

1. To explore the gender gap in access to ICTs among the students of the five social science departments, University of Calcutta.
2. To assess the gap in ability to use ICTs between male and female students.
3. To find out the gender gap between the students in actual use of ICTs.

Methodology

For the present study, Evaluating the Effects of Digital Divide among Male and Female Students Access to and Ability of using Information and Communication Technology, a descriptive survey method is used by the researcher. In the present study the investigator gathered data from the Social Science Departments of University of Calcutta and to find out the digital divide that exits in terms of access and use of information communication technology among male and female students. The population of this study is considered as the Second Year, female M.A. students in the five Social Science Departments, University of Calcutta, Alipore Campus.

The sample in this study consisted of 400 students, (200 male and 200 female) of the Social Science departments, University of Calcutta, Alipore Campus. The study focuses on the comparative analysis between male and female students. Therefore, equal number of male and female students was selected to ensure the real situation. The students were purposively selected by using purposive sampling technique from the five academic disciplines (Education, History, Philosophy, Sociology and Political Science) of the University. Purposive sampling is the sampling that is undertaken by the researcher to serve some of his specific purposes. The sample selection task was simplified by using systematic random sampling strategy.

Tools of research are basically used for data collection. The tools vary from one research type to another. The tool used in the present study, is a self- made questionnaire with closed end items for the University students. The items assessed the following aspects- using smart phone and laptop/desktop without difficulties, ability of internet browsing, ability to open an email account, ability to open a social networking site, ability to install an IMO, Whatsapp and Viber software, ability to install Microsoft Office software, ability to use MS Word, MS Excel, MS power point, ability to install any computer games, computer operating system, ability to download PDF or Power Point files, any software, any entertainment contents (Movie, Drama, Songs etc.) from website, ability to remove virus from electronic devices. According to the mentioned points ability in ICT usage has been measured and after that achieved score represents the actual ability of the respondents.

The students had to put a tick mark against their preference either on 'yes' or a 'no.'

Data sheet was used to collect information regarding each student which included the residential address, family income, name of the institution, Subject of study, and the type of ICT they use in their daily lives.

Data Analysis and Interpretation

Table 1: Demographic Data of the Participants

	Gender		Department					Area of Residence		
	Male	Female	Education	History	Philosophy	Sociology	Political Science	Rural	Semi-Urban	Urban
N	200	200	80	80	80	80	80	88	160	152
%	50	50	20	20	20	20	20	22	40	30

Table 2: Uses of Various devices by the Respondents

Gender	Smartphone		Internet access on Mobile Phone		Personal Computer/ Laptop		Internet connection on Computer/Laptop	
	Number	%	Number	%	Number	%	Number	%
Male	156	78	180	90	124	62	130	60
Female	188	94	192	96	86	43	80	40

Among all the participants of the study, about 78% of the male students use smart phone whereas 94% of the female use smartphone. From the responses of the student it is found that female students are getting more access to use a smartphone.

Not only that, more females, compared to males, have internet access to their smart phones. The students who own a smartphone, among them about 90% of the male students use internet on their smartphones, whereas 96% of the female students have internet access on their personal cell phone.

In table-02, empirical data show a relatively large gender gap in ownership of personal laptop/desktop because 62% of total male students of the study own a personal laptop/desktop computer whereas only 43% of the total female participants have a personal laptop/desktop computer. In the case of personal laptop/desktop, internet access is not same as in smartphone. There is a clear gender gap found by the researcher. 60% of the male respondents who own a personal laptop/ desktop have internet access on their device but only 40% of the female students who own a personal laptop/desktop have internet access on their device. Both male and female respondents report that the economic condition of their family is responsible for such gender gap in ownership of personal laptop/desktop.

Table 3: Use of Different Sites by the Respondents

Gender	Access to internet sites		Messenger		Whats app		Viber		Facebook		Twitter		Job Sites		e-news paper	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Male	148	74	134	67	152	76	28	14	178	89	64	32	90	45	112	56
Female	110	55	162	81	180	90	24	12	192	96	24	12	56	28	62	31

N stands for number of Respondents uses the Different Sites

Internet has become very popular among young generation for communication with one another as well as a popular medium for educational purposes. The study shows that Social networking sites like Whatsapp, Viber, Facebook, Twitter and Messenger are almost used by both male and female participants. Some participants use internet for reading online newspapers but their number is very low. The percentage of male students access e-newspaper more than female students. The job sites are accessed more by the male students than by the female students. Table 3 shows the real scenario of internet usage of the participants and most of them report that they mainly use internet for the purpose of using social networking sites.

Table 4: Purposes of using Internet by the Respondents (in %) Using

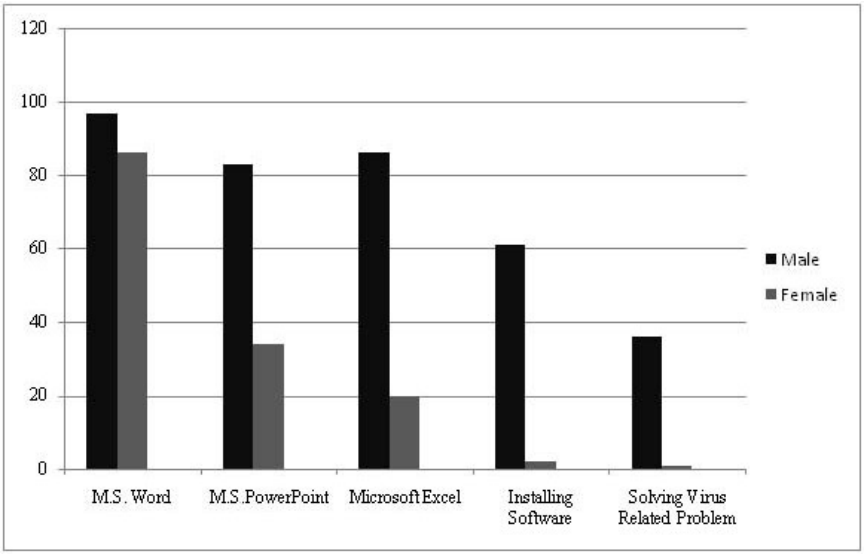
	Using Social Networking Sites	Download-ing and video files	Chatting	To get infor-mation	For e-mail	Education-al Purpose	Play games	To Pass leisure time
Male	85	96	77	98	91	82	89	56
Female	92	59	89	88	53	64	45	86

Table 4 shows the purpose of using internet of the respondents for various reasons. Female participants use internet as a source of entertainment more than the male participants. Compared to male participants, female students show less preference to use e-mail regularly. Moreover, male students are more frequent in downloading different types of internet contents like PDF, Mp3, music videos, drama, movies etc. by using internet than female students. In the case of searching any kind of information, male participants are one step ahead from female. The male participants are also more inclined towards playing games. But it is interesting to note that female students like spent more time on the internet for passing their leisure time. They engage themselves either in chatting with friends or they are engaged in online shopping. 82% of the male students use internet for their educational purpose whereas the percentage of female using internet for educational purpose is 64% which is low compared to the male participants.

Ability to Use ICT by the Male and Female Students

In the case of internet access and usage, digital divide is not so significant but a significant gender gap is visible in the ability of using ICTs. The graph shows ICT ability of the students that male participants are more efficient in using ICT contents in various ways, whereas female participants are able to use social networking and entertainment sites. Male are more capable in using MS office, installing software and solving virus related problem than female respondents.

Comparative analysis between the ability of using ICT by male and female respondents



Conclusion

The comparative study examines whether there are differences in male and female students access to, usage and ability of using ICTs. After analysing the responses of the participants it can be concluded that both male and female students have more or less equal access to smart phone and they use internet more for using social networking sites, chatting and entertainment purposes. But there is a significant gender gap in ability of ICT usage. Females are capable of using ICTs for communication purposes but they are less competent in and installing software whereas males show their efficiency in these aspects. Thus it can be concluded that gender gap is a factor for Digital Divide among the University students.

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Gender Differences in Mathematics Perception among Students of Kolkata

Prabir Ghosh* and Aditi Ghose**

Abstract

Mathematics is deemed to be an essential part of education. It is a compulsory part of school learning. Unfortunately, mathematics is not always looked back at with fond memories of school. Rather, it is about unwilling schedules of homework and practice, to be got over at the earliest opportunity. The way students perceive mathematics is bound to affect their achievement in the subject. Moreover, mathematics is often fallaciously conceived of as a subject more suited for male predilections.

This investigation, therefore, assesses the perceptions of students in Secondary and Higher Secondary schools in Kolkata and makes a gender wise comparison of the same. The sample consisted of 660 students.The tools of the study consisted of three opinionnairesto assess students' experiences of mathematics, their image of the subject and their manifestation of the relationship with the subject. The results of the study showed that while experience of mathematics and the manifestation of the relation with it were high average, the image of mathematics was less so. Gender wise, t-test showed that boys reminisced significantly better experience with mathematics and manifestation of their relation with it than girls, the image of mathematics did not show significant difference.

***Key Words*:** Gender Difference, Mathematics Perception, Experience, Image, Manifestation.

Introduction

Education is one of the basic rights of children. It initiates students into the human culture that has been built up over the ages. In the modern world, a life without adequate basic education is a life without the essential tools of living. In particular, digitization and logical induction and deduction has taken over much of our existence.

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For this, mathematics is deemed to be an essential part of education. Hence it is a compulsory part of school learning.

Mathematics is not always looked back at with fond memories of school. Rather, it is about unwilling schedules of homework and practice, to be got over at the earliest opportunity. Debates rage over school boards about mathematics being a compulsory part of the curriculum at the Secondary stage (The Telegraph, 20.06.17).

On the other hand, mathematics is known to become a way of life for many students who go on to pursue mathematical vocations like engineering, or mathematics itself. The most sought after vocation in the contemporary world is after all the computer programming experts.

Thus, mathematics is perceived in several different ways by people who have different inclinations and abilities, and indeed different types of intelligence (Gardner, 1983). Schools and teachers, as well as parents, however, have the onus of ensuring that the citizens of tomorrow acquire the essential mathematical skills as well as the mind sets for living in the future society. Mathematics has to be seen as a friend in need, and even as an amusing past time.

Generally, mathematics is perceived as a boys' subject rather than a past *t*ime suited for girls. This attitude has been cultivated over generations and is endemic among societies (Lloyd, Walsh & Yailagh, 2005). Boys are expected to aspire to vocations or the study of engineering and the sciences, whereas girls in many homes are expected to end up as home makers who do not require mathematical expertise. Obviously, this results in girls and boys perceiving mathematics through difference lenses (Nematullah, Yousaf&Gulshan, 2015). While this state of affairs requires to be altered, it may be necessary to investigate the actual differences in our society.

Several investigations have been carried out to this effect in other societies. Ciftci (2015) in Turkey investigated the effect of the perception of the quality of mathematics education among 638 secondary school students. The tools of the study included Mathematics Education Quality Scale, Mathematics Anxiety Assessment Scale, Placement Test and Grade Point Average (GPA). The data was treated by conducting ANOVA and path analysis. The findings indicated that perception of the quality of mathematics education positively affects mathematics achievement and negatively affects mathematics anxiety.

The study by Allen (2011) is pertinent for the study of perceptions of mathematics. It is based on perceptions of college students on successful strategies for reducing mathematics anxiety. This qualitative phenomenological study was

focused on understanding college students' perceptions regarding mathematics anxiety. This study implies that positive social change can be achieved by providing practical classroom strategies that can reduce students' mathematics anxiety. By reducing mathematics anxiety, more students may elect to take mathematics related courses and enter rewarding mathematics related careers.

Skaalvick and Skaalvick (2011) made two longitudinal studies on mathematics self-perception, i.e., self-concept and self-efficacy of 246 middle school students and 484 high school students. Over a span of two years they found that self-concept and self-efficacy is an important mediator of academic achievement. Academic achievement in this case, was measured by the last two evaluation scores of students in the schools.

Billington et al (2007) in their study 415 students of physical science and humanities found gender differences on 'Empathy Quotient' and 'Systemizing Quotient'. They found that while the former is more prevalent among females, the latter was more prevalent among males. They concluded that having more Systemizing Quotient better enabled males to enter science.

Halpern et al. (2007) in their paper on sex differences in Science and Mathematics have dwelt on several issues. While doing Science and Mathematics requires several types of cognitive abilities, women are more proficient in verbal abilities and men are better at visuospatial abilities. Besides, the authors relate gender differences to cultural practices, early experiences, biology and other sociocultural influences. These tend to affect the difference in numbers of men and women in Science and Mathematics related vocations.

Brandell et al (2003) conducted a project (Ge Ma - Project) on student attitudes towards mathematics in Sweden. They constructed a questionnaire which consisted of questions about 'others and mathematics' and about themselves as individuals and mathematics. Their finding shows that mathematics is 'gender stereotyped' from the ninth year of school and many older students perceive mathematics as a 'male domain'. A comparison of the Swedish students was made by applying the questionnaire to Australian students. It showed that Swedish students tended to view mathematics as a male domain more than Australian student. In fact, some Australian students 'related mathematics positively and strongly with women'

These and several other findings indicate out that gender differences regarding image of mathematics is an issue that requires attention.

Mathematics is thus considered to be one of the most important core subjects in the school curriculum.

The investigator therefore examined the perceptions regarding mathematics of secondary and higher secondary students and compared these on a gender wise basis. The perceptions of mathematics were examined with respect to –

A. Experience of mathematics

B. Image of mathematics and

C. Manifestation of the relationship with mathematics of secondary and higher secondary school students.

Objectives

01. To ascertain the perception of mathematics of students in secondary and higher secondary schools with respect to their –

A. Experience of mathematics

B. Image of mathematics

C. Manifestation of the relation with mathematics

02. To compare the perception of mathematics of students in secondary and higher secondary schools on a gender-wisebasis.

Variables

The variables of the study are

Perception of mathematics: This is about the way mathematics is perceived(Allen, 2011). This consists of the following dimensions –

Experience with mathematics (EM): Students' experience with the subject.

Image of mathematics (IM): Students' mental representation of mathematics.

Manifestation of the relationship with mathematics (MM): The actual behaviour of students when they are faced with mathematics as a subject of study or in a mathematical situation.

Gender: This is a categorical variable indicating the sex of the participants.

Gender 1: Girls

Gender 2: Boys

Sample

The population for the study consisted of secondary and higher secondary students of Kolkata. In particular, children from Class VII to XII were the target population.

The sample was incidental and selected as follows –

Table - 1

Girls (1)	Boys (2)	Total
350	310	660

Tools

Opinionnaire: Three opinionnaires from Jahan (2001) were adapted for this study. The adapted versions were as follows:

Experience with mathematics (EM).

Image of mathematics (IM).

Manifestation of relationship with mathematics (MM).

The descriptions of the three opinionnaires are

Experience with mathematics (EM)

This opinionnaires sought to assess the student's experiences with regard to mathematics in connection with:

i. Teachers of Mathematics.
ii. Participation in mathematics class.
iii. Peers and friends.
iv. Study habit.
v. Daily life.
vi. Parents.

Image of mathematics (IM)

This opinionnaire sought to find out the image of mathematics formed by the respondent with regard to:

i. Gender specific image.
ii. Utilitarian image.
iii. Discipline oriented image.

Manifestation of relationship with mathematics (MM) This opinionnaire sought to find out the relationship of the respondent with mathematics by focussing on its manifestation with respect to:

i. Classroom situation.
ii. Examination situation.
iii. Self-study situation.
iv. Discipline oriented situation.

Scoring Principle All the three opinionnaires had statements that were to be responded through Likert Type responses.The scoring principle was

Table - 2

Response	Positive statement	Negative statement
Strongly Agree (SA)	5	1
Agree	4	2
Indifferent	3	3
Disagree	2	4
Strongly Disagree	1	5

Validity and Reliability

Regarding all three opinionnaires

All three opinionnaires were subjected to content validation by five experts. The three opinionnaires, had a total of 80 items. The reliabilies of the opinionnaires were measured by the test retest method on a sample of 200 representative students and found to be highly significant.

The local norms of the opinionnaires were established by means of descriptive analyses (Anastasi&Urbina, 1997).

Table - 3

		EM	IM	MM
N	Valid	200	200	200
	Missing	0	0	0
Mean		111.79	36.30	125.50
Std. Deviation		13.524	4.393	18.512
Percentiles	25	102.00	34.00	117.00
	50	112.00	37.00	125.00
	75	120.00	39.00	133.00

Major Findings

Objective 01 The scores of the participants for EM, IM and MM were tabulated and subjected to descriptive analysis.

Table – 4: Descriptive Analysis of Whole Sample

	EM	IM	MM
N	660	660	660
Mean	103.32	36.60	115.85
Standard Deviation	8.448	3.967	9.846
Skewness	.284	-.069	.103
Standard Error of Skewness	.095	.095	.095
Kurtosis	-.261	-.456	-.267
Standard Error of Kurtosis	.190	.190	.190
Range	42	20	52
Minimum	83	28	91
Maximum	125	48	143

Observation

All the distribution of scores were examined and found to be continuous. The skewness and kurtosis were also found to be within the prescribed limits of normality (Garson, 2012).

EM: The mean score is average as it is within M-SD and M+SD of the standardization sample. The mean score is in the third quartile of the distribution of the standardization sample which makes it high average.

IM: The mean score is average, as it is within M-SD and M+SD of the standardization sample. The mean score is in the 2nd quartile of the distribution of the standardization sample which makes it a low average.

MM: The mean score is average, as it is within M-SD and M+SD of the standardization sample. The mean score is in the third quartile of the distribution of the standardization sample which makes it high average.

Objective 02 The scores for EM, IM and MM were subjected to descriptive analysis on a Gender wise basis.

Table - 5: Descriptive analysis of Gender

Gender			EM	IM	MM
1	N	Valid	350	350	350
		Missing	0	0	0
	Mean		101.75	36.56	113.99
	Std. Deviation		7.213	3.781	8.986
	Skewness		.083	-.198	.143
	Std. Error of Skewness		.130	.130	.130
	Kurtosis		-.519	-.716	-.448
	Std. Error of Kurtosis		.260	.260	.260
	Range		35	18	48
	Minimum		87	28	95
	Maximum		122	46	143
2	N	Valid	310	310	310
		Missing	0	0	0
	Mean		105.11	36.64	117.94
	Std. Deviation		9.351	4.172	10.356
	Skewness		.171	.034	-.069
	Std. Error of Skewness		.138	.138	.138
	Kurtosis-.527		-.297	-.135	
	Std. Error of Kurtosis		.276	.276	.276
	Range 42		20	52	
	Minimum		83	28	91
	Maximum		125	48	143

Observation

EM: Mean of Boys is higher than Girls. Standard Deviation of Boys is higher than Girls and this is reflected in the respective ranges and maximum and minimum scores of Boys and Girls.

IM: Mean of Boys and Girls are nearly same. Standard Deviation of Boys is higher than Girls and this is reflected in the respective ranges and maximum and minimum scores of Boys and Girls.

MM: Mean of Boys is higher than Girls. Standard Deviation of Boys is higher than Girls and this is reflected in the respective ranges and maximum and minimum scores of Boys and Girls.

Comparison The gender defferences were compared by t-test.

The hypotheses for this are as follows:

H_{OEG}: There is no significant Gender wise difference in mean Experience with mathematics.

H_{OIG}: There is no significant Gender wise difference in mean Image of mathematics.

H_{OMG}: There is no significant Gender wise difference in mean Manifestation of the relation with mathematics.

Table – 6: Independent Samples Test

	Levene's Test for Equality of Varience		t-test for Equality of Means			
	F	Sig.	t	df	Sig.(2-tailed)	Mean Difference
EM	19.218	.000	-5.200	658	.000	-3.361
			-5.121	578.295	.000	-3.361
IM	1.364	.243	-.254	658	.799	-.079
			-.253	627.894	.801	-.079
MM	1.539	.215	-5.243	658	.000	-3.948
			-5.198	615.994	.000	-3.948

***Observation*:**

- Table - 19 shows that the Gender wise difference between mean Experiences in mathematics is highly significant. H_{OEG} is to be rejected. Table - 16 shows that mean Experience in mathematics of Boys is higher than that of Girls.
- Table - 19 shows that H_{OBG} is to be accepted. The difference in mean Image of mathematics between Boys and Girls is not significant.
- Table - 19 shows that the gender wise difference between mean Manifestations of the relation with mathematics is highly significant. H_{OMG} is to be rejected. Table - 16 shows that mean Manifestation of the relation with mathematics of Boys is higher than that of Girls.

***Discussion*:**

The above findings imply important consequences for the teaching and learning of mathematics. They can also be accounted for by looking at learning situations and the influences thereon.

The fact that, on the whole, mean Experience with mathematics and Manifestation of the relation with mathematics are high average is promising for the educational scenario. This means that students have good Experience in class and the outward signs of their affinity to mathematics are likewise positive. Yet, the mean Image of mathematics is on the lower side which shows that the subject still retains, at least partially, the intimidating vision of mathematics. This less than satisfactory Image of mathematics has been created by society which considers the subject to be the omnipotent, but illusively unattainable.

Much of the above may stem from the popular idea of mathematics as being in the higher echelons of academia. Moreover, its abstract nature which is further perpetrated by usual class room practices, further establishes the stark Image of mathematics and retains it as children grow up.

Nervousness about mathematical performance and anxiety about solving problems often make students quail even at the thought of mathematics classes and more so prior to and during examinations. Yet, the findings in this investigation show that the Experience students have in mathematics classes is not so bad. Their expression about their feelings about mathematics is also not bad. It is possible that this "change of heart" is a result of better teaching, more attractive and explicative text books and less pressure in examinations in contemporary school practices. Improvement in teaching practices in mathematics and its beneficial effects on students have been noted in several studies (Mensah, 2013; Cheung, 1998; Yara, 2009; Johan, Linnanmaki&Aunio).

***Revelations*:**

The above findings point to certain pertinent aspects of mathematics teaching and learning. It is heartening to know that students retain memories of good experiences in mathematics classes. They also claim to exhibit positive behavior when confronted with mathematical situations. However, the inhibiting image of mathematics persists and serves to thwart many of them from mathematical pursuits.

Gender differences that emerge from the study show that boys have better experiences of mathematics and exhibit more positive manifestation of it than girls. This is expected, given the popular observations that can be noted in society. This, therefore, attests the need for dispelling the idea of mathematics as a masculine domain. It further shows how imperative it is to interest girls in mathematics and thus prevent them from being deprived of successful careers. In this respect, it is inspiring to know that the IIT's are taking special steps to admit girls (The Times of India, April16, 2017). However, more necessary than this step,

is to initially initiate girls into the lofty echelons of mathematics by generating interest in the subject and by motivating them in the early years.

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ICT uses and Empowerment of Female Undergraduate Students belonging to the Muslim Minority Community

Nafisa Khatun and Mudassar Nazar Baidya***

Abstract

The present study aimed to study the use of ICT among female undergraduate students belonging to the Muslim minority community in West Bengal. It is also directed to study the empowerment of female undergraduate students belonging to the Muslim minority community in West Bengal through ICT. For the current study, the researchers used a multi-phasic cluster sampling method with 100 female students from the Muslim minority community studying at the UG level in Arts. The samples were collected from 10 government-aided general degree colleges in West Bengal. An ICT use scale was employed to assess the use of ICTs by female undergraduate students belonging to the Muslim minority community. The scale was comprised of 50 items considering eight dimensions of ICT. The norm of the scale was set to interpret the data. Out of 100 samples, 10 female students belonging to the Muslim minority community were taken to form a focus group. An interview schedule was applied to the focus group to explore the impact of different levels of ICT use on the female students' personal, social, educational, and economic empowerment. The result reveals that more than 60% of the female students belonging to the Muslim minority community have a low level regarding the use of ICTs and 34% of the students have a high level regarding the use of ICTs. Those who have a high level regarding the use of ICTs have a moderate level of personal empowerment, while a low level of personal empowerment is found among female students who use ICTs occasionally. ICTs have an impact on the female student's social empowerment, though the level of ICT use does not have a positive impact on the female student's economic empowerment. The use of ICTs has had a positive impact on the educational empowerment of female students in higher education. Female students belonging to the Muslim minority community need to be encouraged to use ICT more to achieve high-level empowerment through ICT.

Key Words**:** ICT use, UndergraduateStudents, Minority Community, Empowerment.

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Introduction

West Bengal has a female population of 120.14 lakhs, (Muslim) according to the Census Report (2011). The female literacy rate in West Bengal is 52%, one of the lowest in the country. Between the years 2013 and 2018, Muslim enrolment has increased by 37%. In the same period, female Muslim enrolment increased by 46%. According to a survey by the National Council for Applied Economic Research (NCAER), 49% of Muslims enrolled in higher education are women. In the present scenario, the usage of ICT and the empowerment of Muslim women students in higher education is an important area of research.

Aryanathu, V. and Venkataravi, R. (2018) observed that ICT gadgets are part of women's lives. Women are enabled to do their daily work effectively. ICT gadgets are enabling technology for rural women. Although the women's economic situation and geographic location act as barriers to their use of ICT devices. According to Gupta (2018), female students who use ICTs at a high level have high empowerment through ICT; female students who use ICTs at an average level have average empowerment through ICT; and female students who use ICTs at a low level have low empowerment through ICT. Islam, B. M. N. (2017) studied on 'Problems and Prospects of Muslim women in higher education' and observed that due to a shortage of colleges, Muslim women are lagging behind in higher education. Jana, P. K. (2016) revealed that the percentage of Muslim women who completed primary, upper primary, secondary, and higher secondary education in West Bengal was significantly lower than that of non-Muslim people in India and West Bengal. Talukdar, S. (2015) concluded that the state of education among Muslim women is not even remarkable, though it has increased from the past. The cultural traditions do not allow Muslim girls to take advantage of co-educational schools, especially if they are far away from their homes.

In a pluralistic society like ours, empowering Muslim women essentially means acquiring skills and potentialities that help women adjust better in society, providing them with the opportunity to overcome social, economic, and educational barriers, and encouraging them to participate in economic, social, and civic activities in order to bring about a desirable overall improvement in their quality of life. ICT is the most influential instrument for women's empowerment. There are many forms and tools of ICT, such as gadgets, print media, information sharing tools, search engines, social media, browsers, websites, application software, storage devices, etc. These modes of ICT are becoming an inseparable part of our day-to-day lives. There is a definite relationship between ICT and women's empowerment. It will be very interesting to know the role of ICT in the empowerment of Muslim female students in higher education in West Bengal.

Objectives

1. To study ICT uses of undergraduate students belonging to the Muslim minority Community.
2. To study the empowerment of undergraduate students belonging to the Muslim minority community through ICT.

Methodology

Design/Method: Descriptive Survey.

Population: All the female undergraduate students belong to the Muslim minority community of the Arts stream from two regions (North 24 Parganas and Howrah) of West Bengal.

Sample and Sampling Procedure:
Through Multi-phasic Cluster Sampling, 100 female students belonging to the Muslim minority community studying at under graduate level were selected from 10 colleges in Howrah and North 24 Parganas.

Chart of the sample

Region of West Bengal	Name of degree colleges	Number of Muslim women students
24 PGS (N)	Mahadevananda Mahavidyalaya	10
24 PGS (N)	Bamanpukur Humayun Kabir Mahavidyalaya	10
24 PGS (N)	Barasat College	10
24 PGS (N)	Basirhat College	10
24 PGS (N)	Dum Dum Motijheel College	10
Howrah	Lalbaba College	10
Howrah	Bijoy Krishna Girls' College	10
Howrah	Ramsaday College	10
Howrah	Sovarani Memorial college	10
Howrah	Udaynarayanpur Madhabilata Mahavidyalaya	10
	Total	100

Tools

1. A scale to assess the use of ICT by female undergraduate students belonging to the Muslim minority community. (ICT use scale)
2. An Interview Schedule for focus group.

Description of ICT use scale

SL. NO.	Dimensions	Total Items
1	Gadgets	10
2	Print Media	5
3	Information sharing tool	6
4	Search engine	4
5	Social media	10
6	Browser	5
7	Websites	6
8	Storage Devices	4
	Total Items	**50**

Scoring of responses in ICT use scale

SL. NO.	Response	Score
1	Never	0
2	Sometimes	1
3	Always	2

Every student can receive a minimum of 0 and a maximum of 20 points in dimension gadgets; a minimum of 0 and a maximum of 10 points in dimension print media; a minimum of 0 and a maximum of 12 points in dimension information sharing tools; a minimum of 0 and a maximum of 8 points in dimension search engines; a minimum of 0 and a maximum of 20 points in dimension social media; a minimum of 0 and a maximum of 12 points in dimension websites; a minimum of 0 and a maximum of 100 total scores can be obtained on the whole scale.

Norm of the ICT use scale

High	Average	Low
71 & above	50-70	49 & below

Description of the Interview Schedule

SL. NO.	Dimensions	Items
1	Personal Empowerment	06
2	Social Empowerment	04
3	Educational Empowerment	05
4	Economic Empowerment	05
	Total	20

Techniques for Data analysis

The data was analysed quantitatively and qualitatively. For quantitative analysis, percentages (%), means, standard deviations (SD), graphs, and tables were used. The data collected from the focus group (10 undergraduateMuslim female students) were analysed qualitatively.

Data Analysis and Interpretation

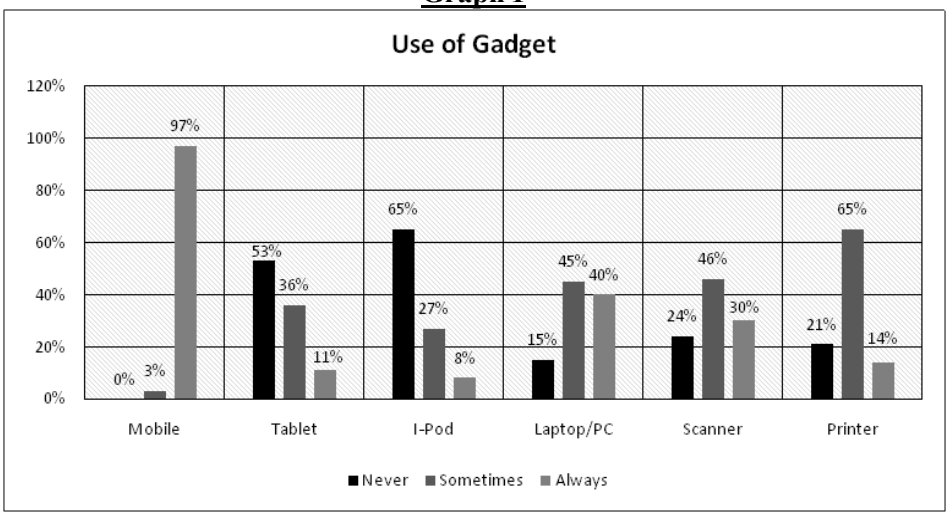
ICT uses of undergraduate students belonging to the Muslim minority Community

The data was analysed and interpreted using percentages, and the results are shown in tables (A to H) and graphs (1 to 8).

Table 1 : Use of Gadget

SL. NO.	Items	Never		Sometimes		Always	
		N	%	N	%	N	%
1	**Mobile**	**0**	**0%**	**3**	**3%**	**97**	**97%**
2	**Tablet**	**53**	**53%**	**36**	**36%**	**11**	**11%**
3	**I-Pod**	**65**	**65%**	**27**	**27%**	**08**	**08%**
4	**Laptop/PC**	**15**	**15%**	**45**	**45%**	**40**	**40%**
5	**Scanner**	**24**	**24%**	**46**	**46%**	**30**	**30%**
6	**Printer**	**21**	**21%**	**65**	**65%**	**14**	**14%**

Graph 1



As per the data shown in the table 1 the 97% of the Muslim female students of higher education under study said that they use Mobile always while 3% of the students reported that they use Mobile sometimes whereas no Muslim female students was found to have reported that she does not use Mobile at all.

The table represents that 11% Muslim female students of higher education under study use Tablet always, 36% out of them use it Sometimes while 53% out of them never use it.

The table shows that 08% Muslim femalestudents of higher education under study use I-pod always, 27% out of them use it Sometimes while 65% out of them never use it.

The table reveals that 40% Muslim female students of higher education under study use Laptop/PC always, 45% out of them use it Sometimes while 15% out of them never use it.

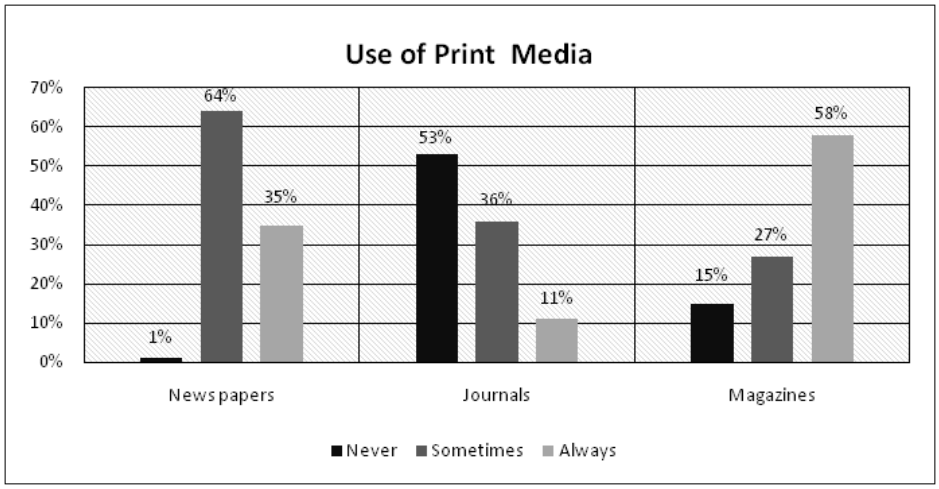
The table represents that 30% Muslim female students of higher education under study use Scanner always, 46% out of them use it Sometimes while 24% out of them never use it.

The table shows that 14% Muslim femalestudents of higher education under study use Printer always, 65% out of them use it Sometimes while 21% out of them never use it.

Table 2 : Use of Print Media

SL. NO.	Items	Never		Sometimes		Always	
		N	%	N	%	N	%
1	News papers	1	1%	64	64%	35	35%
2	Journals	53	53%	36	36%	11	11%
3	Magazines	15	15%	27	27%	58	58%

Graph 2



The above table shows that 35% Muslim female students of higher education under study useNewspapers always, 64% out of them use it Sometimes while 1% out of them never use it.

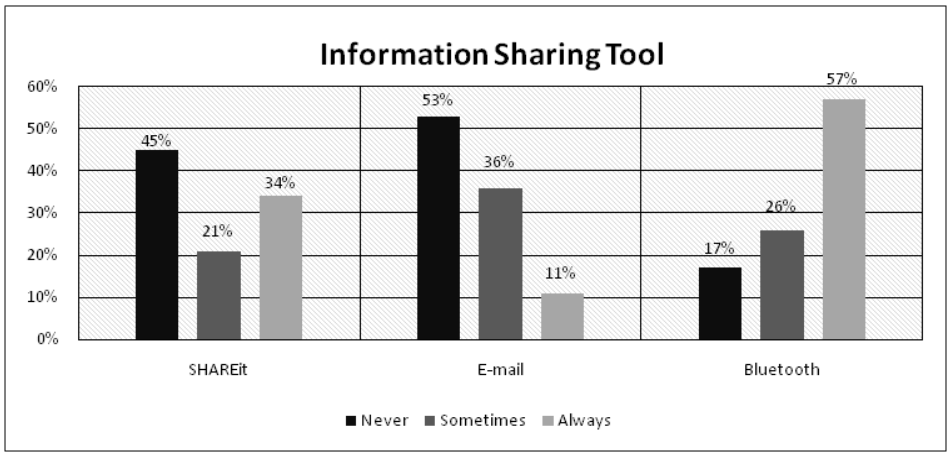
The table also shows that 11% Muslim female students of higher education under study use Journals always, 36% out of them use it Sometimes while 53% out of them never use it.

The above table represents that 58% Muslim female students of higher education under study use Magazines always, 27% out of them use it Sometimes while 15% out of them never use it.

Table 3 : Information Sharing Tool

SL. NO.	Items	Never		Sometimes		Always	
		N	%	N	%	N	%
1	SHAREit	45	45%	21	21%	34	34%
2	E-mail	53	53%	36	36%	11	11%
3	Bluetooth	17	17%	26	26%	57	57%

Graph 3



The above table represents that 34% Muslim female students of higher education under study use SHAREit always, 21% out of them use it Sometimes while 45% out of them never use it.

The table also shows that 11% Muslim female students of higher education under study use E-mail always, 36% out of them use it Sometimes while 53% out of them never use it.

The table reveals that 57% Muslim female students of higher education under study use of Bluetooth always, 26% out of them use it Sometimes while 17% out of them never use it.

Table 4 : Use of Search Engine

SL. NO.	Items	Never		Sometimes		Always	
		N	%	N	%	N	%
1	Google	2	2%	69	69%	29	29%
2	Yahoo	53	53%	36	36%	11	11%

Graph 4

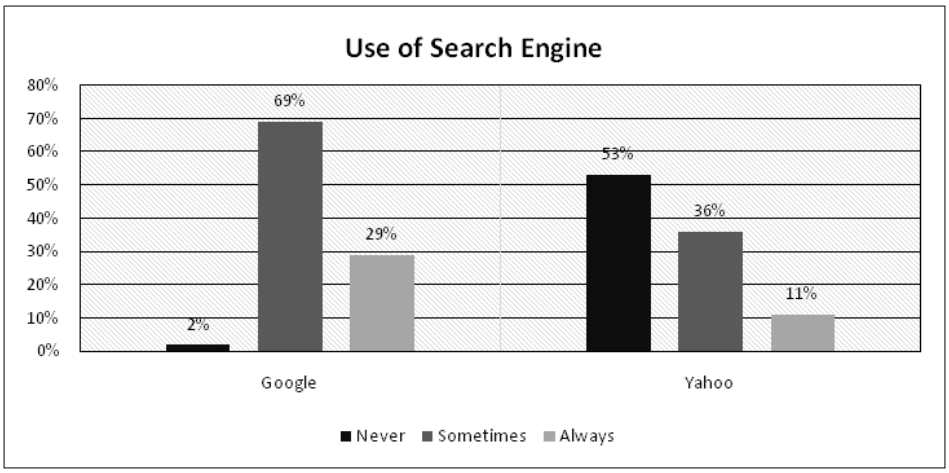


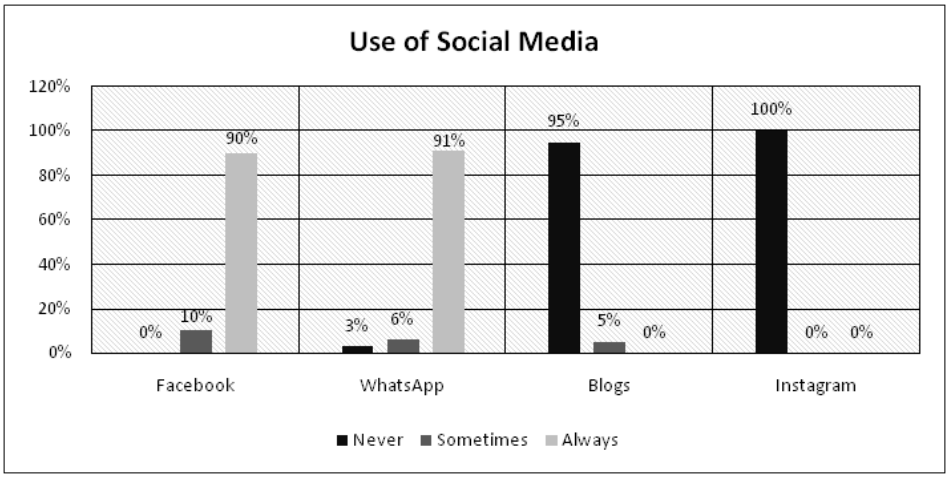
Table 4 shows that 29% Muslim female students of higher education under study use Google always, 69% out of them use it Sometimes while 2% out of them never use it.

The table also shows that 11% Muslim female students of higher education under study use Yahoo always, 36% out of them use it Sometimes while 53% out of them never use it.

Table 5 : Use of social media

SL. NO.	Items	Never		Sometimes		Always	
		N	%	N	%	N	%
1	Facebook	0	0%	10	10%	90	90%
2	WhatsApp	3	3%	6	6%	91	91%
3	Blogs	95	95%	5	5%	0	0%
4	Instagram	100	100%	00	00%	00	00%

Graph 5



As per the data shown in the table 5 the 90% of the Muslim female students of higher education under study said that they use Facebook always while 10% of the students reported that they use Facebook sometimes whereas no Muslim female students was found to have reported that she does not use Facebook at all.

The table also shows that 91% Muslim female students of higher education under study use WhatsApp always, 6% out of them use it Sometimes while 3% out of them never use it.

The table shows that 05% Muslim female students of higher education under study use Blogs Sometimes, while 95% out of them never use it.

The table reveals that no Muslim female students were found who use Instagram.

Table 6 : Use of Browser

SL. NO.	Items	Never		Sometimes		Always	
		N	%	N	%	N	%
1	Chrome	19	19%	49	49%	32	32%
2	Opera	79	79%	18	18%	03	03%
3	Mozilla	65	65%	27	27%	08	08%

Graph 6

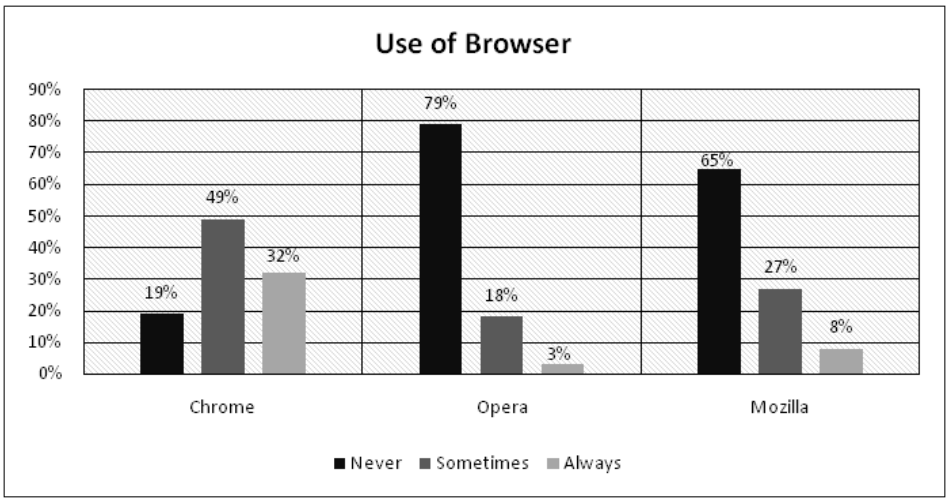


Table 6 shows that 32% Muslim femalestudents of higher education under study use Chrome always, 49% out of them use it Sometimes while 19% out of them never use it.

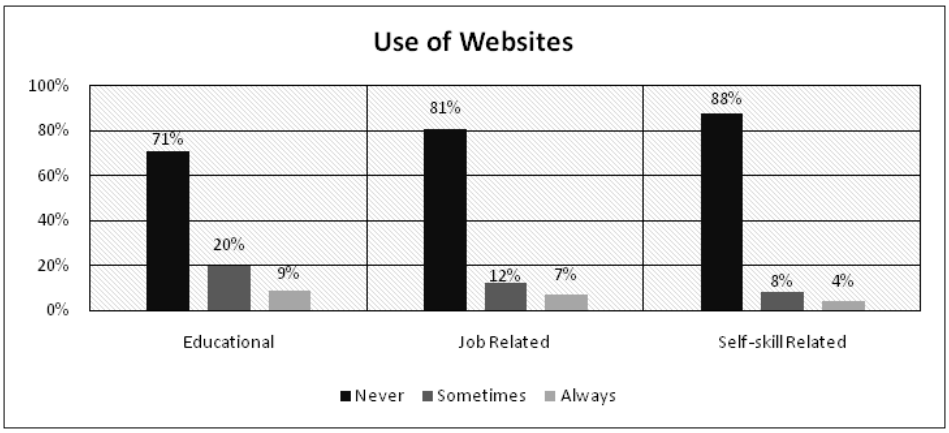
The table also represents that 03% Muslim female students of higher education under study use Opera always, 18% out of them use it Sometimes while 79% out of them never use it.

The table shows that 08% Muslim female students of higher education under study use Mozilla always, 27% out of them use it Sometimes while 65% out of them never use it.

Table 7 : Use of Websites

SL. NO.	Items	Never		Sometimes		Always	
		N	%	N	%	N	%
1	Educational	71	71%	20	20%	09	09%
2	Job Related	81	81%	12	12%	07	07%
3	Self-skill Related	88	88%	08	08%	04	04%

Graph 7



The table 7 shows that 09% Muslim female students of higher education under study use educational websites always, 20% out of them use it sometimes while 71% out of them never use it.

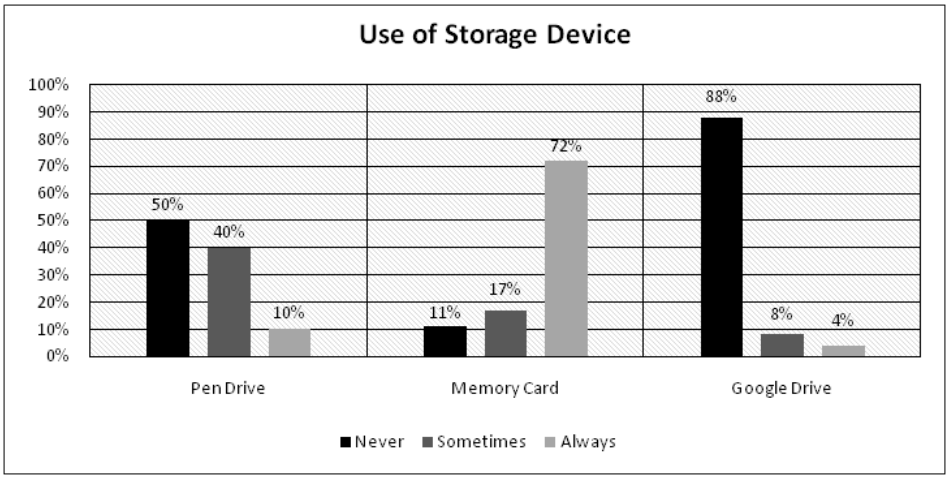
The table shows that 07% Muslim female students of higher education under study use job related websites always, 12% out of them use it sometimes while 81% out of them never use it.

The table also shows that 04% Muslim female students of higher education under study use self-skill related websites always, 08% out of them use it sometimes while 88% out of them never use it.

Table 8 : Use of Storage Device

SL. NO.	Items	Never		Sometimes		Always	
		N	%	N	%	N	%
1	Pen Drive	50	50%	40	40%	10	10%
2	Memory Card	11	11%	17	17%	72	72%
3	Google Drive	88	88%	08	08%	04	04%

Graph 8



The table 8 shows that 10% Muslim femalestudents of higher education under study use Pen Drive always, 40% out of them use it sometimes while 50% out of them never use it.

The table shows that 72% Muslim female students of higher education under study use Memory Card, 17% out of them use it sometimes while 11% out of them never use it.

The table also shows that 04% Muslim female students of higher education under study use Google Drive always, 08% out of them use it sometimes while 88% out of them never use it.

Empowerment of undergraduate students belonging to the Muslim minority community through ICT

An interview schedule was employed for 10 Muslim female students in higher education. Among the Muslim female students, 4 of them found a high level regarding the use of ICT, 5 of them found an average level regarding the use of ICT, and 1 student found a low level of ICT use. On the basis of the data gathered from the focus group through the interview schedule, the following points have emerged.

- Out of ten Muslim female students in higher education, 20% said they could make their own career and life decisions. 40% of the students opined that they get encouragement from parents for their choices. 40% of the students said that they do not have the freedom to make decisions for their personal lives. Those who have a high level regarding the use of ICT have a moderate level of personal empowerment, while a low level of

personal empowerment is found among Muslim women who use ICT occasionally. Hence, ICTs have an average impact on Muslim women's personal empowerment.

- Out of 10 Muslim female students in higher education, 50% of the students said that they were able to access social spaces. 30% of the students opined that they participate in social programmes. 20% of the students said that they do not have freedom of movement. Those who have a high level regarding the use of ICT have a high level of social empowerment, whereas a low level of social empowerment is found among Muslim girls who use ICT occasionally. Hence, ICTs have an impact on Muslim women's social empowerment.
- Out of 10 Muslim female students in higher education, 80% have admitted that they economically depend upon their parents. Hence, they do not have financial autonomy. Only 20% of Muslim students are engaged in a productive activity that will allow them some degree of financial autonomy. Therefore, the level of ICT use does not have a positive impact on women's economic empowerment at that stage of life.
- Out of 10 Muslim female students in higher education, 30% have good academic records and they use ICT. In contrast, 70% have average academic records and they rarely use ICT. Thus, use of ICTs has a positive impact on the educational empowerment of Muslim female students in higher education.

Conclusion

The result of the present study shows that female undergraduate students belonging to the Muslim minority communityare using mobiles, laptops, PCs, magazines, Bluetooth, Google, Facebook, WhatsApp, Chrome, Pen Drives, and memory cards frequently. But they use tablets, I-Pods, scanners, printers, journals, e-mail, Yahoo, blogs, Instagram, Opera, Mozilla, Google Drive, and websites rarely. More than 60% of the female students belonging to the Muslim minority community have a low level regarding the use of ICTs and 34% of the students have a high level regarding the use of ICTs.A focus group study reveals that 40% of the Muslim female students have a high level regarding the use of ICTs, while 50% of the Muslim female students have an average level regarding the use of ICTs. Those who have a high level regarding the use of ICTs have a moderate level of personal empowerment, while a low level of personal empowerment is found among female studentswho use ICTs occasionally. ICTs have an impact on female students'social

empowerment, though the level of ICT use does not have a positive impact on their economic empowerment at that stage of life. In contrast, use of ICTs has a positive impact on the educational empowerment of Muslim female students in higher education. Muslim female students need to be encouraged to use ICT more to achieve high-level empowerment through ICT. In the end, we can say that ICT is the key to all kinds of opportunities and enrichment. ICTs can become a driving force in the sphere of women's empowerment for some time to come.

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Leading Empathy in Schools: Lessons for School Leaders

Sunita Chugh* and Charu Smita Malik**

Abstract

Empathy as a construct has been widely acknowledged across many disciplines, prominent being psychology, medicine, management and leadership. In the field of education, empathy is often applied as a multi-dimensional construct, taking different forms. Empathy is the ability of an individual to understand, feel and respond adaptively to other's emotions and contribute to a humane environment. For a leader of an organization, empathy is a critical and valuable skill that is put forward through communication and effective management of workplace relations. In the school context, empathy becomes even more prized as school leaders need to create a positive, conducive, democratic and fear-free learning culture that rests on developing meaningful human connections with others. Given this background, this paper examines empathy in relation to school leadership. The paper also deliberates on the types of empathy that are relevant for school leadership and puts forward a few rubrics that can guide school leaders in developing an empathetic culture in schools.It is argued that empathy must be an integral part of school vision, where each stakeholder pledges to create safe, trustworthy, un-biased, non-judgmental and productive environment for students to learn and develop organically. Empathy thus becomes cross-cutting to all other school and classroom processes improving the health of the school and strengthening well-being parameters of teachers and students.

***Keywords*:** Compassionate Empathy, School Leadership, ,Active Listening, Trust building,

Introduction

Empathy was researched as a multi-dimensional construct, consisting of sub-sets such as perspective-taking, fantasy, empathetic concern and personal distress (Davis 1983). These sub-constructs covered a wide range of socio-emotional behaviours where one could transpose oneself to feel others' feelings. Newer conceptions of empathy that followed categorizedthe construct into cognitive,

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affective and compassionate dimensions (Davis 2006). Sprengetet.al. (2009) define empathy as "an important component of social cognition that contributes to our ability to understand and respond adaptively to others' emotions, succeed in emotional communication, and promote prosocial behavior". The applicability of this construct is widely acknowledged across many disciplines such as psychology (Spreng et.al. 2009), medicine (Shapiro 2002) and leadership (Bass 1985, Jiang and Lu 2018, Kock et.al. 2019). Empathy has been regarded as an important variable of communication skills and interpersonal relationships that in turn form part of the framework of leadership (Jiang and Lu 2018).In the school context, empathy becomes even more prized as school leaders need to create a positive, conducive, democratic and fear-free learning culture that rests on developing meaningful human connections with others. Given this background, this paper examines empathy in relation to school leadership. Citing research on the inter-connections between empathy and school leadership, the paper also deliberates on the types of empathy that are relevant for school leadership and puts forward a few rubrics that can guide school leaders in developing an empathetic culture in schools. A few simulated examples and case study have been used to make the paper relevant for school leaders in Indian schools.

Empathy : *A critical skill for school leadership*

Many research and theoretical frameworks on leadership position empathy as a critical skill and as a key part of emotional intelligence (Goleman1999, Spreng et.al. 2009, Bruckner 2017). Importantly, empathy is not a fixed trait; rather it can be learned (Shapiro, 2002). School leaders can cultivate empathetic behaviours, language and actions that can foster a trustworthy and productive work culture for teachers and students. This skill and associated behavioural components can be developed through coaching, mentoring, or through in-service and other opportunities for self-development. Empathy is thus an important leadership skill that is part of continuous professional development of school leaders and teacher leaders. Cooper and Sawaf (1997) observed that leadership can be regarded as a relationship; and the fact that "emotional relationships are the lifeblood of any profession" bring empathy into the centre-stage of school leadership. In fact, the ability to demonstrate and act on empathyhas beena discerning factor between successful and unsuccessful leaders. Empathy can significantly improve relationships with colleagues; understand others' problems and concerns; help staff to improve and create an environment of open communication and effective feedback.The influence of empathetic leaders was researched on follower performance(Kock et.al. 2019). The study highlighted a positive association between

empathetic leadership and innovative behavior as well as job satisfaction of followers. The empathetic process- a situation where empathy is required to be exhibited; a leader acting as a role model and demonstrating empathy; the follower trusting his/her needs being valued by the leader; as a result feeling positive, less stress and improved affective state- enhances the workplace performance, job satisfaction and capability to innovate (ibid.). Empathetic leaders also engage with follower's work experience and validate it.

In an exploratory study conducted by Singh and Dali (2013), empathy was examined as an instructional leadership competency for school principals. The findings pointed to a positive relationship between the two variables. School leaders attached highsignificance toin-service training that facilitated them in developing empathy as a core value. According to school leaders, empathy as a leadership competency empowered them to face challenges in a constructive manner. Empathetic leadership was found to be a significant mediator in motivation of high school students in India (Roy 2020). The study validated a scale on leadership-empathy to act as a guide for school leaders to develop a humane and child-centered learning culture in Indian schools. The validated instrument could act as leadership–empathy audit in Indian schools. The items on which empathy of the school leader was measured were grouped into three factors- respect, understand and nurture, in connection with students. Some of the items covered in the scale that measured the incidence of empathetic leadership on student motivation were:never insults or demeans you, listens to you when you speak to him/her, visits your home occasionally, respects your parents, easily accessible to your parents, values your points of view, concerned about your well-being, shares your joys and sorrows, understands your problems without judging youetc. (Roy 2020). The effectiveness of teacher leader can also be assessed on empathy as a critical component of their social-emotional competence (Aldrup et.al. 2022). Synthesis on review conducted by this study yielded an important finding that "teachers reporting more empathy with victims of bullying in hypothetical scenarios indicated a greater likelihood to intervene". This implies that empathetic leaders and teachers not only feel the affective state of the other but taking a compassionate stand take action towards the issue/person.

Types of Empathy

In the literature on empathy as a construct, three typologies have been discussed: cognitive empathy, emotional empathy and compassionate empathy.

Cognitive empathyis the ability to understand another's stand point from the perspective of intellect. Since it is cognitively aligned, empathy understands what

the other person feels but accords more value to what the person might be thinking. Cognitive empathy relies heavily on communication to enable transaction of information as a two-way process in order to understand the other and empathize. In this case, the leader would attempt to delve deeper into what and why the person thinks a particular way while acknowledging the feelings. For instance, if a teacher gets transferred to the place where he/she does not want to go, cognitive empathy helps the school leader to have a larger perspective on the issue and resolve it.

Emotional Empathy is the ability to feel what another person feels at a physical-emotional level. A leader needs to be emotionally intelligent to capture others' emotions and feelings without thinking deeply. If a personal tragedy occurs in the life of a a teacher, a school leader can understand the emotional turmoil the colleague goes through. At the same time, it is required that the school leader must not be overwhelmed by those feelings and loose a balance between personal and professional self.Overwhelming emotions can also become a hindrance to think rationally and respond in a positive fashion. Cognitive versus Emotional/affective empathy is the most discussed theme in literature(Jiang and Lu 2018).The table below provides difference in thrust areas of both cognitive and emotional empathy.

Table 1: Cognitive versus Affective Empathy

Cognitive	***Emotional/Affective Empathy***
recognizing other's mind and emotion	experiencing others' emotions
top-down processes such as recruiting one's experiences and imagining oneself in the other person's shoe	direct perception of emotional stimuli
understanding through intellect	feeling the emotions
emerges inside the mind	trigged by the outside world

Source:*Spreng et.al. 2009*

Compassionate Empathy is primarily action-oriented. It goes beyond feelings someone's pain and taking action to help and support the person. Compassion is not just feeling and relating at an emotional or cognitive level, but also devising strategies to takeaction. Compassionate empathy is the type of empathy that is usually most appropriate.In most cases, the other person expects to be empathized with but more importantly, support them in finding a solution to resolve the issues. In exercising compassionate empathy, we can find the right balance between logic and emotion. Compassionate empathy requires the school leader to feel, be rational

and decisively better decisions and provide appropriate support to them when and where it is necessary.

Empathy as Multi-dimensional construct

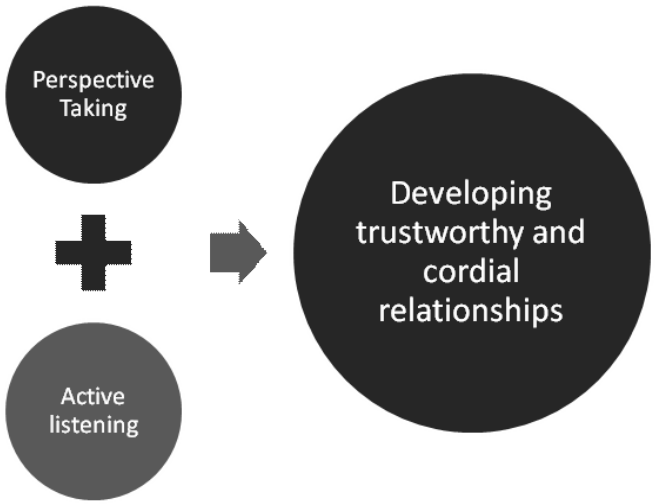
While emotional and cognitive empathy has been predominantly discussed, recent years have seen the emergence of a third approach, that treats empathy as a multidimensional construct (Davis 2006). Empathy is broadly defined as a set of constructs that connects the responses of one individual to the experiences of another. These constructs include both affective and non-affective outcomes that result from such processes. "The model of multidimensionality includes ***antecedents*** which refer to characteristics of the observer, target, or situation; ***processes***, which refer to the particular mechanisms by which empathic outcomes are produced; ***intrapersonal outcomes***, which refer to cognitive, affective, and motivational responses produced in the observer that are not necessarily manifested in overt behavior toward the target; and ***interpersonal outcomes***, which refer to behavioral responses directed toward the target" (ibid.). These constructs as antecedents, processes, intrapersonal outcomes and interpersonal outcomes together define the trajectory of empathizing. This involves communication between the leader and the target; in which the target is understood by the leader, leading to an entire process of active listening that is two-way, followed by both intrapersonal and interpersonal responses and assimilation.

Leading Empathy in Schools: Leadership Perspective

Empathy is an important leadership competency for school principals (Singh and Dali 2013, Jiang and Lu 2018, Roy 2020). The field of schooling is a complex and dynamic one, with regular interactions of multiple stakeholders – school principal, teachers, parents, community, civil society and students to name a few. These interactions are characterized by challenges, opportunities, trust, disagreements and sometimes conflicts. The role of school leadership is to provide direction to the inter-personal relations between stakeholders and between self and other stakeholders. These inter-personal relations must be led with a common vision of keeping the interests of students at the center. In the literature on leadership, the leader is expected to expandhis/her circle of influence. There are various ways of exerting influence and one prominent way of doing so is by creating a conducive school culture that has a positive impact on work culture, teachers' work motivation and student learning. Empathy can play a key role in developing cordial, trustworthy and influential relationship in conducive school culture. In strong and close-networked school communities, students (and adults) have empathy for everyone-

irrespective of diverse background characteristics, gender, beliefs or opinions. When school leaders and teacher leaders' role model empathetic behaviours and different types of empathy, it has a direct bearing on students. Students also learn to be empathetic, and their peer relationships improve. One must be cautious of the empathy-action gap, one can exhibit empathy but may refrain from acting. School leaders can bridge this gap by modelling and encouraging their self and others to act, whether it is standing up for someone who is under distress or helping someone in problem solving. Even though empathy is a multi-dimensional construct, there are two variables that stand prominent if cordial relationships are to be built and sustained. These are perspective taking and active listening.

Figure 1: Dimensions of Empathy contributing to trust and cordiality



Perspective Taking

The leadership ability to consider perspectives of others is essential for effective interpersonal interactions (Davis 1983, Gerace et.al. 2013).Perspective taking is a skill that involves taking into account the understanding of the phenomena in totality. This process embraces keeping one-self in another person's shoes;understanding others' point of view, taking stock of the situation and weighing all opinions and ideation. Significantly, perspective taking also includes knowledge of personal experiences and background of professional expertise of all other members. This skill can be applied to solving problems, managing conflicting, or driving innovation. It is also an important skill that a school leader needs to transfer to other teachers as part of professional development and creating a thoughtful school culture (Spreng

2009). In a study conducted by Gerace et.al. (2013), it was found that participants employed perspective-taking as a skill in situations where significant negative emotions could arise, "shifting between the use of self-information (e.g., switching places, past experience) and other-information (e.g., target's personal characteristics) during the process of perspective taking." Perspective-taking is key to building sound relationships where people feel that their ideas and opinions matter and are considered before taking any action. However, it is the leadership competency of the school leader to draw inferences based on perspectives.

Active Listening

Active listening is an enhanced skill that is part of the leadership repertoire. Skilled listeners communicate to others that they are being heard and express through verbal and non-verbal gestures. Coming from the field of positive psychology, pleasant and meaningful social interactions improve well-being and provide satisfaction at a personal level. A leader needs to practice active listening as a skill, role model it so that other stakeholders in a school can also learn to become active listeners. In fact, a better terminology that can encompass all strategies for active learning in an empathetic framework is Active-Empathetic Listening (Ohlim 2016). The active listening skill repertoire is extensive and includesnon-verbal involvement; paying attention to the other, not engaging with one's thoughts during listening or draw interpretations of what the other is saying; practicing non-judgment; tolerating silence; paraphrasing and asking questions. Harry et.al. 2014 categorizes active listening in three dimensions: "…1) demonstrates moderate to high nonverbal involvement, 2) reflects the speaker's message using verbal paraphrasing, and 3) may include asking questions that encourage speakers to elaborate on his or her experiences." Thus, active listening is a criticalmediator for establishing empathetic relationships with stakeholders of the school.

Establishing cordial, trustworthy and pleasant relationships

In Figure 1, perspective-taking and active listening are seen together to establishing cordial and trustworthy relationships in the school. Empathy helps in building trustworthy relationships that among school leaders, teachers and students, along with other stakeholders. When colleagues and leaders apply active listening and perspective taking skills during communication, it contributes to a vibrant and trustworthy culture. Empathy can become an important tool to navigate through complexities, in the process assuring that professional interests of each will be safe.

Available Rubrics for Leading Empathetic Schools

School leaders may understand the construct of empathy, but at times they may struggle to model it in the system. Empathy needs to be operationalized at the school level. For this, a school leader needs to be equipped with frameworks or rubrics that define broad areas and strategies to operationalize empathy. One can term these frameworks as empathy-rubrics. This paper discusses two frameworks/ rubrics developed by Jones et.al. 2018 and Bora (u.d.), also available online. The framework by Jones et.al 2018 rests on four principles: modeling empathy, teaching what empathy is and why it matters, practicing and setting clear and ethical expectations.

1**. Modeling Empathy** – The school leader needs to model empathy, which means that s/hemustexhibit empathetic behaviours and actions, such as compassionate empathy, perspective taking and active listening. Empathy in practice is tested in difficult times. In times of distress, or when other stakeholders are acting less than expected, it is asked of the leader to critically study the situation, reflect and employ perspective-taking before responding or taking any action.Communication is also very critical as effective skills can either problem solve the situation or complicate it indefinitely. To include others as much as possible during conversations, can go a long way in building trust and rapport with them, eventually leading to trustworthy relationships. A school leader must create opportunities to incorporate others' feedback and respond to their needs.

2**. Teach what Empathy is and why it Matters** –Empathy can be cast as an important value and skill in leadership vision and framework. It is essential that stakeholders and students understand the construct of empathy and the need to exhibit it at appropriate moments. The stakeholders must be clear that practice of empathy can vastly improve the school culture, work motivation of teachers, classroom processes, and school-community relations. Here it is important to note that a school leader places additional emphasis on empathy while interacting with students facing any type of singular or multiple disadvantages, especially children with special needs.

3. Practice - A school leader and teachers must create ample opportunities in schooling and classroom processes to model empathy as well as think of strategies to apply empathy in interpersonal relations. One can use different games and role plays, read and discuss characters in stories and books to look for empathy and see how empathetic behaviours and actions can be applied. A leader can also discuss on barriers to empathy such as ego, stereotypes, stress, or fears of social

consequences for helping someone or a peer. Jones et.al. (2018) shares that one can …encourage students to privately offer kind and supportive words to a student who was bullied. They suggest that leaders need to foster emotional and social skills, like dealing with anger and frustration and solving conflicts. They advocate for use of an evidence-based social and emotional learning (SEL) program and teach specific routines for calming down and resolving disputes..

4. Set Clear Ethical expectations –The framework of empathy necessitates that a school leader sets clear and high expectations from everyone on empathy. It is not just important to put it on paper rather hold conversations around it, model it, praise it, and hold stakeholders accountable to it. Further, the school leadership team can do several reflective exercises and develop collaborative norms on how to enact empathy. One can also establish guidelines forlanguage usage and behaviors. Hurtful language or derogatory terms can be banned.

5. Make school culture and climate a priority – It is always better to review the health of the school system. The school leader can collect data from students and staff periodically if they feel "safe, respected, and cared about at school".Another way to place empathy at Centre stage is by including it in the vision of the schoolor designating a space in the school/classroom where students can come for a safe and trustworthy conversation with teacher/school head. The school leader can also role model empathy during staff meetings and during conflict resolution.

Another frameworkdiscussed by Borba(u.d.) is an extensive and comprehensive rubric for developing an empathetic school culture. Leaders can envision empathy on 8 tenets as described in this rubric. These tenets talk about developing safe, inclusive and equitable learning climate; modelling an empathy-mission; help the staff understand why empathy matters and stay committed to empathy; build collaborative relationships to develop empathy based on unique culture, beliefs and population needs; recognize and motivate staff to work on their own empathy; work towards cultivating caring relationships; involve parents and community; involve students in empathy mission. Together these 8 tenets provide a robust framework for operationalizing empathy in schools.

Table2: Leadership Tenets for Empathetic School Culture

Tenets	Vision for Strong Educational Leaders	Action Points
Tenet 1	Develop Safe, Caring, Inclusive and Equitable Learning Climates	● Assess the perceptions of parents, staff and students on school safety, caring, psycho-social belongingness, ownership of safe school-based relationships. Does everyone perceive these parameters at an optimum level? ● Collect and review data through various methods such as focus groups, questionnaires and "anonymous bullying surveys" to assess if students and others feel safe, respected and cared about at school. ● Hold informal and short duration conversations among staff, parents and students to assess their opinions and find areas of improvement· ● At least once a year review student survey results on "happiness" or attitudinal survey results ● Identify marginalized or more vulnerable groups/ equity groups of students who may feel excluded and create "safety nets."
Tenet 2	Walk and Talk Empathy andModel their Mission	● Promotea positive empathic culture and make each part of the school a safe space built on trust. ● Engage in dialogues and debate, disagreements must not escalate into conflicts. Hold conversations with staff so they know active listening is "two-way."· Lead with questions, ask questions. · Creates a team "we-centered" approach

		and equitable collaboration. Use of Active listening skill. Remain people-centred
Tenet 3	Help the Staff understand "Why" Empathy matters so they are committed to Empathy	• Start with a shared understanding of why empathy matters. Share your vision with staff so they are clear as to the "why." • Dispel "empathy myths" so that staff recognizes that empathy is not soft, can be cultivated, and essential for student success. • Provide a strong case: show evidence as to why your culture, students, staff will benefit from empathy education. • Present the case that empathy is crucial for 21st century learning and an important employability skill. • Show how empathy education is the foundation to implementing other missions such as inclusion, diversity training, bullying prevention, social justice· • Listen to staff views and concerns about empathy-building without judgment and try to resolve the concerns.
Tenet 4	Build Collaborative Relationships for their Staff to work collectively to develop Empathy Education Based on their Unique Culture, Beliefs and Population Needs	• Teachers and students may visit nearby schools who are working on empathy to view and discuss pros and cons of their approaches together. • Start a staff book club and read about empathy education. • Create staff subject teams (history, English, science, health, etc.) to discuss ways to integrate empathy into every subject area. • Create a staff team to develop a school-wide discipline plan based on empathy-

		building practices; strategize to replace aggression with pro-social behaviors and repair relationships. ● Offer ongoing professional development about empathy and social-emotional learning. Convince staff that this is not a one- time staff development, but a sustained commitment in empathy education. ● Take on one best practice each year for staff training that nurtures academic achievement and empathy (such as Cooperative Learning, Conflict Resolution). Continue to work on that one practice throughout the year,
Tenet 5	Recognize Their Staff Also Needs to Work on Their Own Empathy	● Learn mediation/yoga and practice. ● Hold more informal staff get-togethers to develop collegiality. ● Intentionally practice listening skills in staff meetings in pairs or triads
Tenet 6	Work to Help Educators Cultivate Caring Relationships and about Empathize with Students	● Hold discussions with teachers the impact of empathy in teaching: "Think back to your own school days and your best learning experiences. What would be some characteristics of empathetic teachers?" What factors make it difficult to empathize with students? ● Discuss ways to build rapport and relationships with students ● Discuss: "When students see their actions and voices are not only valued but also empowered, they begin to turn from motivation-free to motivated". ● Identify "invisible kids" or those who rarely open up, are excluded, you do not know much about and try to connect or find

		other staff members who can help you reach them. ● Hold brave conversations: "Am I genuine?" Since we empathize with those more like ourselves: "Do I step out of my comfort zone to understand students who are different from me?" ● Discuss ways to help teachers get into their students' shoes and understand where they're coming from.
Tenet 7	Involve Parents and Community in Empathy Education	● Empathy education involves all stakeholders. How are you helping your parents adopt empathy-building practices? For instance: book clubs, parent helping in service projects, newsletters, parent coaches. How can the school leader engage parents?
Tenet 8	Involve Students in Empathy Development	● What are you doing to help your students find their voice, develop empathic mindsets? ● Which socio-emotional empathetic skills do your students need to develop? ● What type of strategies and best practices are you using to help your students recognize that they can make a difference in the world? ● How are your students learning leadership skills? Which students might you be overlooking? How can you involve them?

Source:Adaptedfrom Borba, M.*https://awsa.memberclicks.net/updatearticle—how-to-develop-an-empathy-centered-school*

Case-based discussion on Empathy

The school leader begins to implement empathy-rubric in the school, however often, in the management of the entire school, the focus on individuals gets little attention. The focus on practicing empathy for individual student or teacher is as important as practicing empathy in group or collaborative processes. Here, case-based discussions assume far greater importance. The need for empathy and resolution of challenges is very critical for vulnerable groups of students, especially children with special needs. In the simulated case study given below, a case is discussed in the Indian context.

Case Study: 1: Empathetic attitude of a School Leader towards Children with Special Needs

Mr. Ramesh, the Principal of Senior SecondarySchool, was loved by the teaching staff. His role as an instructional leader was well received by the staff and students. The principal held academic staff meetings every week. In addition Mr. Ramesh also visited classrooms for academic supervision that not only focused on teaching-learning but also on well-being of each student. He also sat with teachers once a week after school and daily for 20 minutes during their collaborative planning time. Mr. Rameshwas committed to the idea that the only way to solve school problems was through teamwork and providing teachersthe input on their academic and social skills. He worked hard to provide planning time for teachers so they could collaborate. The principle of teamwork was evident when Mr. Ramesh discussed where the new student Mohit would be placed and what kind of support services the teacher would need to help this challenged student as he was suffering from behavioural disorder. The teachers decided that Ms Shobha would be the best teacher for Mohit, because of her low-key, non-confrontational manner and her good rapport with students. The teachers also felt that Mohit required support from counselors also. The counselor would meet Mohit regularly to track his adjustment to school.The special education teacher, identified Mohit with BD (behaviour disorder), which made him eligible for special education services; and possibly tutors, because his records indicated that he was well below grade level in all academic areas. Mr. Ramesh also wanted to keep in close contact with Mohit's family and had already scheduled a meeting with his parents. The teachers left the meeting feeling better about the prospect of the new student. They patted Ms Shobhafor treating Mohit with empathy for what they anticipated as a difficult assignment.

The case study of Mohit provides an analysis of how a school leader can be empathetic in approach to solve a specific student problem. It alsodemonstrates school leader plays an important role in shaping the empathy culture of the school. The case study points out that the school principal had built a culture of collaboration, trust and problem solving in the school, which led to every teacher coming together, becoming empathetic to the needs of the child with special needs and most importantly, taking concrete action for the child to learn and progress. This can be categorized as a case for compassionate empathy.

Conclusion

School Leadership as it stands at the beginning of 21st century demands an advanced set of competencies from school leaders. Communication and inter-personal relations form a critical set of repertoires of any school leader. Empathy being central to communication, can have far-reaching influence on school culture, teachers' motivation, student well-being and even student learning. Once empathy is embedded in relationships of the school, each stakeholder stands to benefit- be it the school leader, teachers, students, parents, community, fellow schools and the list is endless. The important aspect to remember is that empathy is a skill set that not only applies to the school leader, even though s/he models it, but also to each other stakeholder- teacher-Teacher, student-student, teacher-parent, school leader-community or school leader-school leader. One of the key roles of a school leader is to build a collaborative vision and then see to it, that the vision gets implemented in its true spirit, with contextual adjustments. A vision is a broad statement, and empathy being a part of it can actually help the school to improve in all other sectors – such as equity, inclusion, administration, management, sports, vocation, skill-based education, and enhancing student learning and learning outcomes. Empathy thus becomes cross-cutting to all other school and classroom processes improving the health of the school and strengthening well-being parameters of teachers and students.

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Learning Through Thinking

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Abstract

Thinking and learning are two interwoven activities. Meaningful learning is never possible without higher order thinking skills. Thinking helps individuals to develop independently the abilities of analysing, raising questions, understanding, finding alternatives, evaluating, planning, problem solving, discovering and so on. Gaining knowledge without any deliberate reflection of it is absolutelyfruitless,an utter wastage of time, effort and labour. Teaching thinking can enable one to process information, recall previously acquired knowledge and experience and apply them as per requirement to understand and solve the present problem/ situation. Thus, it can help to develop critical and creative skills that can result in enhancing quality learning. This paper attempts to explore the relationship between learning and thinking by using content analysis technique of information gathered from various secondary source.

Key words**:** Thinking, Learning.

The ability to think is one of the unique characteristics of human beings that distinguishes him from other animals. There exists a strong relationship between learning and thinking. Meaningful learning is never possible without higher order thinking skills. Thinking helps individuals to develop independently the abilities of analysing, raising questions, understanding, finding alternatives, evaluating, planning, problem solving, discovering and so on. Gaining knowledge without any deliberate reflection of it is absolutely an utter wastage of time, energy and labour. "Learning without thinking is useless. Thinking without learning is dangerous". – Confucius.

The basic difference between higher order and lower order thinking skill is that the former one leads to meaningful learning as it requires reasoning, logical analysis, synthesis, critical judgement and therefore it is reflective and can be applicable in real life situation to solve newer problems. The later one on the other hand means mere memorization of facts, figures and theories without understanding them and therefore it leads to rote learning which is unreflective and remains inapplicable in real life situations.

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Thinking is thus essentially a conscious cognitive process. It is neither haphazard nor emotive; rather, it is deliberate and organised and it helps people to create their own world view. It adds meaning to the world around us. Thinking is not one type rather there are different types of thinking like: Abstract thinking, Analytical thinking, Constructive thinking, Convergent thinking, Creative thinking, Critical thinking, Divergent thinking, Heuristic thinking, Integrative thinking, Intuitive thinking, Lateral thinking, Logical thinking, Positive thinking, Negative thinking, Reflective thinking, Strategic thinking, Systematic thinking, Vertical thinking and so on.

The different types of thinking are presented in the table below:

Type of thinking	Meaning
Abstract	Ability to use concepts to make and understand generalizations then relating or connecting them to other items, events or experiences.
Analytical	Ability to separate a whole into its basic parts to examine the parts and their relationships.
Constructive	It is the capacity to resolve problems in daily life with little stress resulting.
Convergent	Ability to put several different pieces or perspectives of a topic together in some organised, logical manner to find a single answer.
Creative	Ability to conceive new and innovative ideas by breaking from established thoughts, theories, rules and procedures. It is "thinking outside the box".
Critical	Ability to exercise careful evaluation or judgement to determine the authenticity, accuracy, worth, validity or value of something. It involves synthesis, evaluation, reflection and reconstruction.
Divergent	Ability to generate creative ideas by exploring many possible solutions in an effort to find one that works.
Heuristic	Ability to solve problem, learn or discover something by employing a practical method not guaranteed to be optimal or perfect but sufficient for the immediate goal e.g. rule of thumb.

Integrative	Follows a 4-step process: Salience, causality, architecture, resolution i.e. it seeks to define the relevant aspects of a problem, determines the inter-relationship, involves creation of a model and then outlines the decision —how it could be reached.
Intuitive	Ability to understand or know something without any direct evidence or reasoning process.
Lateral	Ability to solve a problem by thinking about it in a different and original way and not using traditional or expected methods.
Logical	Commonly referred to as left brain thinking. It uses straight facts in order to solve problems.
Concrete	It is characterized by a predominance of actual objects and events and the absence of concepts and generalisations in other words it is focussed on the physical world/facts.
Sequential	Ability to process information in orderly prescribed manner. It involves step by step progression.
Holistic	Ability to see the whole picture and recognise the inter-connectedness of various components that forms the larger system.
Positive	Ability to create and transform energy into reality. Optimism is synonymous to positive thinking.
Negative	It is a mental attitude of anticipating the worst possible outcome on situation, event and circumstances. Pessimism is synonymous to negative thinking.
Ethical	It tends to reduce ethics to a series of rules and procedures that can be used to prevent the harm of others and to maximize human freedom.

Metacognition refers to ones' awareness of and ability to regulate one's thinking. In other words, it can be defined as 'thinking about thinking'. It plays a crucial role in developing critical thinking. This ability encourages students to understand how they can learn best. It enables the students to become flexible, creative and self-directed learners. Metacognition is often considered to have two dimensions: (1) Metacognitive knowledge and (2) Metacognitive regulation. The former one refers

to what learners know about learning. It includes learners knowledge about his cognitive abilities, about the task and about the different strategies that can be adopted. The later one on the other hand refers to what the learners do about lerarning. It describes how learners monitor and control their cognitive process.

Perkins (1992) defined **four levels of metacognition** i.e., tacit, aware, strategic and reflective.

Tacit learners are unaware of their metacognitive knowledge. They do not think about any particular strategy for learning and therefore merely accepts if they know something or not.

Aware learners know about some of the kinds of thinking that they do such as framing new ideas, finding alternatives etc. Though thinking in this case is not necessarily deliberate or planned.

Strategic learners organise their thinking by using problem solving techniques, classifying, grouping and similar other techniques that they find suitable and accordingly uses or apply them to learn.

Reflective learners on the other hand are not only strategic about thinking but they also reflect upon their learning while it takes place considering the success and then revising them as per their requirement or suitability.

Metacognition can help students to become independent learners. It always has a positive impact on learning and is useful across a wide range of age and subjects.

Gagne's model of instructional design is based on the information processing model of the mental events where he proposed an instructional taxonomy of nine events, namely

1. Gaining attention
2. Describing the goal
3. Stimulating recall of prior knowledge
4. Presenting the material to be learned.
5. Providing guidance for learning.
6. Eliciting performance, 'practice'.
7. Providing informative feedback.
8. Assessing performance test if the lesson has been learned.
9. Enhancing retention and transfer.

This model ensures an effective and systematic learning program.

Benjamin Bloom developed the taxonomy of educational objectives in 1956. It is a classification system used to define and distinguish different levels of human

cognition i.e., thinking, learning and understanding. He divided learning into 3 domains namely :

1. **Cognitive domain** is focused on intellectual skills such as critical thinking, problem solving and creating a knowledge base.
2. **Affective domain** focuses on the attitudes, values, interests and appreciation of learners and
3. **Psycho-motor domain** involves the ability of learners to physically accomplish tasks and perform different movement and skills.

He classified thinking at six levels namely:

1. **Knowledge** (low end) means recall of facts, methods, process, pattern, structure or setting.
2. **Comprehension** means understanding of what is being communicated without relating it to other material.
3. **Application** means using abstraction in particular and concrete situations.
4. **Analysis** means breaking down of the whole concept or idea into constituent elements or smaller parts so that the idea is made clear and the interrelationship between the ideas are understood.
5. **Synthesis** means joining together of elements and the parts together into whole and
6. **Evaluation** (high end) means critical judgement about the value of the material.

This taxonomy is regarded as one of the crucial models that contribute to the curriculum development of the 21st century. It helps teachers to think and analyse their teaching and students learning.

In 2001, ***Anderson*** et al. Revised Bloom's taxonomy and proposed a modified version with a new matrix structure comprising of 2 dimensions :

1. Knowledge and
2. Cognitive processes.

They made a four-layer classification of knowledge consisting of :
Factual knowledge, Conceptual knowledge, Procedural knowledge and Meta-cognitive knowledge. The cognitive process dimension on the other hand consists of six levels i.e., remember, understand, apply, analyse, evaluate and create and plotted it on the Y-axis of the matrix. On the cognitive processes, they added creativity as the highest level of thinking. The different levels of cognition were placed on X-axis.

Meta-cognition is the knowledge of one's own thinking and all other factors that influence thinking.

Waters (2006) described Sanders' (1996) adaptation of Bloom's framework where the interlink between thinking and learning was presented as follows :

Memory – It is recall or recognition of information.

Translation – It is changing information into different symbolic form of language.

Interpretation – It is discovering relationship among facts leading to generalisation.

Application – It is solving problems using prior knowledge and experience.

Analysis – It is observing/ studying every minute details/ parts of the problem.

Synthesis – It is assimilation of the total knowledge acquired by the individual and then utilising it in one's own unique way using creative thinking to solve the problem.

Evaluation – It is drawing conclusion and making a critical judgement.

The **component display theory** is an instructional model that was developed by **David Merrill** in 1983. He used two-dimensional matrix. On x-axis, the type of contents listed were facts, concepts, procedures and principles. On the y-axis, the three levels of performance were listed as remembering, finding and using.

Biggs and Collis (1982) introduced the concept of structure of observed learning outcomes (SOLO) taxonomy. The focus here is on the learning outcomes and thus on the learners. In short, SOLO taxonomy describes the learners understanding of concepts through 5 stages namely,

1. Prestructural, Unistructural, Multistructural, Relational andExtended abstraction.

According to this taxonomy :

1. **Prestructural** is characterized by missing points or fail to catch a point.
2. In **Unistructural** level, one relevant aspect is understood that can be verified by ability to identify something, name and follow simple procedures.
3. At **multi-structural level**, a learner understands several independent aspects as verifiable by his/her ability to combine, describe, enumerate, list and so on.
4. At **relational level**, a learner integrates his/her understanding of several independent items into a structure as verifiable by skills of analysis, application, comparison and contrasting, criticizing and so on.

5. At the **extended abstract level**, the learner generalizes and creates new domain. This can be verified by abilities to create, generalize, generate, hypothesize, theorize and so on.

According to ***Paul Torrance*** (1962) the 'Father of Creativity', **divergent thinking** is characterised through a combination of 4 components namely:

1. **Fluency** – It is the ability to develop large number of ideas
2. **Flexibility** – It is the ability to produce ideas in numerous categories
3. **Originality** – It is the ability to produce unusual or unique ideas
4. **Elaboration** – It is the ability to adapt abstract ideas into realistic solutions.

The concept of **lateral thinking** is the contribution of **Edward de Bono** (1970). He stated that

1. Creativity is a skill and not just a matter of individual talent, Therefore, it can be learned.
2. A creative idea is not just different for the sake of being different. Rather, it must necessarily have some inherent value of their own or add more value to original idea.
3. Thinking outside the boxmeans escaping from or breaking out of the box to change concepts, perceptions, constraints and rules. It involves developing an idea that would not have been expected in our usual behaviour and usual thinking.

Mukhopadhyay et al. 2014 created an eclectic model of taxonomy of human thinking. Unlike a staircase model, this model proposed for tree/plant as the metaphor and named it as **'Thinking Tree'**. The plant slowly unfolds :

1. **Roots** appears first (**remember**),
2. A **small stem** (**facts**) with just **one or two early** petal like **leaves** evolve next (understand and **application**),
3. As the plant grows, **stem grows taller** (concepts, **procedures**, **principles**),
4. **New leaves** appear (**analysis, evaluation, construction, generalization**),
5. The plant flowers and finally it bears fruits (creativity).

The new feature of this taxonomy are construction and generalization together with creative thinking at five different levels. Thus, there is taxonomy of creative thinking within the taxonomy where intuitive thinking, is the highest form of thinking.

Education in the present-day context, is perhaps the single most important means for individuals to improve personal endowments, build capability levels, overcome constraints and in the process enlarge their available set of opportunities and choices for a sustained improvement in well-being. It is not merely as means to other ends, but it is an attribute that is valued in itself, by most individuals. It captures capability of acquiring knowledge, communication and participation in community life. (Planning Commission, 2001).

Modern age is often referred to as the age of information and technology. An information society is a society where the creation, distribution, use, integration and manipulation of information is a significant economic, political and cultural activity. Its main drivers are digital information and communication technologies, which have resulted in an information explosion and are profoundly changing all aspects of social organisation including economy, education, health, government and democracy. The people residing in this form of society are also termed as digital citizens or knowledge workers. The economy of a knowledge-based society is largely driven not by material inputs but by symbolic or knowledge-based inputs.

Contemporary research literature often describes students as '21st century learners' largely because of their access to technology. Infact, this principally 'sets them apart' from other generations in the way they processed information and choose to actively participate in the educational experience. There is little doubt that 21st century learners are different from their predecessors. Their ease of access and exposure to technology and other forms of contemporary media are attributed to bringing about a major change not only in their thinking but also in their learning mechanism.

Characteristics of 21st century learners **:**

1. Learn on a continuing basis to cope with dynamic content using multiple learning media.
2. Discover knowledge that is hidden in multiple learning resources and invent solutions.
3. Experiment with new ways of learning.
4. Extensively and effectively use technology.
5. Have a well-thought-out learning agenda.
6. Process information for synthesis and drawing conclusions with speed and precision.
7. Readily challenge and verify knowledge, postulates, hypotheses and theories.

8. Master the process of problem solving.
9. Develop higher order thinking skills (meta-cognition).

21st century learners need and deserves an alternative science of learning such as andragogy, technogogy, heutagogy, brain-based learning, constructivism, multichannel learning and so on to cope up with the changing needs.

Andragogy: is primarily the 'art and science of teaching adult learners to learn 'propounded by Malcom Knowles (2005).

Technogogy: is the convergence of technology, pedagogy and learner-based content where the three components have a three-dimensional relationship resulting in a specific learning object design'.

Heutagogy: is the study of self-determined learning or in other words it is knowing how to learn.

Brain based learning: has emerged out of brain research. According to it learning is nothing but the function of the brain patterning.

Constructivism is a branch of philosophy of science which explains how human beings constructs knowledge from 'real life' experiences of interacting with people, objects, events and environment. In other words, it is the way we interpret the world around us. Accordingly, as a learning strategy it draws on students' existing knowledge, beliefs and skills. This approach is based on the fact that students synthesize new understanding from prior learning and new information. This has given rise to an instructional paradigm called the **5E paradigm**, which comprises of 5 aspects: Engage, Explore, Explain, Elaborate and Evaluate.

Engage aspect connects the past and present learning experiences. It anticipates activities and focuses on the aspects of students thinking on learning outcomes of current activities. During this phase students are expected to become actively engaged in the concept, process or skill to be learnt.

Explore provides students with a common base of experiences. During this phase, student actively explores their environment or manipulate materials which help them to identify and develop various concepts, processes and skills.

Explain helps students to explain the concepts that they have been exploring. They are given ample opportunities to verbalize their conceptual understanding or demonstrate new skills or behaviours. This phase also provides opportunities for teachers to introduce formal terms and definitions in addition to explaining new concepts, processes skills or behaviours.

Elaborate extends students conceptual understanding and allows them to practise skills and behaviours in real life. Through new experiences, learners develop deeper and broader understanding of major concepts, obtain more information about areas of interest and refine their skills.

Evaluate encourages learners to assess their understanding and abilities and lets teachers evaluate students understanding of key concepts and skills development.

***Multi-channel learning system*:**
Apart from class lectures, dictated or running notes, text and reference books students use a host of other self-learning media or tools such as:

1. Question answer or guidebook.
2. Mutual consultation among peer group.
3. Private coaching (learning materials).
4. Television programs (educational and non-educational).
5. Audio and video programmes and digital contents(online and offline).
6. Internet based resources.
7. Projects and other problem-solving approaches.

Cogitagogy is the science of learning through thinking. According to the Oxford English Dictionary the word 'cogitate' means 'to think deeply about something; to meditate or reflect.

In the paradigm of science of human learning, our focus is to develop the thinking skill while learning- learning to think and thinking to learn. In other words, if a student can think, the rest of the learning process should fall into place. Cogitagogy should help students to discover knowledge and invent solutions, and thereby continuously rediscover and optimize science of learning through cogitation. It derives its inspiration from two **sources** —

1. Metaphysical and
2. Pragmatism, rather functionalism

Metaphysical inspiration is best represented by Indian scriptures. Here the emphasis is on control of mind which focuses on thinking and thinking deeply and calming it down to a more peaceful and blissful state. Here, the focus is on discovering knowledge that is resident within every human being. The title of Delor's Report, 'Learning: The Treasure Within' (UNESCO 1996) also reflects the idea of discovering the treasure within. The same is reflected in Swami Vivekananda's words when he said "Education is the manifestation of perfection already in man. Like fire exists in flint knowledge exists in mind. Suggestion is the friction that brings it out". Knowledge creation is againthe function of thinking rather than memorizing.

Conclusion

The ultimate objective behind emphasizing on the improvement of qualityeducation particularly higher education is to nurture students to think critically and creatively instead of just becoming a mere storehouse of relevant or irrelevant, outdatedor updated information. Teachers can help students to become better thinkers. Learning to think and thinking to learn therefore should me the main motto. If this can be achieved, then only education can extract the real potential of the students and move towards knowledge creation. For this an effective teaching-learning process mustbe developed to support this goal. It must be tuned to the styles and needs of 21st century learners. It must be remembered that only thinking can result in the development of knowledge which can lead to the individual, national as well as global development.

Thus, it can be summed up as:

- Cognition is the mental process of gaining knowledge and understanding through senses, experience and thought.
- Thinking is the action of using one's mind to produce thoughts. It is a cognitive activity which can be enhanced.
- Thinking is essential for learning.
- Thinking skills are the heart of cognitive learning which makes higher order learning and problem-solving possible. It also helps in organising information, taking decisions, making plans and creating knowledge.
- Knowledge creation (according to Nonaka's SECI Model) is all about acquisition, combination, conversion and transfer of different types of information and knowledge as users practice, learn and interact.

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Learning-friendly Environment for Inclusion and Achievement Motivation of Visually Impaired Learners at Elementary Level in West Bengal

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Abstract

The main aim of the study was to find out the impact of learning-friendly environment in elementary education on inclusion and achievement motivation of VI learners in West Bengal. The strata wise randomly selected samples of the study were 198 VI learners studying in special and inclusive elementary schools and 124 teachers teaching at those schools. The independent variable was learning – friendly environment in elementary school and the dependent variable was achievement motivation of VI learners. The other independent categorical variables were Sociocultural zones of selected schools of West Bengal, Gender, Social group, School type, and sociocultural zone, gender, Special education qualification and school type of teachers. The findings of the study indicated that - (a) wide variation on learning-friendly environment in elementary schools existed among the socio-cultural zones of the State of WB; (b) no perceptual difference on learning-friendly environment on education was found between gender of teachers; (c) special education qualifications had an impact on the perception of learning-friendly environment in schools;(d) special schools were found creating a better learning-friendly environment; (e) a variation in achievement motivation of VI learners was noticed across the socio-cultural zones; (f) no significant difference was found between the boy and girl VI learners in terms of their achievement motivation; (g) a variation in achievement motivation of VI learners among the social groups was found; (h) the achievement motivation of VI learners at inclusive schools was found better; (i) there was a positive relationship impact between learning-friendly environment in elementary schools and achievement motivation of the VI learners.

Key Words : Inclusion; VI Learners; Learning-Friendly Environment in Elementary School; Achievement Motivation of VI Learners.

Introduction

The Right to Education is an internationally recognised right for all children. In order to make the Right to Education for allmandatory, efforts and initiatives must

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be undertaken to ensure that all learners with diverse needs have the scope of access to quality education within a reasonably accommodative inclusive environment that can meet basic learning needs and participation requirements towards enriching the lives of the marginalised and excluded children. Till today, millions of children, youth and adults continue to experience exclusion within and from education around the world. The UNESCO Convention against Discrimination in Education (Unesco, 1960) and other international human rights treaties prohibit any exclusion from or limitation to educational opportunities on the bases of socially ascribed or perceived differences, such as ability, gender, ethnic origin, language, religion, nationality, social origin, economic condition etc.

Education is not simply about making schools available for those who are not able to access them. It is about being proactive in identifying the barriers and obstacles of learners' encounter in attempting to access opportunities for quality education, as well as, removing those barriers and obstacles that lead to exclusion. A latest report published by UNICEF (2016) entitled, The State of the World's Children: A fair chance for every child, argues, "Promoting equity is more than a moral obligation. It is both a practical and a strategic imperative, helping to break intergenerational cycles of disadvantage and thus, reducing the inequalities that undermine all societies." As of February 2013, 193 countries had ratified the United Nations Convention on the Rights of the Child (UNCRC) and 127 countries and the European Union (EU) have ratified report of the Convention on the Rights of Persons with Disabilities (CRPD, 2006). These are the basics of UNICEF's total activities. It is said that the most complete statement of children's rights have ever produced, and thus, it is the most widely ratified international human rights treaty in the world history.

As Universalization of Elementary Education (UEE) is the national commitment of the nation,in India, the universalism seems underlining the concepts of inherent dignity, autonomy, equality, non-discrimination, full and effective participationthat have paved the way towards an inclusive educational setup. Respect for human diversity and its assimilation are placed as the pinnacle solutions towards achieving better representation and inclusion of PWD in all walks of life and in the society at large, from which they were wrongly withheld. Thus, being aligned to the efforts needed to achieve the above state of representation, Inclusive Education (IE) can act as a fundamental stepping stone towards the assimilation as it entails, increasing the participation of special need students in, and reducing their exclusion from the dominant cultures of society at large. Schools are of elementary level, the most significant organisation catering holistic assimilation towards a broader inclusive society.

Inclusion has been defined as, "the acceptance of all pupils within the mainstream education system, taught within a common framework, and identified as the responsibility of all teachers" (Thomas, 1997). Within an inclusive education approach, learning environments are fostered where individual needs are met and every student has an opportunity to succeed.

According to Booth, et. al. (1998), "Effects of disability-based discrimination have become severe in the fields of education, health care, employment, housing, transportation, cultural life and access to public places and services. This may be resulted from distinction, exclusion, restriction, preference, or denial of reasonable accommodation on the basis of disablement, which effectively nullified or impaired the recognition, enjoyment or exercise of the basic human rights by persons with disabilities (PWD), and which eventually, has finally led to their invisibility within the societal sphere where they are least entitled." This has mostly resulted, out of the age-old practice of conventionally considering PWD as subjects for social welfare, charity and protection and never as an inevitable 'human rights' agenda. Vygotsky(1993) formulated a theoretical framework for comprehensive, inclusive and humanistic practices in education. The development of his theory and practice, especially in the context of inclusive education may include – (i) Developing further theory of Discontegenesis-the dialectic relationship between primary and secondary handicapping conditions, a disability specific 'zone of proximal development', social inclusion, and studying the 'internalisation' of external cultural activities into external processes; (ii) Creating disability specific 'psycho-educational profiles' of different handicapping conditions along with constructing sets of psychological tools and disability-specific mediation techniques; (iii) Perfecting the 'dynamic assessment' of children with handicapping conditions and effectively connecting it with remedial teaching methodologies (Ghosh & Ghosh, 2016).

According to NCERT (2006), Inclusive Education is based on ethical, social, educational, and economic principles. It is the means to realize the right to high quality education without discrimination, but with respect and dignity. It proclaims that -

a. Every student has a fundamental right to education, and he/she must be given the opportunity to achieve and maintain an acceptable level of learning.
b. Every student has some unique characteristics, interests, abilities and learning needs.
c. Education systems should be designed and educational programbe implemented to take into account the wide diversity of these characteristics and respective needs.

d. Those with special educational needs must have access to regular schools which should accommodate them within a student-cantered pedagogy capable of meeting the needs.
e. Regular schools with inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society, and achieving EFA.
f. They provide an effective education to the majority of students and improve the efficiency, and ultimately the quality and cost-effectiveness of the entire education.

In pursuance of the provisions of Persons with Disabilities Act (1995), Department of Women & Child Development and Social Welfare, Government of West Bengal also notified the West Bengal Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Rules.

Visual Impairment (VI)

According to identification criteria of UNESCO, VI means, one who:

a. cannot see at all; or
b. who has no perception of light even with the help of spectacles; or
c. has a perception of light with blurred vision even after using spectacles or contact lenses. A simple test is whether the person can count the fingers of hand from a distance of 10 feet in good daylight. Such persons can however, move independently with the help of remaining sight; or
a. can see light but cannot see properly to move about independently; or
b. has a blurred vision but had no occasion to test if his/her eyesight would improve after taking corrective measures.

Learning-friendly Environment in Schools

According to National Curriculum Framework 2005, is a policy of inclusion needs to be implemented in all schools and throughout our education system. The participation of all children needs to be ensured in all spheres of their lives in and outside the school. Schools need to become centres that prepare children for life and ensure that all children, especially the CWSN from marginalised sections, and children in difficult circumstances get the maximum benefit of this critical area of education. Opportunities to display talents and share these with peers are powerful tools in nurturing motivation and involvement among those children. In our schools, we tend to select some children over and over again. Excellence and ability may be singled out for appreciation, but at the same time opportunities need to be given to all children and their specific abilities need to be recognised and appreciated in a

school situation. This includes children with disabilities, who may need assistance or more time to complete their assigned tasks. It would be even better if, while planning for such activities, the teachers can discuss among themselves about all the children in a class, and ensure that each child is given an equal opportunity for learning.

Learning-Friendly Environment (LFE) indicates the level of learning environment of the school which welcomes nurtures and educates all children according to their ability, regardless of their gender, physical, intellectual, social, emotional, linguistic, socio-cultural-economic status or with any other specific needs. In his study, Chaula (2014) primarily aims at assessing the challenges that teachers face the challenge in implementing of Inclusive Education (IE). The study identifies challenges that hinder the implementation of inclusive education to teachers. It uses both the principles of constructivist theory and systems theory to unveil these challenges. The findings indicate that teachers implement inclusive education in schools in a very difficult environment which affects their work in one way or another. Good cooperation helps to achieve the goal of inclusion at the school level. This may also be effective for implementation of the principles of IE, especially in the context of Indian schools.

Achievement Motivation is regarded as the drive to achieve targets and the process to maintain the drive. Motivation provides an important foundation to complete cognitive behaviour, such as planning, organization, decision-making, learning, and assessments (Pintrich & Schunk, 1996). Spence and Helmreich (1983) defined achievements as task-oriented behaviour. Performances of individuals are often compared against standards or with others for assessments. The original definition of achievement motivation was given by Atkinson (1964), who defined it as the comparison of performances with others and against certain standard activities. Atkinson and Feather (1966) have suggested that achievement motivation is a combination of two personality variables: (i) tendency to approach success, and (ii) tendency to avoid failure.

According to Nicholls (1984), Achievement motivation is reflected through the behaviour directed at developing or demonstrating higher ability. Ability can be conceived either with reference to the individual's own past performance or knowledge, a context in which gains in mastery indicate competence, or as capacity relative to that of others. To demonstrate high capacity, one must achieve more with equal effort or use less effort than do others for an equal performance. The conditions under which these different conceptions of ability function as individuals' goals and the nature of subjective experience in each case are specified.

Elementary Education, according to the national norms and RTE Act, 2009, consists of two stages: (i) Primarylevel, up to standard fourth and (ii) Upper Primary level, from fifth to eighth standard. So, the elementary level consists of first to eighth standard of education.

Regarding Inclusion in Education,UNESCO (2015) proposed about learning and learners that -

- All children can learn, but they learn in different ways, and at different paces;
- Need to provide a variety of learning opportunities and experiences for children;
- Children are able to learn by linking new information with what they already know;
- The learning is to be relevant to the lives of children, their families and the community;
- Assurance is given to help parents and other caregivers to support children when they learn;
- Well organised social interactions in pair or in small group will strengthen inclusive learning.

In the context of above discussions, the basic question was identified as, "What is the impact of learning-friendly environment on inclusion and achievement motivation of visually impaired (VI) learners at elementary level?" To find out the answers of the above research question, the following objectives and hypotheses were formulated andstudy methods were adapted accordingly for data collection and its analyses.

Objectives

O_1: To study the learning-friendly environment of VI learners for inclusion as perceived by their teachers at elementary level in terms of their socio-cultural zone, gender, qualifications in special education domain and type of schools in WB;

O_2: To study the achievement motivation of VI learners at elementary level in terms of their sociocultural zones, gender, social groups and type of schools in WB;

O_3: To study the impact of relationship between the levels of learning-friendly environment on inclusion in education and achievement motivation of the VI students at elementary level in WB.

Hypotheses

$^0H_1$: There is no significant mean difference among the learning-friendly environment scores as perceived by teachers on the criterion of sociocultural zones.

$^0H_2$: There is no significant mean difference between learning-friendly environment scores as perceived by the teachers on the criterion of their gender groups.

$^0H_3$: There is no significant mean difference between the learning-friendly environment scores as perceived by teachers on the criterion of teacher groups,'have' and 'have not' the special teacher education qualifications.

$^0H_4$: There is no significant mean difference between the learning environment scores as perceived by the teachers on the criterion of types of schools.

$^0H_5$: There is no significant mean difference among the achievement motivation scores of VI learners on the criterion of sociocultural zones.

$^0H_6$: There is no significant mean difference between the achievement motivation scores of the VI learners on the criterion of gender groups.

$^0H_7$: There is no significant mean difference among the achievement motivation scores of the VI learners on the criterion of social groups.

$^0H_8$: There is no significant mean difference between the achievement motivation scores of the VI learners on the criterion of types of school.

$^0H_9$: There is no significant relationship impact among levels of learning-friendly environment and achievement motivation of VI learners on inclusion in education at elementary level.

Method

The present study was designed for survey research as per the following:

Sampling and Sample: VI students of West Bengal studying either in special schools or in the inclusive schools at the elementary level constitute the population of the present study. VI students of WB studying at the elementary level in the session 2016-17 were taken as the sampling-frame.

The following steps were undertaken to draw the sample of the study from the sampling frames:

1. Two types of sampling Frames were identified – Sampling Frame for students and sampling frame for teachers.
2. Following the Census Report (2011) all the 23 Districts of West Bengal under the four socio-cultural zones, namely, *Ganga-Delta, Rarh, Terai and Hills* happens to be only one Special School (SS) in each of the 20 Districts and a some Inclusive Schools (IS) of elementary level in each of the Districts. In the present study, 20 SSs from each of the 20 Districts along with the 20 ISs were randomly selected from the corresponding 20 Districts were identified from the list prepared by the State Directorate of

School Education, Government of West Bengal.

3. 198 elementary level VI learners were identified from 40 special schools of 20 districts.
4. Similarly, 124 elementary teachers from the corresponding Special and Inclusive schools volunteered to provide information, selected as the teacher sampling frame for the present study.

Sample Distribution

Table 1: Sample Distribution of VI Students according to the Categorical Variables

Dimension	*Categorial Variables*	*Number of student inSociocultural Zone*			
		(1.1)Ganga-Delta	*(1.2)Rarh*	*(1.3)Terai*	*Total*
(2) Gender	(2.1) Girls	52	9	11	72
	(2.2) Boys	75	30	21	126
(3) Social Group	(3.1) General	39	23	8	70
	(3.2) SC	29	5	7	41
	(3.3) ST	13	4	13	30
	(3.4) OBC	13	4	3	20
	(3.5) Minority	33	3	1	37
(4) School Type	(4.1) SpecialSchool	79	36	23	38
	(4.2) Inclusive School	48	3	9	60
Total					198

Table 2: Sample Distribution of Teachers Teaching VI Students according to the Categorical Variables

Dimension	*Categorical Variables*	*Number of teacher in Sociocultural Zone*			
		(1.1)Ganga-Delta	*(1.2)Rarh*	*(1.3)Terai*	*Total*
(2) Gender	(2.1) Male	66	10	15	91
	(2.2) Female	24	1	8	33
(3) Spl Edu Qualification	(3.1) Have	21	7	7	35
	(3.2) HaveNot	69	4	16	89
(4) School Type	(4.1) Special School	28	7	11	46
	(4.2) Inclusive School	62	4	12	78
Total					124

Tools

(a) Questionnaire – Two comprehensive questionnaires, one for Students and other for Teachers, had been developed by the researcher in consultation with the experts and refined that according to their comments.

(b) Standardized Tools – Following two standardized tools are administered for relevant data collection and analysis :

(i) Learning-Friendly Environment Scale was originally developed by UNESCO (1994) as a standardized tool. The researcher adapted the scale with 9 items having 4-point options scale in Bengali and also in Braille. Determining construct validity with the experts, the test-retest reliabilities were determined as 0.88 and 0.68 respectively. Norms found were (i) Achieved [Score: average of 03] and (ii) Achieving [Score: Below 03].

(ii) Achievement Motivation Test originally developed by V.P. Vargava (2010) having 50 items with 3 alternatives wastranslated in Bengali as well as in Braille for adaptation. Determining construct validity with the experts, the test-retest reliabilities were determined as 0.78 and 0.73 respectively. Norms are (i) High for Boys [Score: 19 & above] and for Girls [17 & above]; (ii) Average for Boys [Score: 17-18] and for Girls [Score 17-19] and (iii) Low for Boys [Score: Below16] and for Girls [Score: Below16].

Table 3: Showing Summary of the Methodology according to the Study Design

N	Variables	Construct	Data Collecting Tool	Method adapted	Procedure
198	Independent	Learning-Friendly Environment	UNESCO Tool-Kit (Adapted)	Survey	Data collected according to the Tools from the VI learners at elementary level
	Independent Categorical (Learners)	Socio-Cultural Zone	Researcher-made Questionnaire		
		Gender			
		Social Group			
		School Type			
124	Independent Categorical (Teachers)	Socio-Cultural Zone	Researcher-made Questionnaire		Data collected according to the Tools from the teachers of VI students
		Gender			
		SchoolType			
	Dependent	Achievement Motivation	Vargava AM Test		

Results:

Table 4: F-test and T-test on Learning-Friendly Environment Scores among the Sociocultural Zones

S-C Zone	N	M	SD	F-value	Between Zones	t-value
Ganga-Delta	90	27.01	4.43		Ganga-Delta Vs. Rarh	6.19 (p <0.01)
Rarh	11	17.36	5.16	25.41 (P < 0.01)	Ganga-Delta Vs. Terai	3.17 (p < 0.01)
Terai	23	24.35	3.34		RarhVs, Terai	7.36 (p < 0.01)

Table 4 revealed that there was a significant mean difference among the sociocultural zones on the criterion of learning-friendly environment scores as perceived by the teachers of the schools. Thus, the null hypothesis 0H1 was rejected. It was also found that highest form of Learning Environment scores at the Ganga-Delta zone followed by Terai.

To test the null hypothesis ${}^{0}H_{2}$, the following statistics were computed:

Table 5: T-test on Perception of Learning-Friendly Environment Scores between Genders of teachers

Genderof Teachers	N	M	SD	t-value
Female	91	18.82	5.05	1.17 (p >0.05)
Male	33	19.97	4.72	

Table 5 indicated that there was no significant mean difference between male and female teachers of theelementary schools on the criterion of learning-friendly classroom environment as perceived by their teachers. Hence, the null hypothesis 0H2was retained. Thus, both the male and female teachers were found equal in terms of their perception on learning-friendly environment of VI learners.

Table 6: t-test on Learning-Friendly Environment Scores between‘have’ and ‘have not’ of Special Education Qualifications of Teachers

Special Education Qualifications	N	M	SD	t-value
Have	34	29.68	4.15	11.96 (p <0.01)
Have Not	90	18.92	5.26	

It is found from Table 6 that there was a significant mean difference between the ‘have’ and ‘have not’ groups of Special education Qualifications on the criterion of learning-friendly environment scores as perceived by the teachers of the schools. Thus, the null hypothesis 0H3 was rejected. It is further found that teachers having Special Education Qualifications had perceived better learning-friendly environment.

Table 7: t-test Learning-Friendly Environment Scores between the Types of the School

Types of School	N	M	SD	t-value
Special	45	23.68	4.35	6.23 ($p < 0.01$)
Inclusive	79	18.25	5.12	

Table 7 revealed that there was a significant mean difference between the Special and Inclusive schools on the criterion of learning-friendly environment scores as perceived by the teachers of the schools. Thus, the null hypothesis 0H4 was rejected. It was further revealed that learning-friendly environment of the Special schools was better than the Inclusive schools.

Table 8: F-test and t-tests on Achievement Motivation Scores of VI learners among the Sociocultural Zones

S-C Zone	N	M	SD	F-value	Between Zones	t-value
Ganga-Delta	127	21.91	3.98		Ganga-Delta Vs. Rarh	10.38 ($p<0.01$)
Rarh	39	12.46	5.24	77.11 ($P<0.01$)	Ganga-Delta Vs. Terai	5.32 ($p<0.01$)
Terai	32	17.92	3.75		Rarh Vs. Terai	5.10 ($p<0.01$)

Table 8 indicated that there exists significant mean difference among the socio-cultural zones on the criterion of achievement motivation scores of the VI students. Thus, the null hypothesis 0H5 was rejected. It was further revealed that highest achievement motivation score among the VI learners of elementary level is in the Ganga-Delta zone and that lowest is at Rarh zone.

Table 9: t-test on Achievement Motivation Scores between Genders

Gender	N	M	SD	t-value
Girls	72	19.07	3.66	1.08 ($p > 0.05$)
Boys	126	18.43	4.49	

t-value, according to Table 9 indicated that there was no significant mean difference between boy and girl VI learners of elementary level on the criterion of their achievement motivation. Hence, the null hypothesis 0H6 was retained. Thus, both the boy and girl VI learners at the elementary level were found equal in terms of their achievement motivation.

Table 10: F-test and t-tests on Achievement Motivation Scores among Social Groups

Social Groups	N	M	SD	F-value	BetweenGroups	t-value
General	71	27.34	4.60		General Vs. SC	10.95 (p <0.01)
SC	40	19.13	3.29		General Vs. ST	12.54 (p <0.01)
ST	30	16.43	3.69		General Vs. OBC	5.78 (p <0.01)
OBC	20	21.85	3.47	56.51 (P <0.01)	General Vs. Minority	9.86 (p <0.01)
Minority	37	18.86	4.04		SC Vs. ST	3.18 (p <0.01)
					SC Vs. OBC	2.92 (p <0.01)
					SC Vs. Minority	0.32 (p > 0.05)
					ST Vs. OBC	5.31 (p <0.01)
					OBC Vs. Minority	2.93 (p <0.01)

Table 10 stated that there were significant mean differences among the social groups of the VI learners on the criterion of their achievement motivation. Thus, the null hypothesis 0H7 was rejected. It was also found that achievement motivation score of general category was highest followed by OBC, SC, Minority and ST groups respectively.

Table 11: t-test on Achievement Motivation Scores between the Types of the School

Type of Schools	N	M	SD	t-value
Special	138	26.75	4.35	4.01 (p <0.01)
Inclusive	60	18.47	3.89	

Table 11 indicated that there was a significant mean difference between the Special and Inclusive type of schools in respect to the achievement motivation score of the VI learners. Thus, the null hypothesis 0H8 was rejected. It was further revealed that achievement motivation scores of the VI learners at special schools were better than the Inclusive schools at elementary level.

Table 12: Contingency Table Distribution between the levels of InclusiveLearning Environment and Achievement Motivation

Inclusive Learning-FriendlyEnvironment	AchievementMotivation			Total
	High	Average	Low	
Achieved	5 (9)	16 (10)	7 (9)	28 (28)
Achieving	65 (57)	58 (57)	47 (56)	170 (170)
Total	70 (66)	74 (67)	54 (65)	198 (198)

In the Table 12, the expected frequencies were assigned logically in accordance with the nature of data distribution and given that in the parentheses along with the observed frequencies.

Considering the observed and expected frequencies of the distribution, the X2 value was calculated as 8.41, according to the 2X3 contingency table given above. The calculated value of 8.41, for df 2, was found exceeding the probability value of 5.991 at 0.05 level. Thus, the null hypothesis 0H9 was rejected. Hence, the impact relationship existed between the levels of learning-environment and achievement motivation of the VI students at elementary level.

It was further revealed that almost 14 % VI learners were learning in the inclusive learning-friendly school environment set-up, of which only 2.5 % have the high level achievement motivation, 8 % average achievement motivation, and the rest 3.5 % low level achievement motivation. The rest of 86 % VI learners are learning in the yet to develop learning-friendly school environment, of which 39 % have the high achievement motivation, 37 % with average achievement motivation, and10 % with low achievement motivation.

Discussion

The present study seems to be important for exploring some of the significant findings on inclusive education, especially in the context of RTE Act, 2009, viz., (a) wide variation on learning-friendly environment in elementary schools existed among the socio-cultural zones of the State of WB; (b) no perceptual difference on learning-friendly environment on education existed between male and female teachers of the elementary schools; (c) special education qualifications had an impact on the perception of learning-friendly environment in schools; (d) special schools were creating better learning-friendly environment rather than the inclusive schools; (e) there was a variation in achievement motivation of VI learners among the socio-cultural zones and Ganga-Delta zone was found better, may be due to the greater exposure; (f) no significant difference was found between boy and girl VI learners in terms of their achievement motivation; (g) there was a variation in achievement motivation scores of VI learners among the social groups and the general group was found better, may be due to their greater exposure; (h) the achievement motivation of VI learners at inclusive schools were found better (i) there was a relationship impact between learning-friendly environment in elementary schools and achievement motivation of the VI learners at the elementary level, but only 14 % elementary schools had achieved the learning-friendly environment for inclusion in education.

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Mathematics Anxiety and Academic Achievement of Students at Secondary stage of Education

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Abstract

Mathematics anxiety is loosely regarded as feeling a fair avoidance and dread when dealing with any situation relating to mathematics. The objective of this study is to find out the mathematics anxiety and academic achievement of secondary school students, to examine the academic achievement and mathematics anxiety with respect to habitat. Participants were recruited from a group of 300 secondary school students of the class IX and X from West Bengal Board of Secondary Education in Kolkata, West Bengal. Using 14th items 'Mathematics Anxiety Scale', which elicits responses on a Likert scale numbered [i) strongly agree (5), ii) agree (4), iii) undecided (3), iv) disagree (2) and v) strongly disagree (1)] was administered. Data analysis was done using Statistical Package for Social Science version 16. Descriptive statistics and inferential statistics were carried out. Results have revealed that there is significant difference of gender and mathematics anxiety and achievement in mathematics. It is also found that there is no significant difference in habitat (urban, semi-urban and rural area) and achievement in mathematics and also academic achievement. There is significant relationship between mathematics anxiety and academic achievement in secondary school students. Moreover it was found that there is no significant difference of academic achievement and gender.

Key Words **:** Mathematics Anxiety, Academic Achievement, Secondary School Students.

Introduction

The term 'Mathematics'is derived from the Greek word 'Mathematike' meaning scientific science or knowledge. In everyday life the knowledge of mathematics is important for every human begins to solve the problems and to make appropriate decisions. It is widely recognise that the subject of mathematics as a problem

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area (Wagh, 2003) and maximum students (any stage of life and gender) have the phobia for it (Johnson, 2003). Base on the mathematical context, it appears that many students, who are weak in learning the mathematics, worry while attempting to apply the mathematics skills to solve the problems (Mohamed and Tarmizi, 2010). Generally it can define that mathematics anxiety as a state of discomfort caused by performing mathematical tasks. According to Richardson and Suinn(1972) have defined 'mathematics anxiety is a feeling of tension and anxiety that interfere with the manipulation of mathematical problem in wide variety of ordinary life and academic situation. Gresham (2009) mathematics anxiety has been defined as an irrational dread of mathematics that interferes with manipulating numbers and solving mathematics problems within a variety of everyday life and academic situations.

It was found that students who experienced high levels of mathematics anxiety, developed negative attitudes toward tasks involving mathematics, dropout of elective mathematics' class of avoid taking them together. If students perceived that "mathematics is difficult" during their previous year, mathematics anxiety will be triggered. According to Preis and Biggs(2001) described mathematics anxiety with a suitable diagram, which is described in the flowing:

Phase 1. Negative feeling to math related situation

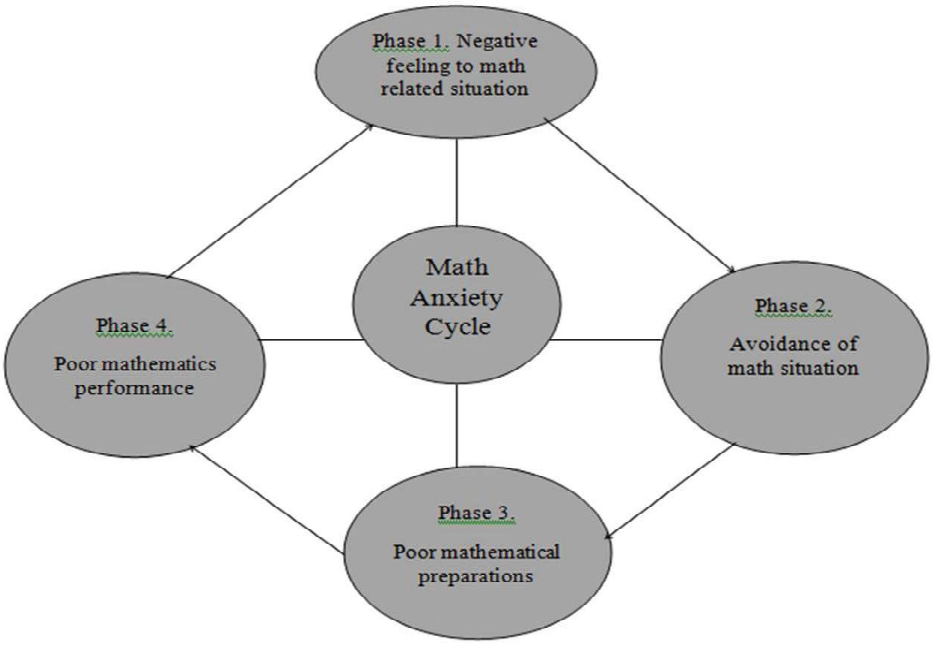

Figure 1: The cycle of mathematics anxiety

In the first phase, the student experiences a negative feeling to mathematics related situations which could be a result of their previous negative experiences with mathematics. This leads to the second phase in which the student begins to avoid mathematical situations, followed by phase three which involves poor mathematical preparations, and finally there is four phase featured by poor mathematics performance.

There is a relationship between mathematics anxiety and student academic achievement. It has found that there was inverse relationship between level of mathematics anxiety of students and academic achievement (Sherman and Wither, 2003 and Elenchothy, 2007). This inverse relationship leads students will feel worried, tired, afraid and also realize that mathematics is not an important subject and will generally refuse to learn mathematics.

Ramirez et al. (2016) has conducted a study on the relationship between mathematics anxiety and mathematics achievement in early elementary school. The researchers selected the first and second grade students'mathematics achievement scores. The results found that the relation between mathematics anxiety and mathematics problem solving strategies is strongest in children with the highest working memory capacity.

Beilock and Maloney (2015) worked on a qualitative study about mathematics anxiety: a factor in mathematics achievement not to be ignored. They focused on mathematics anxiety and the implications mathematics anxiety carriers for mathematics success and science, technology, engineering and mathematics (STEM) engagement. They suggested that policymakers to consider affective factors, mathematics anxiety, when designing programs aimed at increasing the size of the STEM workforce. By educating the pre-service and already established teachers—who can, in turn, educate their students and their parents—on the negative role of mathematics anxiety in mathematics achievement as well as how to reduce the negative consequences of mathematics anxiety, and by creating programs designed to encourage highly mathematics-anxious students in mathematics.

Ballado (2014) made a study on mathematics anxiety and academic achievement of junior pre-service teacher education students. The investigator chose a 24-item Mathematics Anxiety Inventory. The outcomes revealed that majority of the respondents have Moderate to High anxiety levels. There was a significant difference in the mathematics anxiety levels of male and female students.

A significant negative relationship was found between anxiety level and mathematics achievement.

Alkan Vesile (2013) investigated of reducing mathematics anxiety: the ways implemented by teachers at primary schools in Turkey. A qualitative research methods was used in this study. Total 50 numbers of teachers in 4th and 5th grades teacher at primary schools in Turkey were selected. This study was needed to understand the ways which teachers implement to reduce the level of anxiety that pupils face in anxiety in mathematics, teachers chose such ways as motivating pupils, making mathematics relevant, reviewing the given topic by examples and exercise, using games and also support from parents.

Arigbabus and his associates (2012) conducted a study mathematics anxiety among single sex and co-educational school in Nigeria. 450 participants (153 males and 297 females) were used for this study. The findings of this study were conception about mathematics and age are correlated significantly positive with mathematics anxiety, while gender, emotional intelligence, need achievement motivation, life satisfaction and self-esteem did not have significantly correlation with mathematics anxiety.

After reviewing the literature review researchers have noted that mathematics is taught as a compulsory subject in the secondary level of education and mathematics teachers are obtain incompetent include division, algebra, fractions etc., so that a mathematics student has failed to understand the mathematics syllabus throughout his/ her academics. In the schools there are many variables which are effect on student‘s mathematics achievement, such as teaching aids, improper school environment, teacher-student relationships, teacher‘s fears, lack of understanding of mathematics etc. so that an intensive study is needed mathematics anxiety of secondary school students.This study would have some applied values and the study would give the new knowledge about mathematics anxiety which will help for parents, students, teachers, education planners etc. to make suitable environment to reduce mathematics anxiety of the students. Researchers also noted that few studies have found with the relationship between mathematics anxiety and students’ academic achievement with respect to gender, educational environment and habitat in secondary school students. Realizing these problems and inspired by these facts the present researcher has formulated the present research. The current study uses a Mathematics Anxiety scale, which is appropriate for the secondary stage of school students.

Operational definition

- Mathematics anxiety:In this study, mathematics anxiety means- tension, phobia, feeling of fear, avoidance and dread when dealing with any situation relating to mathematics class in secondary stage.
- Academic achievement:For the present study, the term academic achievement means- overall achievement/performance of the secondary school students after a course of instruction and measure it in terms of marks obtained.
- Secondary school students:In this study secondary school students means class IX and X in the West Bengal Board of Secondary Education.
- Achievement in mathematics:Marks are obtained in mathematics of the annual examination of class VIII and IX secondary school students.

Objectives

1. To study the mathematics anxiety of secondary school students.
2. To study the achievement in mathematics of secondary school students.
3. To study the achievement in mathematics among urban, semi-urban and rural areas.
4. To study the academic achievement among urban, semi-urban and rural areas.
5. To examine the relationship between mathematics anxiety and academic achievement of secondary school students.
6. To examine the causes of mathematics anxiety of secondary school students.
7. To provide suggestions on strategies that can be used by students to reduce or overcome mathematics anxiety.

Hypotheses

- $Ho._1$: There is no significant difference in the mathematics anxiety of secondary school students.
- $Ho._2$: There is no significant difference in the achievement in mathematics of secondary school students.
- $Ho._3$: There is no significant difference in the achievement in mathematics among urban, semi-urban and rural areas.
- $Ho._4$: There is no significant difference of academic achievement among urban, semi-urban and rural areas.
- $Ho._5$: There is no significant relationship between mathematics anxiety and academic achievement of secondary school students.

Delimitation of the study

The study is delimited to the secondary schools students of West Bengal, Bengali medium schools of Kolkata and South 24 parganas districts in West Bengal.

Variables

In this study the variables are: - i) Independent- A) Gender (male and female), B) Mathematics anxiety and C) Habitat => Urban, Semi urban and Rural areas.
ii) Dependent: -A) Academic achievement. B) Achievement in mathematics score.

Population

Students enrolled in the class of ix and x standard in different Bengali medium schools in Kolkata and South 24 Parganas districts in West Bengal. The age range of the students were 15-16 years.

Sampling Technique

300 students were selected as sample through stratified random sampling method. Details of the sample are given below:

Grade of the students		Habitat			Gender	
IX	X	Urban	Semi-urban	Rural	Male	Female
150	150	100	100	100	150	150

Tool used in the study

The tool used in the study was the Mathematics Anxiety Scale (2011) by Mahmood and Khatoon. Mathematics anxiety scale was validated by the eminent professors of concerned field and the score of Cronbach alpha was 0.72.

Administration of the tools

The scale was administered with the permission of the headmaster and headmistress of the schools. Ethical conditions for participating in this study were verbally explained to the participants. Questionnaires were distributed to the students with the assistance of the class teachers and it took 20-25 minutes to fill them in.

Scoring methods and data analysis

Mathematics anxiety scale contains 14 items which are measured by 5-point Likert scale [i) strongly agree (5), ii) agree (4), iii) undecided (3), iv) disagree (2) and v) strongly disagree (1)].

The data was analysed by using Statistical Packages for Social Science (SPSS) version 16 software and for the quantitative analysis of data descriptive statistics

like Mean, and S.D. (Standard Deviation), coefficient of correlation were used and inferential statistics like‘t’ test and ANOVA (Analysis of Variance) were used.

Result and Discussion

Table 1: Mathematics anxiety of Secondary School students

Statistics	Boys	Girls	‘t’ value for the mean difference
N	150	150	
Mean	45.38	43.09	- 2.56*
Standard Deviation	7.17	8.26	

*Significant at 0.05 level

Table 1 illustrate that the mean, S.D. and ‘t’ scores of the mathematics anxiety of secondary school students of both boys (N= 150) and girls (N= 150).

Though the mean score of boys indicates high score (M= 45.38) than the girls (M= 43.09), the‘t’ score (t= - 2.56) clearly indicate that there is significant difference (table value of ‘t’ at 0.05 level is 1.97) between boys and girls in mathematics anxiety.Thus the null hypothesis is rejected. Several studies have been conducted to investigated the mathematics anxiety with respected to gender. This finding of the present study is not similar with the outcomes of the study conducted by (Salwani and Salleh, 2001; Woodard, 2004; Yuksel- Sahin, 2008; Karimi and Venkatesan, 2009; Khatoon and Mahmood, 2010; Baloglu and Kocak, 2006). These studies found that girls have higher mathematics anxiety than boys. Based on the present report it can be assumed that boys are not interested to learn the mathematics and generally they avoid the classes of mathematics.

Table 2: Achievement in mathematics of secondary school students of both boys and girls

Statistics	Boys	Girls (N=150)	‘t’ value for the mean difference
N	150	150	
Mean	30.02	27.65	- 2.15 *
SD	10.37	8.75	

*Significant at 0.05 level

Table 2 illustrate that the mean, S.D. and ‘t’ scores of the achievement in mathematics of secondary school students of both boys (N= 150) and girls (N= 150).

Though the mean score of boys indicates high score (M= 30.02) than the girls (M= 27.65), the 't' score (t= - 2.15) clearly indicate that there is significant difference (table value of 't' at 0.05 level is 1.97) between boys and girls in achievement in mathematics. Thus the null hypothesis is rejected.Various researchers have revealed that those students have high level of mathematics anxiety performed at a low level of mathematics achievement (Ma and Jiangming Xub, 2004; Tocci and Engelhard, 1991; Yuksel-Sahin, 2008; Satake and Amato, 1995). In this study researchers found that boys mathematics achievement is high than the girls. Students who have high levels of mathematics performance showed positive attitude toward mathematics (Zakaria, 1997).

Table 3: Habitat (Urban, Semi-Urban and Ruralareas) and Achievement in Mathematics

Habitat (urban, semi-urban and rural	N	Mean	S.D.	F- value
Urban	100	31.45	10.49	5.68
Semi-Urban	100	27.61	8.84	
Rural	100	27.45	9.08	

NS= Non-significant

The mean and S.D. for all groups of habitat are represented in table 3. Though the mean score indicated differences among the three groups of habitat (urban, semi-urban and rural areas) but one way ANOVA (analysis of variance) showed no significant difference in achievement in mathematics (F= 5.68, p>0.05) among the three groups (urban, semi-urban and rural areas).So the null hypothesis is accepted.

The graphical distribution (table 3) also gives a picture of habitat (urban, semi-urban, and rural areas) and achievement in mathematics of secondary school students of both boys and girls. The picture indicates that the score of urban (M= 31.45) is higher than the other two areas {semi-urban (M=27.61) and rural (M= 27.45)}, so the achievement in mathematics is found to be very well in the urban area than the others two areas though the ANOVA results shows there is no significant difference of habitat (urban, semi-urban, and rural areas) and achievement in mathematics.In the urban area there are many educational facilities have been found by the students than the semi-urban and rural areas.

Table 4: Academic achievement and habitat (urban, semi-urban, and rural areas)

Habitat	N	Mean	S.D.	F- value
Urban	100	3.56	41.23	1.07
Semi-Urban	100	3.54	39.81	
Rural	100	3.48	41.21	

NS=Non-significant

The mean and SD for all groups of habitat are represented in table 4. Though the mean score indicated differences among the three groups of habitat (urban, semi-urban and rural areas) but one way ANOVA (analysis of variance) showed no significant difference in academic achievement ($F= 1.07$, $p>0.05$) among the three groups (urban, semi-urban and rural areas). So the null hypothesis is accepted.

The graphical distribution (table 4) also gives a picture of habitat (urban, semi-urban, and rural areas) and academic achievement of secondary school students of both boys and girls. The picture indicates that the score of urban ($M= 3.56$) is higher than the other two areas {semi-urban ($M=3.54$) and rural ($M= 3.48$)}, so it means academic achievement in urban area is perform well than the other two areas, though the ANOVA results shows there is no significant difference of habitat (urban, semi-urban, and rural areas) and academic achievement. Modern educational technologies are maximum use in the urban schools than the semi-urban and rural areas, so that urban students' academic achievement is better than the other two areas.

Table 5: Correlation Coefficient value of mathematics anxiety and academic achievement

Variables	**Correlation value**
Mathematics anxiety	0.16**
Academic achievement	

**** Correlation is significant at 0.01 level**

The null hypothesis is rejected

There is significant relationship between mathematics anxiety and academic achievement in secondary school students($r=0.16$**). Thus there is a positive correlation between mathematics anxiety and academic achievement in secondary school students. It can be say that, mathematics anxiety affect on the students' academic achievement.

There are various causes of mathematics anxiety of secondary school students. These are described in the following:

- Traditional teaching method, where teacher uses lecture method.
- Sometimes teachers give insufficient instruction to the students, to preparing them for assessment rather than for understanding.
- Some students have performed poorly, leading to loss of self-confidence and increased tension
- Many teachers promote the false idea that capacities of mathematics of males are better than females.
- Sometimes teacher may be perceived as not caring about learners because he is unwilling to give extra help to students who need it.
- It could be very difficult for students to like mathematics when their parents did not do well in mathematics themselves, and thus do not understand it or do not think it is important.
- Sometimes the teacher can discourage students from doing well in mathematics and cause mathematics anxiety without realizing it.

There are various strategies for reducing mathematics anxiety. These are describe in the following :

❖ **Strategies of teachers for reducing student's mathematics anxiety**

Teacher practices have a strong influence on student's mathematics anxiety. Following techniques that teachers can use to reduce students' mathematics anxiety.

■ ***Develop strong skills and a positive attitude towards mathematics***

Teachers who have a negative view of mathematics contribute to the development of mathematics anxiety in their students. So, it is more important for more teacher training that develops educator's mathematics skills and build positive attitudes towards mathematics. Various studies reported that teachers should attend seminars, workshops on new research-based best practices for teaching mathematics and become more informed about the effects of mathematics anxiety by reading related literature and attending conferences on the topic (Cavanaugh, 2007; Furner & Berman, 2004).

■ ***Relate mathematics to real life***

Teachers should make mathematics relevant to students' lives and make connections to everyday applications, such as counting change and going grocery shopping, to help students realize that mathematics is an important and useful tool.

- ***Encourage critical thinking***

Teaching methods that emphasize memorization and rote repetition instead of understanding can increase students 'mathematics anxiety. When students are taught with an emphasis on drill and practice and rote learning of formulas, they often don't develop a meaningful understanding of mathematics. Instead, teachers should present.

- ***Encourage active learning***

Studies have found that students learn best when they are active rather than passive learners. Students must be engaged in exploring, thinking, practicing, and using knowledge, rather than listening to verbal descriptions of concepts. Teachers should incorporate games and activities into mathematics lessons so that students can experience mathematics in a hands-on fashion.

- ***Accommodate students' varied learning styles***

Teachers can help students overcome mathematics anxiety by accommodating the diverse array of learning styles within their classroom and modifying their teaching practices to ensure that all students experience mathematics success.

- ***Correct Place less emphasis on answers and computational speed***

In the test environment, there is not only just one right answer, but often only one correct way to get it. Add to this the knowledge that a tiny mistake can result in the loss of all points and conditions can be quite stressful.

- ***Organize students into cooperative learning groups***

Mathematics anxiety has been linked to teaching techniques that emphasize competition among students and require students to work in isolation. Cooperative groups provide students with opportunities to exchange ideas, ask questions freely, verbalize their thoughts, justify their answers, and debate processes.

- ***Avoid putting students in embarrassing situations***

Teachers should create an atmosphere in which students don't feel embarrassed in front of others or threatened when they are called on to give oral answers. Teachers should avoid forcing lower-performing students into intimidating circumstances, such as working problems on the board or being singled out to answer a question in class. They should instead provide these students with alternative ways of participating in class until their confidence level improves.

- ***Never use mathematics as a punishment***

Furner and Berman (2003) stressed that assigning mathematics problem as punishment for misbehaviour can lead to mathematics anxiety.

- ***Use a variety of assessments***

Alternative assessment techniques include oral questioning, observation, demonstration, discussion, learning logs, and retesting with a former test. Projects, performance tasks, and portfolios are also effective assessment tools.

- ***Dispel harmful but popular misconceptions***

Once mathematics anxiety is established, it is often supported by a variety of cultural attitudes that undermine mathematics achievement. These misconceptions include: males are better at mathematics than females; individuals are either good or not good at mathematics no matter how hard they work; there is only one right way to solve a mathematical problem; and all mathematicians solve problems quickly and in their heads. Teachers need to help students realize that these commonly held beliefs are not true.

❖ **Parents strategies for reducing students mathematics anxiety**

Following strategies parents can use to prevent their children's mathematics anxiety.

- ***Do not express negative attitudes about mathematics***

Those parents who have afraid of mathematics may pass on mathematics anxiety to their children, it is not genetically, but by modelling behaviours of their own discomfort with the subject. The need for parents to conquer their own mathematics fears and avoid passing them on to their children.

- ***Have realistic expectations***

Parents increase their children's mathematics anxiety when they have unrealistically high expectations for their success.

- ***Provide support and encouragement***

Parental encouragement in mathematics has been found to strongly influence children's attitudes toward mathematics. Parents must let children know they believe they can succeed at mathematics and provide them with the needed academic support.

- ***Demonstrate positive uses for mathematics***

Parents should show their children how mathematics is used in positive ways, such as sports, hobbies, home repairs, puzzles, and number games. Curtain- Phillips

(2001) noted: – Mathematics is often associated with pain and frustration. For example, unpaid bills, unforeseen debts, unbalanced check books, and IRS forms are a few of the negative experiences associated with numbers.

❖ **Student strategies for reducing mathematics anxiety**

■ ***Practice mathematics every day***

Researchers recommend that students practice mathematics problems daily. They emphasize that repetition is important in mathematics and that with practice; students will develop the confidence needed to solve mathematical problems.

■ ***Use good study techniques***

Students should become acquainted with good study techniques. For example, space out studying time to increase retention; study in a location with few distractions; and don‘t over-study because it can lead to information overload.

■ ***Study according to one’s own learning style***

To reduce mathematics anxiety, students should study according to their individual learning style. For example, visual learners learn by using pictures, diagrams, illustrated textbooks, and videos; auditory learners learn best through verbal lectures, discussions, and talking things through with others; and tactile/kinaesthetic learners learn through a hands-on approach and active exploration within their environment.

■ ***Focus on past successes***

Unsuccessful experiences with mathematics may cause students to doubt their ability to do well in mathematics, so researchers suggest that students focus on past successes rather than failures. Students can build their confidence in mathematics through gradual, repeated success.

■ ***Ask for help***

Students should immediately seek assistance when they don‘t understand a mathematics concept. If a student needs extra help, it is often better to be tutored by someone other than the classroom mathematics teacher because other individuals may have different ways of explaining concepts that are easier for the student to comprehend.

■ ***Practice relaxation techniques***

Students practice relaxation techniques to reduce mathematics anxiety, such as deep breathing, visualization, positive messages, and frustration breaks.

Conclusion

As an individual in the educational area, opening the doors of success for students in mathematics is important. Mathematics anxiety has never been a topic of discussion in schools. Sometimes mathematics anxiety is also transmitted from the mathematics anxious of the teachers to their students during their process of teaching. To overcome the mathematics anxiety it is necessary for the teachers themselves to aware of their mathematics anxiety levels and help them to reduce their fear and their negative attitudes about mathematics. Schools need to explore research around this topic and open their mind to the notion that teachers, parents, and classroom environments are partially responsible for developing mathematics anxiety in the youth of tomorrow.

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Museum Learning Experience: Dimension of Visual Culture

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Abstract

Museums are the institutions that visualise heritage of the societies for an ultimate goal to provide life-long learning with the tools at their disposal, the objects – collected or fabricated. To become museal, the objects undergo a process of musealisation. Though museums essentially deal with the objectification, it emphasise on the visual culture instead of putting stress on material culture to fulfil their primary objective of communication to the visitor by creating a learning ambience ideally through immersive visualisation. The qualitative study employing content analysis tries to trace the process of museum learning and related theories of visual communication and perception.

Key Words: Museum Learning Theories, Communication Models, Objectification, Visual Communication & Perception, Visual Culture.

Introduction

The word museum has its origin in learning or the study of philosophy (that is, knowledge at its deepest level of meaning) considered as a service to the muses. Thus the temple of muses was the temple of learning. A museum holding what is sacred to each culture, promotes, preserves, studies and goes deep into it linking the ancient past with the recent most in history. Every museum can be a treasure house of knowledge and of experience.

The cultural, religious and ethical dimensions, which formed an integral unit in museion, got separated in the Hellenistic institute of Alexandria at the middle of the 3rd century BCE, and it was at that period that the term museum came to be linked with intellectual learning mainly. But Hegel cautions (1952/ 1998: 455),

> …Fate does not restore their world to us along with the works of antique Art… but only the veiled recollection of that actual world. Our active enjoyment of them is therefore not an act of divine worship through which our consciousness might come to its perfect truth and fulfilment; it is an external activity…

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Museums have evolved over the centuries as important organizational components and as society's information infrastructure. Their roles and functions, as they have developed over this period, are the expressions of a variety of cultural and social practices related to education, research, artistic creativity, entertainment and recreation. Museums now enable the public to explore collections for inspiration, learning and enjoyment. The redefinition of museum gives them a more pro-active role and is inclusive of the virtual realm that many museums now occupy. Museums provide an ideal learning environment, whether it is formal or informal learning, active hands-on participation or passive observation. Museums offer education facilities, which are very much necessary to inculcate the theoretical knowledge in the minds of visitors, especially the young ones.

Culture or Civilization, taken in its wide ethnographic sense, is that complex whole which includes knowledge, belief, art, morals, law, custom, and any other capabilities and habits acquired by man as a member of society (Tylor, 1871). Whereas, heritage of a country is the manifestation of culture as inherited traditions, monuments, objects and culture along with the range of contemporary activities, meanings and behaviours that a society draw from the practicing tradition.

Objects undergo complex and multi-layered musealisation process involving several parameters like collection, classification, grouping, display, texts, etc., to gain articulated meanings. Curatorial practices allocate or relocate the objects to a position in the exhibition – physical and conceptual – that imparts a meaning, often related to a fixed academic discipline. For long, this was considered to be the correct method for interpretation, i.e., a singular view that has been directed by the curator.

"In the accepted understanding of term, musealisation means the placing in the museum, or more generally, transforming a centre of life, which may be a centre of human activity or a natural site, into a sort of museum" (Désvallées and Mairesse, 2010: 50). Musealisation is the science of preserving the culture beyond its time as heritage by keeping it alive among the consciousness of people of the country as living tradition. It preserves the heritage tangibly through objectifying the heritage in terms of exhibits and intangibly through ritual, belief, music, dance, puppetry, folklore, etc. In this era of globalisation, which was initiated long before its time, it is now necessary to research for assessing the immense strength of musealisation of culture and heritage, in both its tangible and intangible forms, those are present within the community practices.

During the last couple of decades new ways of object arrangements emerged depending on different meanings along with content and style of narratives of objects displayed on which museum pedagogy is structured. "The meanings made by museum visitors from the visual cultures of display are a product of both individual

and social interpretive processes and are complex and unpredictable" (Hooper-Greenhill, 2000: 124). Museums have started using methods other than conventional ones, like displayed objects, to supplement the additional demand for more close interpretation; dramatic performances, workshops of different types, live demonstrations, etc., are tried, often with limited success.

The role of museum has radically changed from being a conventional institution exhibiting objects of heritage to a more dynamic one – reaching out to educate, collaborate and make the visitor to participate in the process of understanding the narratives that objects embody. "To refer to museums as detemporalizing, ahistorical or static organisations, while greatly oversimplifying their temporal dimensions, also points to their often forgotten temporal complexity" (Shelton, 2006: 485).

Generally it is being told that the collection and the visitors are the two pillars on which a museum stands. Without these two elements, museum never forms and survives too. Biswas (2010: 75) writes "...one becomes complementary to the other." Whatever is the collection, to impart education and to enrich the knowledge of visitors through interpretation of its collections, is the chief objective of a museum. The museums have realized that over and above the collection, conservation and display activities, if any other thing has any role, on the top of it, education can be named. After all, even the traditional activities of museums are also educational, though in some different shape. It is this realization, which has propelled the museums to stick to its social goals that can be fulfilled only through education.

Museum Education

The meaning of museum education is that museums create an ambience in which the visitors experience learning. A learning situation is a condition or environment in which all the elements necessary for promoting learning are present. Learning experience is the mental or physical reaction or makes through seeing, hearing or doing the things to be learnt and through which one gains meanings and understanding of the materials to be learnt.

Museum Education employs Direct Purposeful Experience. This is a basic method by which people learn to live and utilize the surroundings in which they are placed. The broad-based conical model is known as Edgar Dale's Cone of Experience (Dale, 1959: 42-43), which later expanded to form the Cone of Learning. The main aim of museum education is to create direct-purposeful experience from abstractions of the objects on display. Theoretically it uses Gestalt psychological theories though later contradicted and replaced by the structuralist theories. "Museum education is centrally concerned with teaching from and learning with objects and specimens" (Hooper-Greenhill, 1994: 230). Hooper-Greenhill again

states, "Museums objects also lead to questions about the roles and functions of the museums, which in itself is a very important aspect of museum education" (1994: 232). Museum education means present a learning ambience in which visitors practice learning. 'Seeing is believing', the very concept is appropriate in museum education. Education in museum is a spontaneous, self-paced learning process. Museum provides free choice learning, open communication of ideas, concepts, etc., which differ museum from other formal learning institutions. In fact, museum-visitor relationship is often referred to as an educational relationship.

Museums have changed from the Classical Concept as archive of heritage to the, Neoteric Concept of a social institution adapted and adjusted with growing demand of Gen-Z. Museum – Visitor Interface has also gone into massive change; museums are no longer places for passive interaction – it has become a 'contact zone', like a fair ground or theatre hall or may be a market, where people, of different identity, social or functional, like visitors, curators and others, meet to be engaged in interactions of varied nature – educational, recreational, social, personal, entrepreneurial – among others. Visitor-museum relationship becomes closer. In some museums staff or volunteers interact with the visitors. "Some are straightforward teachers; others may be in the guise of theatrical dress or mode, representing an alternative reality… is to draw visitors in to the museum's subject, to engage him or her in an experience beyond passively viewing exhibitions" (Alexander and Alexander, 2008: 276).

> A museum can be a showpiece on the surface for everything modern, but what matters most is the depth and quality of the individual encounter with the 'real thing'… the primary role of exhibitions and associated activities is to engage audiences directly with collections – to gain visitor attention, to hold it and to encourage reflection (Black, 2005: 271).

The museum visitors, especially in a multi-cultural country, like India, with continuous cross-cultural social interactions, do come with varied experiences and expectations. Cultural diversities, from macro to micro level, wide socio-economic variations, diverse educational levels, differing but valid cultural understandings, besides ranges of languages and physical attributes make the situation more complex.

Communication in the Museums

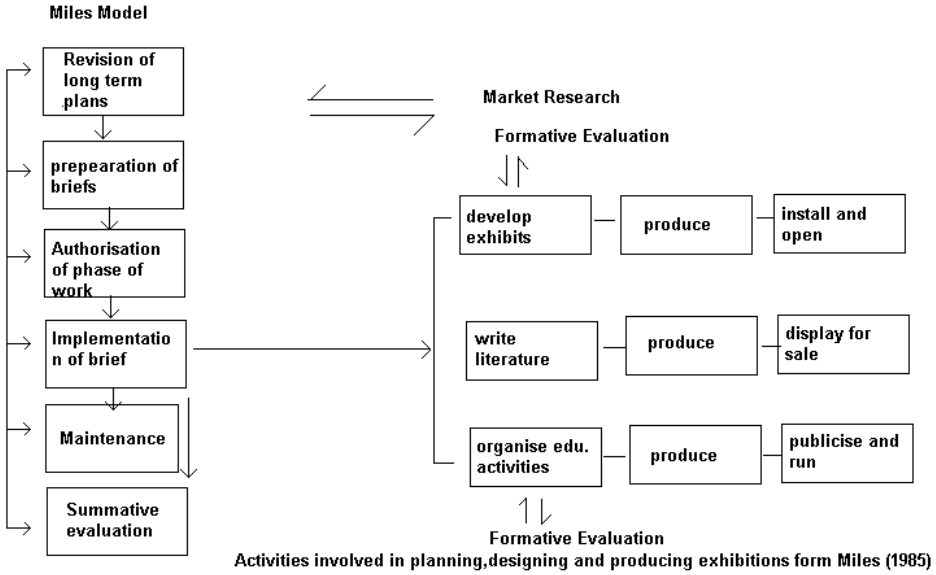
In the fast changing societies in the third millennium under the domain of superfast digital technologies for quick dissemination of information, the museums were bound to change. Effective communication became the most important aspect of museum functioning, besides collection, preservation and documentation. Museums now play a dynamic role of communicating the information on their treasured

possession. The idea of museum as means of communication has grossly replaced the notion of the museum as collection of scholarly use. Museums are no longer solely protectors but also communicators. Museums have many common features of majority of mass communication forms. There is face-to-face communication that modifies the starkness of the mass communication system in the museums. Communication is a two way process. In most of the cases visitors are present (one party) in the museums; while the exhibition team (the other) has been absent. For communication to take place, both sender and the receiver should have the same concept, even the same passion. Museums have natural communication methods through talks, curator sessions, participatory sessions, etc.

The understanding of the process of communication has evolved by Mc Quail, 1975, form a simple model to something more complex. The simple communication process was based on the idea of one person sending a message to another through a medium involving a communicator, a receiver and a relationship between them. Subject of message, a common language, and an intention on the part of the communicators are the other factors. The external factor, noise, was introduced to the process, which might interrupt the transfer of information. This model can be applied to a museum exhibition; the exhibition team acts as source, exhibition acts as transmitter along with objects, texts and events as channel of communication, visitors' heads as receivers and finally visitors' understandings as the final destination. Simple model of communication has problems of its own and has been criticized by many. It suggests that communication is the simple transfer of a message from one part to another. But communication, of course, is far more than this. The noise interfering with the message might include anything from crowds to visitors' fatigue. Internal sources of noise may be confusing signals, e.g., poor graphics or wrong use of colour. It proposes a wholly linear view of communications. The receiver simply receives the message as cognitively passive and contributes nothing to the process. The communication process must fail if in any case the reception does not happen. The concept of feedback enters the process here. In a communication process, the receiver should clearly understand the message, if not the message must be modified to make understanding more likely. Once the receiver starts to play an active role, the whole process changes and breaks up and the linearity of the process is altered. The meaning of the message begins to be shared between the two parties.

The simple communication model was introduced to the museum by Cameron in North America. Cameron (1968), Knez and Wright (1970), Miles (1989) are the pioneers in this respect. Cameron used the model virtually intact. He opined that there are many transmitters, many media and many receivers in a museum. The prime medium used is that of objects or real things. Knez and Wright are in

agreement with Cameron. To them a professional museum team, like the exhibit designer, curator or educationalist, is the transmitter and the visitors are the receivers. They challenged Cameron's emphasis on objects as the medium of museum communication; rather suggested that a distinction should be drawn between those museums that relied on written or spoken words as of primary importance in exhibitions, like the science museum; whereas in the art museums objects are more important. They consider putting across ideas as the primary function of museum communication, at least in science museums. Miles (1985) discussed the influence of the above model on exhibition production. Since the model is based on independent inputs from different departments, like curatorial, design, education, etc., with little or no coordination between themselves, without bothering to consider each other's views; he felt that the exhibitions produced following this model make the museum disabling institutions. Miles proposed a different, more flexible model using extensive research work including market research before the process, formative evaluation during production and summative evaluation after the exhibition opens. It also includes concurrent development and educational activities. It is more complex and reflexive system including various activities and their interrelationship in the production of exhibitions.



Activities involved in planning,designing and producing exhibitions form Miles (1985)

Communication is integral to the production of culture. The culture of communication is somewhat linked to hermeneutics and constructivism. The symbolic and interpretive potential may be the most effective way for transmission of ideas for controlling people in the society considered as political and economic organisation. Communicators (museum staff of different categories) as social

agents facilitate learning of the visitors by providing experiences for meaning-making using their prior knowledge and interpretive strategies or choice.

New Communication Strategies now focuses on the meaning making activities of museums and visitors. Complementary qualitative communication strategies on the needs, intention, interest and perception of 'user' and 'non-users' is essential (Chanda, 2019).

> Visitors make meaning in the museum, they learn by constructing their understandings. The issue for museums is to determine what meanings visitors make from their experiences, and then to shape the experience to the extent possible by the manipulation of the environment. Every museum building will send a message (or multiple messages); every exhibition will evoke feelings, memories and images; every encounter with an object brings about a reflection (even if it is only incomprehension and frustration); every social interaction reinforces connections, stimulates new ones, or triggers personal anxieties (Hein, 1998: 54 – 55).

Learning Experience in Museum

Learning is a fundamental process of life. Through learning every individual develops modes of behaviour by which he/ she lives. It results in modification of behaviour through experience among other things. Learning is more or less permanent change in behaviour following the changes in environment. Learning events consist of stimuli, learners and response. The nature of learning depends upon Contiguity, Practice, Reinforcement, Generalisation and Discrimination.

Learning in museums involves visitors' attention to object, display, label, person, element or some mental construct of these. Traditionally such learning has been linked to the attracting power and loading power of exhibits in museums. The information thus collected by the visitors is stored in the brain and remains there for fairly long period (Falk and Dierking, 1992). Museum provides free choice learning situations devoid of verbal instructions, assessment and other types of controls that exist in schools. Learning in museums is a spontaneous process, a personal experience not imposed on the visitor.

Museum provides open communication of ideas, concepts and information involving exploration and discovery, and museums are home for 3As – the authentic, the aesthetic and the accessible. The authenticity as revealed by real objects and phenomena exhibited in museums, communicates with a powerful clarity to visitors. Museums are compelling aesthetic environments: they engage the senses, stimulate, inspire and sometimes even overwhelm and everything that concerns visitors is the focus of museum education. Visitors make meaning in the museum, they learn by constructing their understandings. The issue for museums is to determine what

meanings visitors make from their experiences, and then to shape the experience to the extent possible by the manipulation of the environment. Every museum building will send a message (or multiple messages); every exhibition will evoke feelings, memories and images; every encounter with an object brings about a reflection (even if it is only incomprehension and frustration); every social interaction reinforces connections, stimulates new ones, or triggers personal anxieties (Hein, 1998: 54-55). "Constructivist learning theory insists that people make their own active interpretations of experience. Individuals search for meaning, look for patterns, try to invest their experiences with significance" (Hooper-Greenhill, 2000: 118).

With multiple roles, museums work as the centres of education, and there is the appropriate educational theory for museums, i.e., Constructivism, earlier known as Progressive Education, a combination of active learning (Learning Theory) and personal meaning making (Epistemology).

Falk and Dierking (2002: 5) seek "to understand museums from a visitor's perspective". They define museum encounters through their Interactive Experience Model, which they divide into three contexts: personal, social, and physical. This model is used to demonstrate how each context interacts to create the visitor's experience. They (Falk and Dierking) again (2000: 10), put forward the Contextual Model of Learning as "a device for organizing the complexities of learning within free-choice settings." The Contextual Model of Learning is not a model in its truest sense; it does not purport to make predictions other than that learning is always a complex phenomenon situated within a series of contexts. More appropriately, the "model" can be thought of as a framework. The view of learning embodied in this framework is that learning can be conceptualized as a contextually driven effort to make meaning in order to survive and prosper within the world; an effort that is best viewed as a continuous, never-ending dialogue between the individual and his or her physical and socio-cultural environment.

The Contextual Model of Learning portrays this contextually driven dialogue as the process/ product of the interactions between an individual's (hypothetical) personal, sociocultural, and physical contexts over time. None of these three contexts are ever stable or constant; all are changing across the lifetime of the individual. As the museum examples help to clarify, the Contextual Model of Learning draws from constructivist, cognitive, as well as socio-cultural theories of learning. The key feature of this framework is the emphasis on context; a framework for thinking about learning.

Museums present material culture to be viewed on the assumption that vision enables effective learning as brain absorbs visual information quickly. Anyone can

walk into a museum and learn something or other at his/ her own pace. Museums are open to young and old, rich and poor, learned and not-so-learned.

Visual Communication & Perception

"Seeing comes before words" (Berger, 1972: 7); Hooper-Greenhill truly describes (2000: 129): "Vision is the master sense of the modern era. Modernity is inseparable from the making of the observer, who … as one who sees within a set of rules and conventions." Museum displays are made neutrally on the common gaze characteristics of the viewers and the curators based on the above assumptions framing museum pedagogy.

> The visual and tactile qualities of specimens, their "reality", make an emotional appeal to people which seems to increase their sensitivity and capacity to assimilate information of considerable complexity and subtlety… In addition to imparting facts to people, the museum offers opportunities to challenge them to active co-operation in the process of learning and to stimulate in them certain attitudes, such as the faculty of observation, logical thinking, responsibility and imagination (Wittlin, 1949: 188).

Objects in view corroborate different sets of information, like shape, size, colour, texture, position, static or dynamic, etc., often of uniform characters and in unison to the viewer's expectations, resulting in quick and accurate perception leading to a prompt reflexive and reaction without involving much thought, identifying correctly the object in the observer's gaze. A group of German psychologists, Weirtheimer, Köhler, and Koffka, argued that the perception always have kinds of arrangements, configurations or forms (Gestalt) partly determined by the physical shapes in the field of vision. There is also a tendency to modify perceptions for the meaningless shapes into good forms as far as possible in terms of simplicity, regularity, symmetry, continuity, etc. Köhler speculated that certain physiological processes in the brain to be the cause of this tendency towards goodness. Symmetrical and regular shapes are easy to perceive as only a part can be used to identify the whole, making the rest of the information redundant since, according to the Gestalt psychologists, the viewers do not attempt to perceive every detail of the shape as the limitations in the visual mechanisms and brain are incapable to provide large information without prolonged search. The observer tends to ignore the details more than what he thinks needed in differentiating, reproducing or classifying shapes, which might lead to incorrect perception. For proper perception of complex shapes greater light intensity and more time are necessary. Gestalt psychology strongly opposes traditional psychology comprising structuralism, functionalism and behaviourism.

> There are of course many ways of increasing complexity, but as a rule this implies more detail and more variety of detail. Silhouette shapes have been found to appear increasingly complex if the changes in direction of the contour are increased in numbers and variety. Outline shapes may be made more complex by increasing the amount of interior detail, in which case, simplification may occur in perception, along Gestalt lines (Vernon, 1962: 53).

Gestalt psychology was the first systematic attempt to study perceptual segregation and the perceptual organisation. There are debates over the inborn ability of human being to organise the sense field; earlier psychologists argued that it is learnt by experience, the Gestalt school of psychologists believe that it is a natural tendency for incoming sensory stimuli organise into Gestalten pattern at physiological level. Thus the visual Gestalt can be represented in the following scheme:

Stimulus pattern ⟶ physiological Gestalt ⟶ Percept (object seen)

Gestalt psychology defines the nature of perception, i.e., an individual perceives an object as a whole, while the behaviourists and stimulus-response theorists define perception analogous with the taking of photograph. That means sensation comes before meaning and these two are separate. Gestaltians do not separate sensation of an object from its meaning – unless the observer sees some meaning in an object, no attention would be paid to it – perception is related to the total situation; perception (insight) always involves a problem of organisation. "A thing is perceived as a relationship within a field which includes the thing, the viewer and a complex background incorporating the viewer's purposes and previous experience" (Mangal, 2000: 170). Perception is always related to the total situation and involves a problem of organisation.

Gestalt psychologists tend to minimize previous learning, desire attitude, expectancy and mental state, though do not completely ignore.

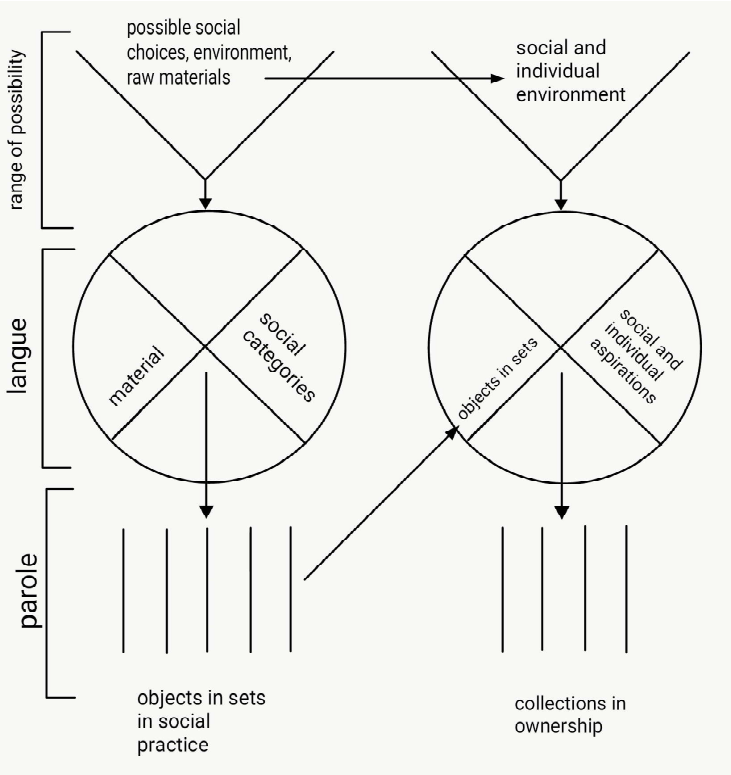
> … there have been criticisms of Gestalt theory. For instance, Hebb, while maintaining that the Gestalt psychologists have certainly shown that there are innate factors involved in perception, thinks that they have gone too far in ignoring the part played by learning and experience in the perception of simple figures such as, say, triangles. For normal human beings this learning takes place in infancy and makes unified perception possible (Lovell, 1970: 98).

Gestalt theories are mainly framed by studying static two-dimensional figures; they also proposed the law of common fate, where the visual elements appearing moving together are grouped together. While the laws of perceptual organisation are reasonable, these are descriptive statements without strong explanation. "The

Gestaltists attempted to provide an explanation by means of their doctrine of isomorphism, according to which the experience of visual organisation is mirrored by a precisely corresponding organised process in the brain" (Eysenck and Keane, 1995: 34). Julesz (1975) extended the Gestaltists' work by establishing relationship between brightness and colour on perceptual organisation. If the average brightness differs in different regions, the visual display would be perceived as consisting of two regions. If overall brightness is same throughout the display but the granularity (the way elements in a region are distributed) is greater in one half than the other would be perceived as consisting of two regions (Eysenck and Keane, 1995: 35).

The learning theories previously considered having a known stimulus necessary for evoking a response. Skinner (1938: 20) defined two types of responses – respondent behaviour, elicited by known stimuli (reflex actions); and operant behaviour emitted by the unknown stimuli (controlled by the strength of its consequences). An operant is a set of acts constituting doing something by the organism.

"Meaning in museums is constructed in relation to the collections which the museums hold… Objects in museums are assembled to make visual statements which combine to produce visual narratives" (Hooper-Greenhill, 2000: 3). Pearce (1994/ 1999: 3) provides a scheme of semiotic analysis of objects and collections:



The processes of interpretation are active and complex. "The interpretation of the meaning and significance of material culture is a contemporary activity. The meaning of the past does not reside in the past, but belongs in the present" (Tilley, 1994/1999: 73). Structuring process means that parole works in sets, not in discrete pieces - meaning depends upon relationships; categories are created by and the distinction dividing one set from another creates categories (Saussure, 1960). Parole is the situated act of utilization by an individual speaker of langue, the structured system of codes, rules and norms of a particular language. The study of linguistic system eventually formed semiology, the part of a general science of signs.

> Semiotic reductionism holds further serious implications for better understanding some of the root causes of conflicts of interpretation within museum environments. It is the differences between group memory with other forms of temporal ordering, and the narrative approaches of museums, that have provoked many of the more dramatic confrontations between them and their publics over interpretation. (Shelton, 2006: 487)

Saussure however accepted the evolution of structural system of the language. The system remains independent to the individual use. Piaget thinks that the synchronic character of Saussure's structuralism is due to the influence of current economic and biological theory on his thought. Lévi-Strauss used structural analysis to explain semantic function of art and its role within the society. Foucauldian structuralism was used in several studies for explaining interpretation of artefacts and transformations of indigenous culture under the influence of dominant cultural communities.

Objectification deals with the understanding relationship between object and subject – a dialectical and reciprocal relationship. Personal, social and cultural identities are objectified in the things. Material culture and culture are dialectically connected in a phenomenological relationship that is processual in nature rather than static entity.

> The concept of objectification can be traced back to Hegel's *Phenomenology of Spirit* and Marx's later materialist appropriation and inversion of the Hegelian notion of the dialectic. In anthropology a notion of objectification as mimesis was central to the idea of collective interpretation. (Tilley, 2006: 60)

Phenomenology deals with the methods of understanding of the experienced *things* and emphasizes the needs of problematization of the character of experience of the acquisition of information through the physical senses. Heidegger's phenomenology has many points of contact with other modes of inquiry, e.g.,

mainstream philosophy, hermeneutics, theology, *gestalt* psychology and eventually post-structuralism and that has more influence on the study of material culture (Thomas, 2006). Construction of meaning happens by fitting information into a pattern of relationship of elements placed in a frame that is recognised or understood. Hermeneutics make it clear the understanding takes place through a process of interpretation based on memories of previous experience. Interpretation is comprehension of a dialogic relationship between the detail and the whole. Harris (2011: 96) cautions, "… although aspects of dialogism are very attractive in the context of contemporary museums with their ideals of cultural leadership and visitor participation, it might simply be too difficult to implement."

Tangible objects mostly have meaningful personal attachments, individually or collectively. Often these are sacred, metaphorically representing complex beliefs and thoughts. Objects displayed or exhibited in the museums and galleries can be regarded as visual media, constructed through a complex process of infusing visibility (or making visible) utilising actual signs, symbols, resources for visual communication and learning of the artefacts, ultimately producing a visual meaning. The two and three dimensional artefacts are therefore become subjects to analysis in relation to their current uses as part of visual culture. Nevertheless it is quite important to fathom the past interpretations of the values and ideas borne in the objects that are still circulated in the present day socio-cultural contexts.

Intangible abstract ideas are made tangible in the objects. Histories are recalled and shared through the material form. Artefacts hold encoded in them ideologies, expression, beliefs, cultural memory, values and socio-cultural affiliation, besides social and personal identities. Deliberate meanings can be imposed upon objects to facilitate verbalisation of thought and disseminate ideology including knowledge; thus enabling materialisation of symbolised notion, maybe political at times.

> Objects have the capacity to carry meanings, and these meanings can be attributed from a number of perspectives. Objects, therefore, have the capacity to be polysemic, to bear multiple meanings. The meanings of objects emerge within relationships and frameworks, and it is these elements external to the object, drawn together by a meaning-making sensibility, an active mind and body, that anchor the endless play of signification, and make provisional closure possible (Hooper-Greenhill, 2000:111).

Being potentially empowered to visualise abstract entities and externalise diverse emotions, objects are important for learning processes. Objects are studied under two broad categories – material culture studies and visual culture studies. Material

culture studies developed by anthropologists, archaeologists and museologists; focusing largely on the significance of three-dimensional objects – their interrelationships and spatial & social contexts under the ambit of structuralism, post-structuralism and hermeneutics. However material studies ignore the relationship between the objects displayed and the visitors.

The emerging field of visual culture study has been shifted to anthropology from art history encompassing sociology and fine arts. Visual culture study focuses mainly on two-dimensional objects, including films, photographs and visual media. It deals with the theoretical aspects of the signifying social practices that shape the visual artefacts not necessarily by the high culture values. "Visual culture as a concept and a methodology refuses to accept the distinction between high and mass culture. This is useful in the problematization of culture, pedagogy and knowledge" (Hooper-Greenhill, 2000: 14). Visual culture is theoretically concerned with display, vision, visuality in the sites of spectacle and examines relationship between the viewer and the object viewed. Interpretive communities become significant for interpretation of visual culture in museums, since it is stressed that interpretation is a shared experience in contrast to the constructivist theories thus explaining difference in diverse response to an object even difficulties in comprehending by certain visitors. The exhibitors and visitors should belong to the similar interpretive communities having shared experiences.

Visual culture theories can be applied suitably to the museum pedagogy, though adjusted with prior empirical studies, in contrast to the didactic *expert-to-novice transmission* model of the 19th century CE or the post-modern, post-colonial and post-structural system of *proper arrangement* of objects revealing basic structures of the subjects displayed – in both the models visitors were considered an abstract mass belonging to a homogeneous class.

Since the primary focus of museums shifted from collecting and curator-centric approach of display to be more socially relevant organisations accepting the political control to be one of the deciding factors in exhibiting and interpreting objects or concept, new pedagogic approaches are needed in the post-museum scenario. Communication is the primary concern in the post-museums simultaneously caring the tangible relics concentrating more on the use along with the intangible heritage, particularly the collective memories and cultural traditions to complement the missing elements, i.e., the material evidence and information gap. Community partnership is paramount in the post-museum in developing exhibition and interpretive strategies to be socially relevant to the particular interpretive groups.

Museums would be a cultural space incorporating many voices and may produce dynamic processes of exhibition productions from multiple perspectives. Ethnographic museums have already gone ahead in negotiating with different communities. Nevertheless the visual culture shares the same problem of material culture, "Should we treat the visual as a screen on to which knowledges and practices which have been formulated 'elsewhere' are projected? Or should the visual be seen as a primary mode of communication, relatively free of language?" (Pinney, 2006: 131).

The anthropological gestures shifted the attention from *object* to the *culture of perception*, from *elite traditions* to *more diffuse everyday practices and interactions*; move from *art* to *visual culture* effected greater inclusivity of subject matter and theoretical readjustment emphasizing cultural practices over aesthetics (Shelton, 2006: 484). Shelton quotes W I T Mitchell ('Showing seeing: a critique of visual culture', 2002: 86-87, in The Visual Culture Reader, Ed. Nicholas Mirzoeff, London: Routledge) to point out that one of the central tasks of visual culture should be to 'make seeing show itself' in a process of 'showing seeing.' He continues referring Mitchell in elaborating further that to give vision a culture is to attach it to human societies, with the ethics and politics, aesthetics and epistemology of 'seeing and being seen.'

Design idiom, derived from exhibition design, is a tool to gauge exhibit characteristics and visitors' reactions. Beauty and usability is used to evaluate the cognitive and affective reaction of a visitor to a system. Flow, taken from the cognitive psychology, assesses visitors' reactions to objects and potential outcomes. Object biographies, taken from anthropology, used to track the connections of the visitors to the individual histories of the exhibits. Learning styles, the open debates in museology, further explores visitors' interactions with the exhibits and the outcomes.

Summary

The pressures of globalization have changed the socio-economic, political and cultural milieu. It has become an essential part of the society or country to preserve heritage of all kinds, and disseminate knowledge through various programmes and activities for various target groups.

> 'Bygones' and 'memorabilia', long relegated to Cinderella status in museum display, and treated as mere appendages in archaeological study, have emerged in recent years as market leaders in the auction room, bringing a whole new class of collectables into being. Bygones also enjoy pride of place in the new 'Heritage Centres' and local history museums (Samuel, 1994: 209).

The modernist museum was encyclopaedic, like a universal archive; pedagogy structured through binary divisions of expert and novice and knowledge transmitted based on objects placed isolated from the popular culture. The communication was one-way; visitors' voices were never given much importance. With the turn of century, the *new media* took away the monopoly of museums as expository spaces. Learner-centric approach slowly replaced didactic method in communication. Emphatic consumerism asked for better visitor amenities. Demands for restitution and repatriation emerged as part of decolonisation necessitated rethinking on collection policies, display ethics and holdings of objects. All that resulted in greater emphases on social roles; understanding of audience demands, altered communication strategies according to diverse needs and establishing cultural identity. Moreover the additional responsibility of documentation & conservation of intangible heritage and to be inclusive particularly in the societies of multiple ethnicities posed challenges for the interpretation of visual culture in the museums. Few ethnographic museums, however, found a provisional solution to encounter the challenge by involving concerned communities in decision-making processes to negotiate through the specific cultural needs. "Such diverse critical tendencies are suggestive of a pervasive and global redirection of museum functions away from pure scholarship towards fostering social and political awareness and correspondingly, it might be added increased disingenuous symbolic engineering" (Shelton, 2006: 491-492).

Present-day culture is explained as post-modern, post-colonial, and post-structural. The cultural organisations have become closer to the audience in the post-modern era; significantly much conscious about the politics of address and much more aware of the concept of voice. Who is speaking, what is spoken, who is being addressed, how is spoken – all are being analysed raising the issues of identity and process of subjectivity, which is gendered depending on ethnicity, class, race, sexual orientation, etc. The *cultural turn* recognizing generative power of culture and communication focuses on sharp analysis of the meaning making matters, interpretation diversity and their power in shaping social life. The interpretive paradigm insisted on representation that accord meaning and bestows value.

The future museum would break the barrier of a confined physical space, rather would be conceptualised as a set of process, experience, concerns or ambitions of the communities, where diverse cultures and subcultures may pervade through the dominant cultural practices. Museum personnel accumulate diversified notions to devise strategy for negotiating through cultural practices and expand

cultural politics of the democratic community, where multiple subjectivities and identities can exist. Such *post-museums* can provide different narratives by dissolving the borders of academic disciplines. These integrate the specialist knowledge with the experience of the non-specialist audience involving emotions and imaginations of the visitors.

> Besides objectivity, the post-museum would negotiate responsiveness; celebrate diversity by encouraging mutually nurturing partnership. The post-museum would develop its identity once the technology of power of the visual culture in the museum is understood as a form of cultural politics (Hooper-Greenhill, 2000: 162).

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Opinion of B. Ed Students Towards Enhancing Professional Capacities (EPC) Course BY

Waeza Tazien and Somnath Roy***

Abstract

India , being diverse in various aspects struggles to maintain equitable opportunities for one and all , which unfortunately has led to deficiencies in the whole education system , compromising with quality. The issue of maintaining quality and of enhancing and enriching the teacher education curriculum led NCTE to restructure the B.Ed curriculum in 2014. This curriculum, as said to be , is quite comprehensive, comprising of both theory and rigorous field engagement with the child, school and community as it spreads over two years comprising of four semesters. The new and interesting aspect of the restructured curriculum is its emphasis on enhancing professional capacities of the teacher trainees by introducing 4 courses , which comprises of theory and practical. In the following paper , with the objective to know and understand Enhancing Professional Capacities (EPC) course and to find out the general opinion of the passed out B.Ed trainees towards EPC, the researchers conducted a descriptive study on 66 B.Ed passed out students belonging to the two year B.Edprogramme , sampled incidentally. The findings indicate towards general lack of interest among the B.Ed passed out students towards EPC.

Key Words : Teacher Trainees, Enhancing Professional Capacities, Teaching.

Introduction

People in this country have been slow to recognize that education is a profession for which intensive preparation is necessary as it is in any other profession (*The*

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University Education Commission , 1948-49). If the youth of the country are the future of the country then teachers are that bedrock on which this future depends. Possession of good quality teachers is an asset for any country . In India, the development of good teachers is taken care by the teacher education system , governed by the National Council of Teacher Education (NCTE).

The National Curriculum Framework (NCF) , 2005 places different demands and expectations on the teacher , which need to be addressed both by initial and continuing teacher education. The National Knowledge Commission (2008) suggested revitalizing the teaching profession to attract and retain quality teachers. Based on the recommendations of the NCF , 2005 , National Curriculum Framework for Teacher Education (NCFTE), 2009 asserted that there is a need to bring greater convergence between professional preparation and continuing professional developmentof teachers at all stages of schooling in terms of level , duration and structure . Justice Verma Commission (2012) observes that the teacher education curriculum does not effectively engage student-teachers with subject knowledge. It focuses only on generic methods of school subjects. Any new developments in specific disciplines that make up school subjects do not receive the due attention.

Opfer and Pedder (2011) reviewed literature on teachers' professional development practices, the generative systems of these practices, and the impact that learning experiences have on their knowledge and changes in classroom practices. The review highlights that to understand teacher learning scholars must adopt methodological practices that focus on explanatory causality and the reciprocal influences of all three subsystems- the teacher, the school, and the learning activity. Cardina (2017) described public school secondary health education teachers' support for professional development in the United States and the types of professional development activities in which they participated and compared them with public school secondary teachers of all other subjects. The findings suggested that , newly hired health education teachers indicated they were least prepared in handling a range of classroom management or discipline situations and using data from student assessment to inform instruction . Scales , Wolsey and Lenski(2017) conducted a longitudinal multiple-case study on four novice teachers to investigate the use of professional judgment in their literacy instruction. The findings suggested that participants learned the skill of professional judgment in student teaching rather than in course work. King (2018) identified that the cascade model of capacity development was insufficient for developing the requisite capacity of teachers.

- Analysis of the commission reports shows that there is a consensus about teaching being a profession and that teachers need to be skilled with professional expertise. Analysis of the articles first highlight that there is dearth of research in the area of Enhancing Professional Capacities (EPC)

in relation to teacher education in India. Second, the teacher education course as a whole is insufficient for developing teacher as professionals. In this context answers of three questions are very relevant to know. The questions are (1) What is EPC? , (2) What was the purpose of introducing EPC in the B. Ed curriculum? and (3) What is the general opinion of the passed out B. Ed trainees towards EPC?

Objectives

- To know and understand Enhancing Professional Capacities (EPC) course.
- To find out the general opinion of the passed out B.Ed trainees towards EPC.

Methodology

The study employed a descriptive approach. For answering the questions 1 and 2 Curriculum Framework For The NCTE Two-Year B.Ed. Programme (2014) was analysed. For answering question 3 , six questions were asked to 66 B.Ed passed out students of the two year B.Ed programme who were sampled using incidental and snowball sampling technique from the suburbs of Kolkata. The study employed Bengali medium students only. The responses were analyzed and depicted descriptively.

Description of EPC and its Purpose

What is EPC?

EPC stands for Enhancing Professional Capacities . Teaching is a profession that teaches all the other profession . Therefore teaching is one of the most important professions and teachers are thereby professionals. This implies that , teachers need to possess the characteristics of professionals which requires skill development through training.

According to National Curriculum Framework for Teacher Education (NCFTE), 2010 " Teaching is a profession and teacher education is a process of professional preparation of teachers. Preparing one for a profession is an arduous task and it involves action from multiple fronts and perspectives. A profession is characterized by a sufficiently long period of academic training , an organized body of knowledge on which the undertaking is based , an appropriate duration of formal and rigorous professional training in tandem with practical experience in the field…."

Based on these recommendations of the NCFTE ,2010, Enhancing professional Capacities Course was introduced in the Two year B.Ed curriculum to look into the wholesome development of teachers geared with skills as professionals.

What was the purpose of introducing EPC in the B.Ed curriculum?

The main purpose of introducing EPC in the B.Ed curriculum was to enhance the professional capacities of the teachers and to equip them with professional expertise. The two year B.Ed curriculum offers four courses of EPC, each looking into the development of particular professional expertise of the teachers.

According to Curriculum Framework For The NCTE Two-Year B.Ed. Programme (2014) , the following Four EPC courses have been introduced with the said purposes.

Course EPC 1: *Reading and Reflecting on Texts*

Students in the Indian universities are reluctant readers and struggle to write for different purposes. Course on Reading and Reflecting on Texts will serve as a foundation to enable B.Ed. students to read and respond to a variety of texts in different ways and also learn to think together, depending on the text and the purposes of reading. Students will also develop metacognitive awareness to become conscious of their own thinking processes as they grapple with diverse texts. The course offers opportunities to read a wide variety of texts, including empirical, conceptual, and historical work, policy documents, studies about schools, teaching, learning, and about different people's experiences of all of these.

Course EPC 2: *Drama and Art in Education*

Learning is enhanced through Drama in Education, which helps learners to extend their awareness, through multiple perspectives, to look at reality through fantasy, and to predict everyday situations in order to cope with unpredictable unsettling experiences. Transformational education involves reflection, introspection and action, with a deep relationship between the head, heart and hand. Drama in Education transcends one to travel through time .The course on Drama and Art in Education helps in understanding the self and as a form of self-expression for enhancing creativity. The components of fine arts aim to develop aesthetic sensibilities in student-teachers and learn the use of art in teaching learning. Be it visual or performing, the practice of art deepens children's ability for perception, reflection and expression, providing them with alternative languages to experience and communicate subtle, diverse and unfamiliar territories, from human to the larger consciousness of nature.

Course EPC 3: *Critical Understanding of ICT*

Preparing teachers to use technology in a classroom is an important step for Information and Communication Technology (ICT) enabled education in the country. The course on *Critical Understanding of ICT* will focus on moving beyond computer literacy and ICT-aided learning, to help student-teachers interpret

and adapt ICTs in line with educational aims and principles. It will explore ICTs along three broad strands; teaching learning, administrative and academic support systems, and broader implications for society. Seeing ICTs as an important curricular resource and an integral part of education, according primacy to the role of the teacher, ensuring public ownership of digital resources created and used in education, taking a critical perspective on ICTs as well as promoting constructivist approaches that privilege participation and co-creation over mere access, are principles that the course will help teachers explore.

Course EPC 4: *Understanding the Self*

Know thyself is one the of the most important purpose of education, with this aim, the course on *Understanding the Self* helps to develop understanding of student-teachers about themselves – the development of the self as a person and as a teacher, through conscious ongoing reflection. The course will address aspects of development of the inner self and the professional identity of a teacher. This shall enable student-teachers to develop sensibilities, dispositions, and skills that will later help them in facilitating the personal growth of their own students while they teach. It is important for student-teachers to develop social relational sensitivity and effective communication skills, including the ability to listen and observe. The course will enable student-teachers to develop a holistic and integrated understanding of the human self and personality; to build resilience within to deal with conflicts at different levels and learn to create teams to draw upon collective strengths.

Findings

What is the general opinion of the B.Ed passed out students about EPC?

For finding out the general opinion of B.Ed passed about EPC, 6 questions were asked.

Figure 1 :What is the full form of EPC?

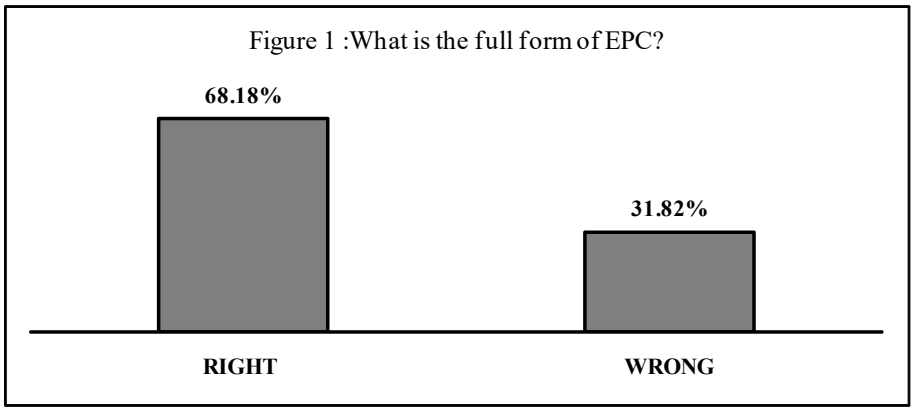
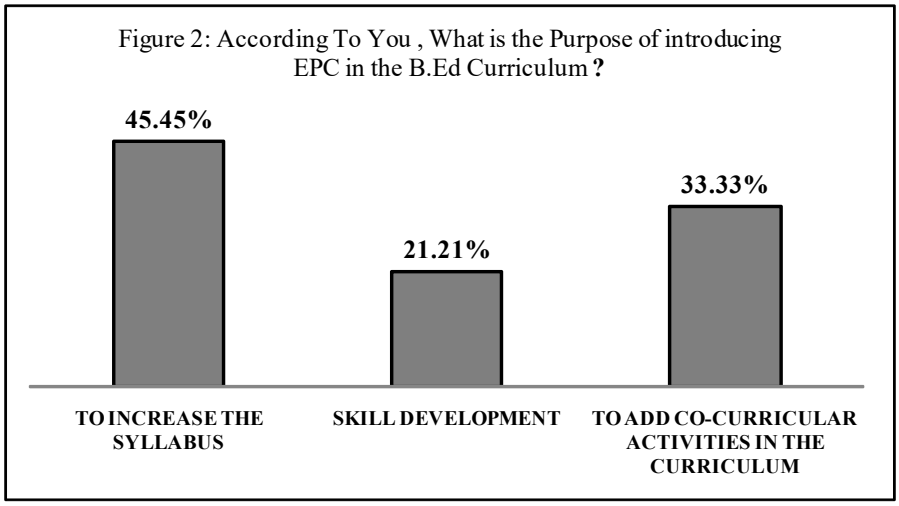


Figure 1 shows the responses for question 1 - What is the full form of EPC? As seen in Figure 1 , 68.18% of B.Ed passed out students knew the correct full form of EPC , while 31.82% of the B.Ed passed out students responded incorrectly. This highlights the lack of awareness or interest towards one's course.

Figure 2: According To You , What is the Purpose of introducing EPC in the B.Ed Curriculum ?



Question 2 -According to you what was the purpose of introducing EPC in the B.Ed curriculum? was an open ended question , the respondents responded in their own words. The analysis of the responses showed three trends in the responses – i)To increase the syllabus , ii) Skill development and iii) to add co-curricular activities in the curriculum. As seen from the Figure 2 , 45.01% of the B.Ed passed out students feel that the purpose of introducing EPC in the curriculum was to increase the syllabus to cover the duration of two years, 33.04% of the B.Ed passed out students feel the EPC was introduced to add co-curricular activities in the curriculum while 21.99% of the B.Ed passed out students feel that the purpose of introducing EPC was for skill development. The responses again highlight the lack of interest among the trainees towards knowing their courses. It also shows the communication gap between the teacher educators and the teacher trainees in communicating the learning objectives of the courses.

Figure 3: Responses to questions 3

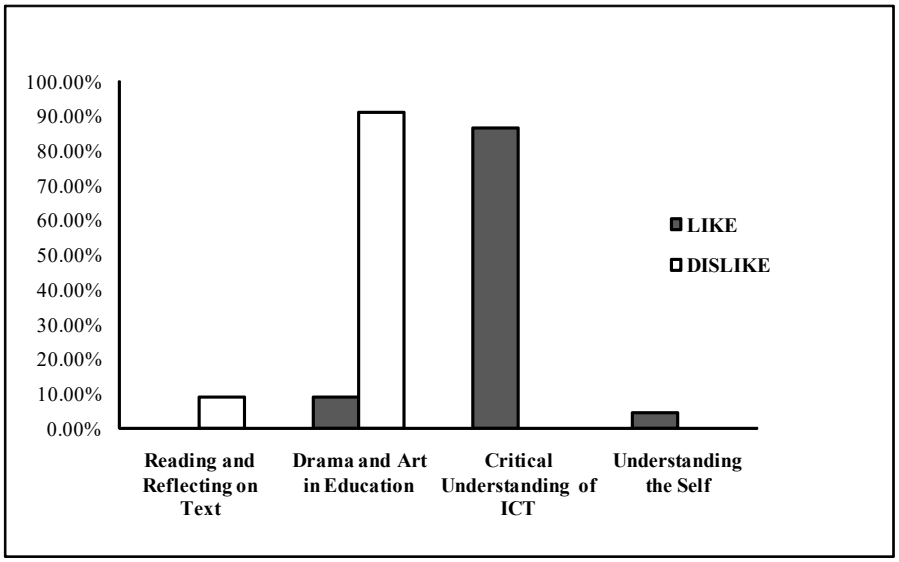


Figure 3 depicts the responses to questions 3(Which EPC paper do you like ?) and 4 (Which EPC paper do you dislike ?) As evident from the figure the 86.36% of the B.Ed passed out students like EPC paper is Critical Understanding of ICT , 9.09% of the B.Ed passed out students like Drama and Arts in education and only 4.55% of the B.Ed passed out students like Understanding the self. On the other hand , 90.91% of the B.Ed passed out students dislike Drama and Art in Education and 9.09% of the B.Ed passed out students dislike Reading and Reflecting on text. The probable reason for such a response could be inadequate communication of the learning objectives , improper method of instruction , lack of infrastructure for smooth running of the courses or lack of trained and skilled teacher educators or resource persons.

Figure 4: Did you do practicals or fieldwork in all the four EPC papers ?

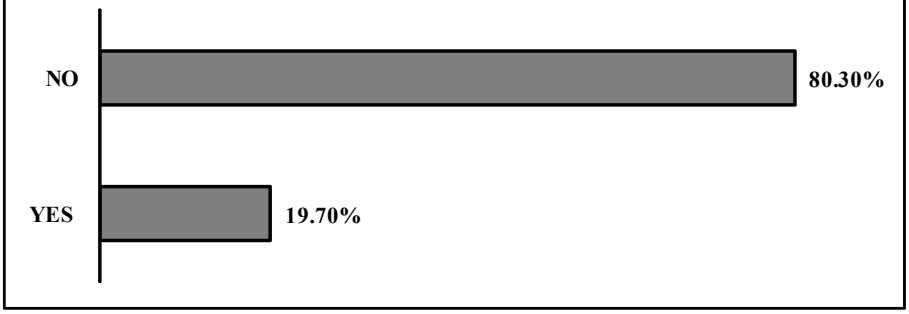
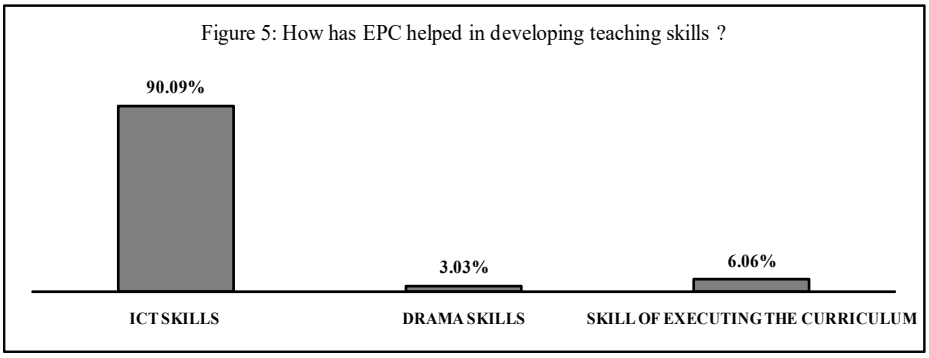


Figure 4 shows the responses for Question 5 - Did you do practicals or fieldwork in all the four EPC papers? As seen from the figure 80.30% of the B.Ed passed out students responded in negative, while only 19.70% of the B.Ed passed out students responded in affirmative. This asserts the unavailability of the grass root facilities. The two year B.Edprogramme has been formulated and implemented; it is however, not meeting its said objective, compromising with the development of the skilled and professional teachers.



Question 6 –How has EPC helped in developing teaching skills ? was an open ended question. The themes observed in the responses were i) ICT skills , ii) Drama Skills and iii) Skill of executing the curriculum. As depicted in the Figure 5, 90.09% of the B.Ed passed out students feel that EPC helped in developing ICT skills, 6.06% of the B.Ed passed out students feel that EPC helped in developing the skill of executing the curriculum while 3.03% of the students feel that EPC helped in developing Drama skills. The reason for such a response is that most of the practicals are not done in the institutions, because of which EPC is not seen as an attractive and interesting course by the students which fails the purpose of joyous learning.

Conclusion

The findings indicate towards a general lack of interest and a lackadaisical attitude among the teacher trainees and the teacher educators towards their course. The teacher educators, being an important component need to accept the changes in the curriculum positively and prepare themselves accordingly to impart the course. As this would require , development of more expertise , orientation programmes , workshops and refresher courses should be organised by the concerned authorities at the state and center level.

As mentioned previously , teacher educators need to prepare for their classes and the courses. Preparation would help in communicating the learning objectives to the trainees in a better way, which would help promote interest, a positive

attitude and hence better learning among the trainees. A point to be considered here is that , while responding to the questions , many respondents used the word "computer" to imply ICT and for many ICT meant "computer literacy" only. This shows that, incomplete knowledge is being transmitted to the teacher trainees, which is highly dangerous as these trainees are the future teacher educators. Therefore , this miscommunication needs to be looked into by the teacher educators and this also needs to be highlighted in the orientation programmes and the workshops provided to the teacher educators and the teacher trainees

The major problem highlighted in the findings is that the practical for all the EPC courses are not being conducted in all the teacher training institutions due to lack of trained teachers or resource person and lack of infrastructure which leaves the whole purpose of the new curriculum unserved. Further policy changes are required to incorporate more teacher educators according to the demands of the course. The whole curriculum for the B.Ed two year course looks complete , interesting and practical , keeping in mind the demands of the nation. It,however , needs to look into ground realities and grass root level availability of the resources. The policy as a whole is good , to serve its purpose it needs smooth implementation.

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Outcome Based Higher Education: Challenges and Prospects in the post COVID-19 Period

Neeru Snehi*

Abstract

Spread of COVID 19 pandemic led to swift changes and disruptions in the education sector. Impact of these disruptions continue to transform the teaching-learning experiences and widen the delivery mechanisms of education. In higher education sector, the adoption of digital technologies and the blended/ hybrid models of online education, have significantly influenced discussions on learning outcomes. Fostering qualityhigher education is a priority agenda for developing a knowledge society and knowledge economy, which has been endorsed by NEP 2020. Assessment of learning outcomes has gained attention and priority.In this context, countries such as USA, in Europe, Australia, Japan and others have adopted Outcome- based Education approach to achieve quality. In Indian context too, UGC has initiated several academic reforms to improve quality of higher education one of which is introduction of learning outcome-based approach. Under CBCS it is now mandated that the development of curriculum /content of courses to be carried out on the basis of Learning outcomes-based approach. The process has already begun in many universities. This paper essentially looks into the concept of OBE approach. It also attempts to explore the challenges and prospects of outcome-based education in the existingi.e., post-COVID scenario.

Key Words**:** Higher Education, Impact of COVID-19 Pandemic on Education, Outcome-Based Education.

Introduction

The impact of COVID 19 pandemic is felt by every student in the world (UNICEF 2020; United Nations 2020). This unprecedented spread of COVID 19 pandemic and subsequent closure of educational institutions forced the higher education

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institutions to look for alternative ways for provision teaching-learning experiences to students in the absence of face-to-face education. Consequently, the institutions adopted quickly the online method for teaching the students. The situation reflected that regardless of the outcomes, online/ remote learning became the de facto method of education provision for varying periods.Across the countries, educators proactively responded and showed great support for the shifts in lessondelivery. UN also observed that it is generally accepted that "this crisis has stimulated innovation within the education sector" (United Nations 2020, p. 2).Even then, the education sector is divided over the strategies to face the situation created by COVID-19. The situation in Indian education sector is not much different, as per the demands of prevailing circumstances schools and colleges/universities began to offer education online. Though the capacity and quality for providing online education differed considerably. At the same time, it is pointed out that the changes or innovations brought in the higher education institutions during the COVID 19 period may not be the changes that the colleges and universities needed to enhance the quality of education provided or to be adopted and continued in the post-COVID 19 scenario.

Impact of COVID-19

During the highly sensitive and volatile period created by COVID-19, majorly, the Indian institutions quickly shifted to the online, blended or hybrid models. This widespread adoption of digital technologies for teaching, developing learning material, course redesigns and pedagogical transformations have caused significant challenges for both students and academic communities. While, teaching-learning through online platform became the need of hour, the concerns regarding integration of online and other types of digital teaching-learning and its impact on the role of teachers in the post pandemic period. Similarly for students, access to the technology is the key in order to participate in educational classes, which in online mode may create more/novel demands and apprehensions in terms of resources etc. In addition, the diversity and differentiation among teachers, students and other staff etc. in the Indian higher education system also contributed to challenges of developing strategies to make use of technology for the benefit of all. This is significantly important because technology by itself is politically neutral but the questions such as who has access to it and who controls it may not be so simple.

During the pandemic, major objective was to devise strategies and continue the educational processes across institutions. The ensuing online teaching practice emerged as one of the key initiatives for providing education. In fact, governments, education institutions, teachers offeredteaching-learning without much preparation,

planningand even digital experience. This also impacted the most of traditional regulations, examinations, assessment areas too. However, it also brought to focus, that changes occurred during this period are going to persist even after the pandemic, may become part of future education practices. In the face of this transformation, in the post-COVID period, there is need to relook at teaching-learning, research and examination at the university level since the pandemic has added a new layer of complexity and confusion to the highereducation sector, to those who work in the sector, and to those who seek to study in colleges and universities. In light of this, it has become important that while transiting out of COVID-19 situation, to become aware of the changes to be brought in the education system beyond simply changing instructional delivery process/platform.

Zhao &Watterston (2021) emphasized that this crisis-driven opportunity must be used by all educators to push for bringing change in 'almost every aspect of education: what, how, where, who, andwhen. In other words, education, from curriculum to pedagogy, from teacher tolearner, from learning to assessment, and from location to time, can and should radically transform'. He has identified three main areas need to be reimagined for preparing for unseeable futurenamely curriculum, pedagogy andorganization (where and when to teach).

Certainly, besides COVID, there are many forces which are driving the education sectors to change in the post pandemic period. The move toward competency -based learning, learning outcomes approach, focus towards skills and abilities is continuing and has received a greater push due to pandemic. Higher education institutions are moving towards student centric teaching learning and have adopted outcome-based Education approach for enhancing quality of educational programmes as well as graduates. The next section delves deeper into this approach.

Outcome Based Education – Brief conceptual framework

Background – Fostering quality higher education is a priority agenda for developing a knowledge society and knowledge economy. The concerns for improving quality are ever-increasing due to the swift changes brought about by the fourth industrial revolution i.e. digital technology which has not only influenced the type of jobs, but also on the knowledge and skills required. In turn, this has direct influence on what students are learning and whether they are learning skills for future employability opportunities/ job trends. Resultantly, initiatives to improve quality of teaching learning in institutions across the globe are continuing. These efforts include transition from teacher centric to student centric teaching-learning and integration of technology for developing new pedagogic strategies to improve teaching and

learning among others. Yet, teaching to enhance learning or how to learn, unlearn and relearn needs revitalization. In this context, countries such as USA, in Europe, Australia, Japan and others have adopted Outcome- based Education (OBE) approach to achieve quality. In Indian context too, UGC has initiated several academic reforms to improve quality of higher education one of which is introduction of learning outcome based approach at undergraduate level. In fact, India a permanent member ofWashington Accord (WA) since the year 2014 implying the accreditation and recognition of degree of Indian engineering education adopted OBE framework for bringing reforms in examination system and enhancement of professional skills.

However, the University Grants Commission (UGC) has initiated the mission of improving the quality of higher education in India through its Quality Mandate in the year 2018 under the leadership of Prof. D. P. Singh, Chairman, UGC. This Quality Mandate aims to fill the gap in acquiring degree and attain the level of employability. Therefore, Quality Mandate UGC takes the drive for developing Learning Outcomes based Curriculum Framework (LOCF) under the international standards of Outcome Based Education (OBE). There are different definitions for outcome-based education. The most widely used one is the four principles suggested by Prof. William Spady (1994), from Faculty of Education and Arts, University of Newcastle, Australia.

Concept – OBE focuses on what students should be able to do at the end of learning period. Spady (1994, p. 12) defined Outcomes-based education as "clearly focusing and organizing everything in an educational system around what is essential for all students to be able to do successfully at the end of their learning experience."

Based on this definition certain important characteristics of OBE emerge for its implementation. The major objective of OBE implied is to ensure that learners are able to acquire knowledge, skills and attitudes required to become a successful person after they exit the educational system. This indicates that OBE isa process and focuses on development of futureperformance skills of the learners.The significant features of OBE include decisions about the curriculum and instructions are driven by the exit learning outcomes and are to be displayed at the end. Further OBE creates conditions that enable students to achieve the outcomes and priority is given to the ends, accomplishments, results, learning and purpose. Most importantly, OBE promotes fitness for practice or education for capability and requires alignment of curriculum with the learning outcomes and enhances focus on discussion based approach for teaching learning and integrated curriculum.

The four basic principles of outcomes-based Education stated by Prof. Spady includes (i) clarity of focus i.e. teachers should focus on helping students to develop knowledge, skills and attitudes that will enable them to achieve the intended outcomes; Designing down – that is the curriculum design or framework must have intended outcomes that students areto achieve; High expectations- establish high, challenging standards of performance; and expanded opportunities to learners to learn in their way (UGC, LOCF, 2019).

Tucker (2004) also emphasized that OBE as a process involves the restructuring of curriculum, assessment, and reporting practices in education. This result in the focus on demonstration of learning outcomes/skills/competencies acquired by the students rather than accumulation of course credits. Further, his emphasis is on to align all aspects of educational processes and systems to the expected outcomes that all students should be able to proficiently exhibit at the end of the curriculum, and that outcomes should not be viewed synonymously with grades or simply curricular completion, but rather authentic demonstrations of expected competencies as a result of significant learning experiences.Thus it can be deduced that, the implementation of OBE requires consistency across desired outcomes of education, teaching and learning activities, and assessment methods and practices. To organize everything in the educational system (curriculum, resources, facilities, curricular and co-curricular activities, etc.) and align them with the desired outcomes of education, it would be necessary first for institutions to have a clear understanding of what outcomes are. The next section addresses the following questions: What are outcomes and how are they derived and stated? The next section of this article will provide thorough discussions on the outcomes according to the OBE framework.

What are Outcomes?

In the simplest terms, 'content' of the curriculum addresses what am I learning while the 'outcome' addresses why am I learning. The intended outcome thus makes the curriculum more robust and meaningful. So, the term outcome can be defined as "something that follows as a result or a consequence", "an end-product or a result", and "the way a thing turns out" (Macayan, 2017). He further states that, 'in education, outcomes are viewed as the learning results that students are expected to demonstrate across the curriculum. Hence, outcomes in education may vary in terms of levels or forms'. Describing different types of outcomes, Killen (2000) stated that some outcomes are expected to be demonstrated at a course level (subject-related academic outcomes), and some are at the program and institutional levels (cross-discipline outcomes). However, according to Spady

(1994, p. 49), the most important form of outcomes with which other forms or levels of outcomes should be aligned are those that reflect real life roles that learners will perform the moment they exit the education system – these are called culminating outcomes.

Also, the course/subject-related and program level outcomes should be fundamentally linked to the culminating or exit outcomes of education. This practice ensures that education prepares students to perform future life-roles. Thus, the focus of OBE is more on the results or products of education, rather than on the content and curricular processes (Morcke et al., 2012). Therefore the first thing required is stating of culminating outcomes. Based on his four principles (mentioned earlier) Spady suggested that the culminating outcomes should be stated first, followed by some enabling outcomes (program level), then by some discrete outcomes that are measured in terms of specific learning tasks (course level). The backward design of outcomes would somehow guarantee that all the forms and levels of outcomes across the curriculum are systematically and intentionally aligned and connected. Then, the implementation of this design should be moved forward. Further, writing of these learning outcomes is based on Bloom's taxonomy of educational objectives and includes 'clear and unambiguous' examples of behaviourist learning outcomes from various disciplines. The strong links between behaviourism and outcomes-based education have been well ûagged by Andrich (2002) and others. Despite this emphasis on measurable objectives stated in behaviourist terms, outcomes-based education has long been highly contentious.

Challenges

Developing a student centric model – The increasing emphasis on student centered learning in the Indian higher education system is a welcome move to improve the quality of higher education. The Eleventh and Twelfth five-year plans advocated for academic reforms including semester system, choice-based credit system, learning outcomes-based approach to education and assessment reforms among others. Recently, the UGC has advised universities to prepare outcome-based curriculum and has provided a draft framework for the purpose. The implementation of outcome-based education would also lead to restrict the standardization of education system as intended in the plans.While the traditional education system focuses on what is taught, OBE places emphasis on what is learned, and this distinction is very important. The latter is a student-centric model that incorporates real-world scenarios into the mix. The knowledge, skills and attributes that students take away at the end of a program or course are more valuable than what, or how, something is taught.

Curriculum – OBE is based upon an educational theory which integrates every aspect of educational system with a set of avowed outcomes. OBE insists upon determination of learning outcomes as the first step in course designing, they should inevitably be attained by every student at the end of his or her educational experience. Under CBCS it is now mandated that the development of curriculum /content of courses to be carried out on the basis of Learning outcomes-based approach. The process has already begun in many universities. Learning outcomes-based approach requires that all degree and diploma programs be defined in terms of learning outcomes.For this, an all-round paradigm shift from teacher-centric to student-centric education is essential for proper implementation of OBE. Since the year 2019, UGC has prepared subject specific LOCF for curricular reforms to achieve learning outcome and its introduction has started. The properly developed learning outcomes of a curriculum inform teachers, learners about the stated outcomes and help in maintaining quality of the subject. The learners can demand for varied educational experiences to attain the desired outcomes.The biggest obstacle to designing an OBE curriculum is a lack of expertise in this area. There should also be a clear framework for the outcomes.

The skills, abilities which will be valued in the future globalized world includes creativity, curiosity, criticalthinking, entrepreneurship, collaboration, communication, growth mindset, globalcompetence, and a host of skills with different names (Duckworth and Yeager, 2015; Zhao et al. 2019). Further, the rapidity of changes being experienced in present day employment scenario, it is implied that traditional career pathways would not remain same for the coming generations, therefore the curriculum for education need to provide comprehensive access and deep exposure toall learning areas across all years in order to enable all students to make informed choices and develop their passions and unique talents. This would include defining of competencies for the digital/smart age such as creativity, entrepreneurship and global competencies. The focus of curriculum on developing student capabilities rather than teaching on the basis of template (content and knowledge) i.e., competency-based curriculum. Teachers need to be trained in developing curriculum as well as its transaction. It is essentially important that all students should develop essential knowledge skills and basic competencies which would help them to learn common norms, expectations and societal ways and help them in further learning. In addition, the curriculum should keep on evolving/modified so as to accommodate the changes taking place in the environment.

Pedagogy – Another important concern raised by teachers and academia is the pedagogy i.e., how to teach. During the pandemic online teaching was initiated,

but there was not much time for developing pedagogy for online teaching. The new models of pedagogy may on focus on student-centered, inquiry-based, purposeful approaches. They should include strategies such as 'explorations of solutions to authentic and significant problems. They shouldhelp students develop abilities to handle the unknown and uncertain instead ofrequiring memorization of known solutions to known problems' (Zhao &Watterston, 2021).

Changing role of teachers and teacher educators – The present objective to involve students in their own learning and developing their learning pathways. However, this requires provision of enabling students to make informed decisions regarding their learning pathways. Students nowadays are much more tech-savvy, they are not satisfied with the given knowledge, their capabilities need to be channeled by assessing their needs for learning. When students are enabled to learn on their own, the role of teachers also change. Instead of being instructors of content/curriculum, they become as organizer of learning, curator of learning resources, counselor to students, community organizer, motivator and project managers of students' learning. The teacher'sprimary responsibility is no longer simply just instruction, which requires teachereducation to change as well. Teacher education needs to focus more on preparingteachers to be human educators who care more about the individual students andserve as consultants and resource curators instead of teaching machines (Zhao2018a).

Assessment – The assessment in outcome-based education is assessment of learning and performance for the future. The education programs need to be designed on dynamic template, identification of objectives/outcomes at every level would help in improving of performance of outcome-based education. Further, the major challenge is to distinguish between culmination outcomes and comprehensive outcomes. Culmination outcome refers to the consequence or the end results such as scoring high marks in the examination. Comprehensive outcomes, on the other hand, include actions undertaken, agencies involved, processes used etc. along with the simple outcomes. Comprehensive outcomes-based approach is an important lens through which learning by diverse groups of students in teaching learning process needs to be highlighted. Learning outcome-based approach talks of curricular reform to achieve culmination outcome in terms of knowledge, skill, values and attitude. It also talks about the process in terms of pedagogy, learning design and assessment to be practiced by teachers. Although it talks about learner centered approach, it fails to incorporate the learner as an agency and the relational aspect of teacher and student. Hence, the understanding of the outcome in comprehensive sense is missing in the outcome-based approach.

Another important aspect focused due to school/college closure in pandemic is learning gaps. Consequently, there is need to re-evaluate how students are educated and assessed now. Educational institutions are now increasingly looking at integrated assessments to effectively evaluate learning outcomes. Integrated assessment basically refers to an assessment that attempts to combine learning from multiple modules and/or lessons into a single assessment. However, to catch up with the evolving nature of integrated assessments, states and educators will need to embrace technology (Aggarwal, 2022).

Prospects

COVID-19 pandemic has transformed the higher education sector across the globe. It has not only raised challenges but has also presented opportunities which can continue to be productive even after the current pandemic situation passes by and normalcy returns. It has accelerated the focus towards flexible learning pathways, changing the traditional fabric of higher education sector. The swift shift to online education, which was earlier being considered either not feasible or accepted by the academicians has happened though needs lots of research and improvement. Therefore, institutions have started preparing for future increase inblended learning, online education, centralized augmentation of instructional system design and extraordinary changes in the conduct of research and research collaborations.

These changes would have influence on students, researchers, their attitudes and experiences. The awareness and adeptness to latest artificial intelligence, development of software programs, e-resources, teaching technologies/portals etc. would help in transforming the education sector and its stakeholders.

This opportunity is timelier as fostering quality higher education is a priority agenda for developing a knowledge society and knowledge economy, which has been endorsed by NEP 2020. It reemphasized the importance of assessment of learning outcomes. The policy cites that 'curriculum, pedagogy, assessment and student support are the fundamental requirements for quality learning, infrastructure, resources, technology are necessary for high quality education. In the current scenario, technology is playing a significant role in providing online education and developing new pedagogic strategies to improve teaching and learning. This is called for as looking into the future may reveal that students in the present education system will be entering into the jobs that perhaps do not exist today.

Based on the earlier discussionand in the present world scenario, disruptions and innovations in technology are continuing in corporate world, they are influencing

socio-cultural, economic and demographic environment too. Therefore, students will be required to steer through an ever-changing global landscape. In such a scenario it is expected that there will be increasing demand for learning of newer skills to propel their careers further, more demand for vocational training, opportunities for flexible learning and flexible degrees, competency-based programs etc.Significantly, teachers may evolve from their roles as disseminators of knowledge to facilitators of knowledge. Thus, facing the challenges brought forth by pandemic has brought may new opportunities and possibilities for education policy makers, planners and institutions to reform the education sector for the unseen future.

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Values of Inclusive Education System in India through Community Development

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Abstract

India is the third largest democracy country of the world in terms of purchasing power. Despite this improvement, more than 460 million people in India live in abject poverty. The reciprocity of poverty producing disability, and disability resulting in poverty has created new challenges for the implementation of inclusive education in India. In India about 240 million children are disabled and have been denied access to education due to certain barriers outside the institutions and those within. Such barriers include narrowly defined set of eligibility criteria, negative attitude, and inaccessible environments. In India, inclusive education is instrumental in addressing these barriers and in making education accessible to children with disabilities and for those who are denied access on racial, ethnic, health, linguistic and cultural grounds. The range of challenges confronting the school system while including children with diverse backgrounds have to be met by creating child centered pedagogy, through community development and community participation. The present research paper focuses upon that how inclusion is the major challenge facing educational systems and schools around the world. This paper also highlights that how through community involvement, participation and community development, equal opportunities and complete enrolment for all children with disabilities within inclusive settings is possible. The present paper also provides some suggestions and ways through which integration of pre-service and in-service teacher education programmes in inclusive education could help to overcome the hurdles confronting the inclusion of all children within inclusive school settings and Inclusive education "is a process of strengthening the capacity of education system to reach out to all learners. It involves restructuring the culture, policies and practices in schools so that they can respond to the diversity of students in their locality." Education is a dynamic process. It should cater all the needs of pupils with the changes of time and advancement of society.

Keywords**:** Inclusive Education, Community development, Inclusion, Inclusive Schools, India.

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Introduction

India is the largest democracy in the world. According to Census 2011, there are 1.2 billion people in the country, out of which, about 833 million people live in rural areas. Census 2011 data on disability has not been announced yet. United Nations observes that 10% of the population has disability and there are about 120 million people with disabilities in India. The challenges and opportunities to provide inclusive education at school level in India.

The inclusion of children with special needs in educational settings has become a primary service option since the adoption of the UNESCO's Salmanca statement and framework for action of special needs education (UNESCO, 1994). Although inclusion may mean different things to different people, it is generally believed to mean the extent to which a school or community welcomes children with special needs as full members of the group and values them for the contribution which they make. The children actively belong to, are welcomed by and participated in a mainstream school and community (Farrel, 2004).Thus, inclusive education is about presence, participation and achievement of all learners (Engelbrecht and Green, 2007).

Inclusive education means including children with disabilities in regular classrooms that have been designed for children without disabilities (Kugelmass, 2004).

It is an educational practice based on the social premise of justice that advocates for equal access to educational opportunities for all children regardless of their physical, intellectual emotional or learning disability (Loreman et al, 2005).

Ainscow (1995) states that the aim of inclusive education is restructuring school so as to address the learning needs of all learners. That is, schools must change in order to be able to meet the learning needs of all learners in a given community.

Differences means the students could be related to disability, gender, size, colour or ethnicity and disability is just one of the differences and does not limit ones strength and abilities. Inclusive education recognizes that these differences are valuable and bring creativity and through them ideas are shared and experienced. In other words, inclusion is about transforming systems to be inclusive of everyone and not about inserting persons with disabilities into existing structures (UNICEF, 2009).

This trend which has gained momentum since 1970s is the merger of regular or general education with special education. The principle of Inclusive Education was adopted at the "World Conference on Special Needs Education: Access and

Quality" (Salamanca, Spain 1994) and was restated at the World Education Forum (Dakar, Senegal 2000).

The Salamanca Statement and Framework for Action emphasizes that schools should accommodate all children regardless of their physical, intellectual, social, emotional, linguistic or other conditions. The Statement affirms: "those with special educational needs must have access to regular schools which should accommodate them within child centered pedagogy capable of meeting these needs". India was a signatory to the Salamanca Statement. Following the adoption of the Salamanca Statement, in the last few decades there have been efforts internationally to include children with disabilities in the educational mainstream. Now, the schools have to accommodate all children and arrange education according to their needs.

Geoff Lindsay (2007) suggests that, "inclusive education or mainstreaming is the key policy objective for education of children and young people with disabilities". The philosophy of inclusion has its roots in the ideas and principles governed through equity and equality of opportunities to all without differentiation and discrimination. "Inclusive Education means that schools should accommodate all children regardless of their physical, intellectual, social,

International Journal of Home Science emotional, linguistic or other conditions. This should include disabled and gifted children, street and working children, children from remote or nomadic populations, children from linguistic, ethnic or cultural minorities and children from other disadvantaged or marginalized areas or groups"(UNESCO, 2003). It is the act of ensuring that all children despite their differences, receive the opportunity of being part of the same classroom as other children of their age, and in the process get the opportunity of being exposed to the curriculum to their optimal potential" (Handbook on in-service teacher education on inclusive education, DEP-SSA, 2008) [5].

Carroll(1967) had compared academic achievement of 20 students of special class with that of 19 mentally retardants children who attended regular class for half the school day and special classes during the others half. The finding through test about the grade equivalent form pre- to- post difference sources indicated that the partially integrated children with mental retardation achieved much higher gains in reading than the segregated and concluded that integration helped in the improvement of the performance of the mental retardation students.

Shotel et.al (1972) concreted a study on the attitudes of regular class teachers in elementary schools which had educationally integrated mentally retarded students and with resource room support. The researchers found that teacher's attitudes towards this type of placement were significantly negative.

Objective

1. To study the concept of inclusive education of Indian.
2. To study the need of inclusive education in India.
3. To study the problems being faced in implementing inclusive education in India.
4. To study the strategies that must be adopted to cope with emerging problems and issues regarding inclusion of children with special needs.
5. To study the role of Teachers and their Training in promoting Inclusive Education.

Methodology of the Study

Keeping in view of availability of the resources and feasibility of the present research paper, the author conducted his research studies on the basis of secondary sources of data. Secondary data has been collected from various books, Journals, research articles etc. The methodology of the study also includes the thoughts and writings of various authors in the stream of academic, research & corporate industry. Thus, the author utilized all resources available and carried out extensive studies for the present research paper.

Concept of Inclusive Education

In schools throughout the world, 'inclusion' has been used to refer to the placement of students with disabilities in ordinary classrooms alongside their peers (Kugelmass, 2004). "Inclusive education means that students with disabilities are served primarily in the general education settings, under the responsibility of regular classroom teacher. When necessary and justifiable, students with disabilities may also receive some of their instruction in another setting, such as resource room" (Mastropieri & Scruggs, 2004). According to Vaughan & Schumm (1995), inclusion offers and supports a school community in which all students, including those with disabilities and learning difficulties, are accepted, as integral members of the community.

In Indian context, Inclusion can be viewed from three perspectives which are:

1) Physical inclusion
2) Social inclusion
3) Cognitive inclusion

1) *Physical inclusion*

Physical inclusion receives consistent promotion, support and facilitation from the government. All the policies and regulation have made education free and compulsory for all children. No institution can deny admission to a chi old with disability on

account of his/her disability. The universalization of elementary education (UEE) focuses on enrolment, retention and achievement of all children.

2) *Social inclusion*

This type of inclusion is only happening in some sections of the society. In the lower socio-economic strata, research studies have revealed that there is greater acceptance of persons with disabilities (PWDs) with minimum expectation from them, whereas people from economically upper and affluent class of society have high expectations from PWD and for acceptance they do not move beyond denial (Bhan, S., Mehta, D, 1998)5. Gradually the efforts are being made by educating people through direct instruction and media to bring attitudinal changes in the society.

3) *Cognitive Inclusion*

The educational institutions try out cognitive inclusion by allowing the children with special educational needs to study in general classrooms with non-disabled children. Cognitive inclusion is possible only if the subject matter is broken down into smaller learning units and teacher should make sure that all the children to the expected level of mastery learn each of the micro-units of a lesson.

Therefore, the transition from "Special School Concept" to "Inclusive Education" can be treated as an evolutionary process in the service of children with disabilities.

Indian Scenario of inclusive education

The Kothari Commission (1964-66) the commission officially first addressed issues of access and participation by all. It stressed a common school system open to all children irrespective of case, creed, community, religion, economic-conditions and social status. In 1986, the national education policy (NPE) followed the commission's recommendation and suggested the expansion of educational facilities for physically and mentally handicapped children to study in regular schools. This result in 1974, into the scheme for integrated education for disabled children (IEDC).

The Sixth all- India educational survey (NCERT, 1998) and NCERT (2006) reports that the India's 200 million school- aged children (6-14 years), 20 million require special education needs (SEN). It conducted by the boards of school education have same shortcoming, greater importance is now given to continuous and comprehensive emulation (CCE) at school levels.

Plan of Action (POA), 1992, it postulated that a child with disability who can be educated in a general school, once they acquire daily living skills, communication skills and basic academic skills. The POA was strengthened by the enactment of Rehabilitation Council of India (RCI-1992).There four, in 1992; parliaments of India enacted the RCI act, subsequently amended in 2000 and provided legislative support to inclusive education. This act makes it mandatory to provide free education to children with disabilities is an appropriate environment until the age of 18 years. In 1999, the government passed the national trust for welfare of persons with Autism, Cerebral palsy, Mental retardation and Multiple Disability Act for the economic rehabilitation of people with disabilities. In recent years, major initiatives had been winched by the government for achieving the goals of universalization of elementary education (UEE), especially the sarva shiksha abhiyan (SSA) [8] in 2002. This adopts a ZERO rejection policy and uses an approach of converging various existing schemes and programs.

The UN standard rules on the equalization of opportunities for persons with disabilities (1993) were an important resolution for improving the educational conditions of persons with disabilities. The major implications for the Indian situation in the form of three legislative acts - The RCI Act(1992), PWD Act (1995), National Trust Act (1999) and the Salamanca statement and framework for action on disability education (1994).

Verma (2001-02)in her evaluation study of IEDC concluded that the scheme of Integrated Education for Disabled children sponsored by Government of India has helped considerably in changing the attitude of teachers, teacher educators, educational administrators, parents and community.

The RTE Act (2009) a fundamental right from all corners, the government's made the 86th amendment, article 21A of the constitution of India (2002), making the right to education of children from 6 to 14 years of age a fundamental right. Article 51A (K) was added to part IV-A of the constitution as a fundamental duty of parents to provide opportunities for education to their children aged between 6 and 14 years. The right of children to free and compulsory education act on the 26th august, 2009 and the implantation of RTE Act on 2010 for included differently able students and general students.

Need of inclusive education in India

Need for Inclusive Education in India for addressing the issue of "why inclusion", is the reality in Indian context should be reviewed. Some of the important facts with regard to inclusive education in Indian scenario are as follows·

1) More than 90% of disabled children are found in the rural areas in India. The special school as well as integrated education programmes are only a few in numbers and cannot serve all disabled children. Therefore, inclusive education is needed to provide equal educational opportunities to all disabled children in their own locations.

2) As far as standardized models of integration are concerned one specialist teacher serves to 10 disabled children of the same category. This approach is not practical in rural areas. In most villages of the country, disabled children of different categories are present. Therefore, the disabled child has to depend on the general school for education. As a result, inclusion is inevitable for these children from rural areas.

3) The extent of disability in each category ranges from mild to severe and sometimes there are profound cases. The mild and moderate cases are more in number than the severe and profound cases and they depend on the general education system. This call for the involvement of general education so that the children who are left out of schools or those who are at risk can be served. All the above discussion's related data can be shown through Table-1.

Table No. 1 Children with special needs per 1000 population.

category of diffrentaly able persons.	Age	Rural	Urban	Total
V.I	0-4	8	12	20
	5-1 year	17	22	39
	0-14	25	34	59
H.I	0-4	9	7	16
	5-14 month	18	23	41
	0-14	27	30	57
Speech	0-4	42	35	77
	5 - 14 month	47	48	95
	0-14	89	83	172
Locomotors	0-4	29	21	50
	5-14 month	36	31	67
	0-14	65	52	117
M.R	0-14	31	90	40
Others	0-4	88	75	163
	5-14month	118	124	242
	0-14	237	208	445

Source: RCI report in Disability status in India, 2006

Therefore, the reality in India focuses on the need for inclusive education.

Problems & prospects in implementation of inclusive education in India

The main challenge to implementation of inclusive education is policy issue. While the World Conference on Special Needs Education (UNESCO, 1994) recognized the need for reforms in schools, without significant changes in the policies in the universities and middle colleges, the objective of inclusive education cannot be achieved. Lack of policy on inclusive education means that institutions of higher learning and teacher training institutions cannot invest in the elimination of barriers, which is evidenced by poor architectural accessibility to higher institution buildings, low number of lecturers with training in special needs education and lack of awareness about education for students with disability. Lack of interest in developing policy on education of PWD may be attributed to poor attitude, ignorance, professional protectionism towards segregated education, antagonism towards inclusive education from within disability itself.

Teacher training institutions and universities need to move from ivory tower and work with communities, so as to provide accessible housing and other services to students with disabilities. Higher education institutions are further faced with high cost of higher education against weak national economies and even where the economy is good, there is lack of commitment on financial support to students with disabilities. Individual countries would have to make commitment to support those who are coming from economically weak background by reducing costs on education to individual households and introduce grants and make loans available to those who need it. They should promote community development and participation in order to maximize resources so as to ensure that there is sufficient, efficient and sustainable resource allocation to education for vulnerable students.

Some other Problems and Challenges towards implementing Inclusive Education in India

Some other challenges and problem in implementing inclusive education in India are:

1. **Challenge of poverty associated with disability**

   With an estimated 1,027 million people, India is the world's second most populated country. It has 17% of the global population and 20% of the world's out of school, children. Despite impressive gains in the last few decades, India still has more than 260 million people living in poverty. A large number of children with disabilities live in families with income significantly below the poverty level.

Disability causes poverty. The combination of poverty and disability results in a condition of "simultaneous deprivation". Recently, the Ministry of Rural development, Govt. of India, has allocated 3% of funds in poverty alleviation programmes targeting families of children with disabilities (Sharma, B.L.2004).

2. Challenge to modify deeply held attitudes

Attitudes of the non-disabled are proving to be a major barrier in social integration of PWDs. "The more severe and visible the deformity is, the greater is the fear of contagion, hence the attitudes of aversion and segregation towards the crippled" (Desai, 2002). Such attitudes are hurdles in path of any attempts to include students with disabilities into regular schools. Alur, M. (2001), in her study found that disability in India is not seen as something "normal" or "natural", rather it is seen as an "evil eye". She further concludes that "the contradiction here was that the Indian society, although integrated in accepting and valuing diversity in so many ways has a social role construct of disability which is negative, discriminatory and exclusionary". Parents of disabled children also think that disabled and handicapped are not educable. Teacher's attitude is not positive towards the implementation of inclusive education in the regular classroom, as it gives extra burden on them without any incentive.

3. Challenge of providing adequate levels of training to key stakeholders

Majority of school personnel in India are not trained to design and implement educational programs for students with disabilities in regular schools. Most teacher training programs in India do not have unit on Disability Studies (Myreddi & Narayan, 2000). Universities, which do not cover some aspects of special education in their teacher training programs, fail to train teachers adequately to work in inclusive settings. For example, there is limited coverage of information about practical strategies (Myreddi & Narayan, 2000)15. Placement of pre-service teachers in special or integrated schools is rarely given consideration (Jangira, Singh). However, the situation may improve in the coming years as the Rehabilitation Council of India (RCI) will periodically evaluate special education programs to ensure that each program meets minimum standards (RCI, 2006).

4. Lack of Trained Teachers

The report of the RCI (2006) states that the number of trained special education teachers is extremely small, considering the number of children with disabilities that require their services. In 2011, there were only 9,492 specially trained teachers. Of these, 4,295 were trained to teach children with mental retardation, 1,079 were trained to teach students with visual disabilities, 4,011 were trained to teach students with hearing impairments; and only 107 were trained to teach students with locomotors disabilities in India. To address, this severe shortage of trained teachers, RCI recommended that an additional 44,000 teachers would be needed to be trained by the end of Eleventh five year plan (2007-2012). However, even if these targets are to be achieved, only 10% of the population of children with disabilities would be served (RCI, 2006).

5. Inadequate Resources

Majority of schools in India are poorly designed and few are equipped to meet the unique needs of students with disabilities. The lack of disability friendly transport services and inaccessible building are considered by some to be far greater problems than social prejudice and negative attitudes (Chatterjee, 2003).

6. Rigid methods & Curriculum

Teaching methodology and curriculum in the present educational system are rigid and not in accordance with the special educational needs of children. There is a need of coordination between the educational institutions/ universities and schools for the flexible teaching methodology and curriculum development.

7. Drop-out Rate

Drop-out rate of special educational needs children is very high. Dropout is greatest in the early grades. Pre-cursors to drop-out include repetition, low achievement, poor teaching, degraded facilities, very large classes, household poverty and poor health and nutrition. The Total enrolment of Children with Special Needs (CWSN) at Elementary level is shown in Table-2:

Table no.2 (enrolment CWSN at elementary level, in million)

years	Elementary level(i-viii)		
	Boys	Girls	Total
2003	0.63	0.34	0.97
2004	1.04	0.71	1.75
2005	0.83	0.56	1.39
2006	1.16	0.96	2.12
2007	1.32	1.07	2.39

source: Analytical Report of NUEPA, 2007

Emerging problems and issues regarding inclusion of children with special needs

- **Qualitative Teachers Training**

  The educational authorities in India may adopt a policy of training one teacher from each school or a cluster of schools. The teacher would need to be provided with intensive training to work with various disabilities and would then act as an integration specialist or an inclusion facilitator for one or a number of schools located in close proximity. A similar strategy has worked well in certain parts of India when several school teachers were specifically trained to work in integrated settings under the Project Integrated Education for the Disabled (PIED) program launched in 1987 by MHRD and is recommended by several researchers in India (Jangira, 1995; Myreddi & Narayan, 2000)11, 15. Sharma, K (1992) suggest that the curriculum for pre-service training programs should be carefully developed, incorporating feedback from special and regular educators.

- **Classroom Practices in Inclusive Education.**

  Teachers can use the following numbers of techniques in the inclusive classroom:

  - Using games designed to build community.
  - Involving students in problem-solving.
  - Sharing songs & books that teach community.
  - Openly dealing with individual differences by discussion.
  - Assigning classroom jobs that build community.

- Utilizing physical therapy, equipment such as standing frames, so students who use wheelchairs can stand when other students are standing.
- Encouraging students to take the role of teacher and deliver instruction.
- Focusing on the strength of a student with special needs.
- Peer tutoring, Co-operative learning, Multidisciplinary Approach, Collaborative Teaching, Whole Class Teaching and Activity Based Learning should be used for the better results in the present scenario.

➢ **Need to Design innovative system of training**

*T*he number of persons who need training are very large and the conventional training methods cannot meet the requirements. Therefore, there is a need to design some innovative models to train educators at mass level. One way to educate such a large number of teachers is by using Distance Open Learning or DOL. IGNOU, in association with RCI is offering various courses to train special education teachers.

➢ **Need for collaboration between different Ministries**

Different ministries in India administer services for persons with disabilities. For example, while "integrated education" is the responsibility of MHRD, education in special school is the responsibility of Ministry of Social Justice and Empowerment. So, there is a need for streamlining administrative arrangements so that funds provided to different ministries for Persons with Disabilities (PWDs) can be used effectively.

➢ **Involvement of NGO's through Community Development and Mobilization of Communities in implementing Inclusive Education programs.**

NGO's can play a significant role in implementing integrated education because they are widely located in India and can serve both urban and rural school communities. The Sikshit Yuva Sewa Samiti (SYSS), an NGO in partnership with the government, participates in the implementation of the Integrated Education for Disabled Children (IEDC) and DPEP projects, and strengthens the programme through community-based and community mobilization intervention initiatives. It also provides resource teachers as

a support system to general teachers, and a backup team of physiotherapists and occupational therapists at the district level.

- **Establish an alternative system of examination**

Most school educators in India are concerned that inclusion of students with disabilities would result in lowering school standards because these students won't be able to pass exams (Sharma, Thus, it is necessary to establish an alternative system of examination for students with disabilities. Such a system is already in practice in USA.

- **School-University Partnership**

Multi lingual, multi-cultural and multireligious nature of India is cited as a challenge in implementing any educational reform. Local universities in each of the States and Union territories may play a significant role in overcoming this challenge. Evidence from a number of western countries indicates that such collaborative projects can produce positive results for students with disabilities as well as for school educators. For example; one such project is the Learning Improves in Networking Communities (LINC) program that was conducted in partnership between the Catholic Education Commission, Victoria (CEVC) and Monash University in Melbourne, Australia. The project was geared to identify the factors within the school environment that most effectively contribute to successful integrated practices.

- **Establishment of National Resource Centre**

There is need to have a National Resource Centre for Disabilities. Such a center would work to collect, and disseminate information on various aspects of disability through various TV and radio programs as well as through internet (Sharma, B.L. 2004). The center would also fulfil the role of scrutinizing all mass communication programs to ensure that disability is not portrayed in a negative manner.

- **Individualized Education Plan (IEP)**

An individualized Education Plan must be tailored so as to cater to the individual student needs as identified by the evaluation process and must help teachers and related services providers to understand the students disability and how the disability affects the learning process.

- **Educational Concessions and Facilities**

  There is need of educational concessions and facilities for the education, occupational training, placement and rehabilitation of the disabled persons with the main objectives as following :

  1. To develop their potentialities in academic, occupational and social spheres.
  2. To help slow learners to work on inclusion to general stream programmes.
  3. To make partial integration programmes a success to bridge the gap between special education and general education pattern.
  4. To provide remedial or supportive help and training on time to the disabled children (Virk, 2012).

Role of teachers and their training in promoting inclusive education

It is a fact that regular schools and regular classroom environment often fail to accommodate the education needs of many students, especially individuals with disability. This is the reason that so many pupils with disabilities do not attend regular schools. Tesfaye (2008), reported that, the regular classroom teacher is responsible for any adaptation that may be necessary for students' success in this environment. Consequently, these teachers must have the skills to develop and adapt curricular to meet individual needs. Necessary skills for the regular classroom teachers include an understanding of how a disability affects the ability to learn academic skills or to adapt in social situation. According to Abate (2005), it is unrealistic and unfair to expect that the regular class teacher will be able to include children with disability in regular classroom without receiving adequate training. It is through training that teacher could bring the necessary adaptation required to meet the special needs of their students.

Training of teachers must be done at pre-service and in-service levels. This includes training at teacher training colleges and universities at both the national and provincial level. In pre-service training programs, inclusive education should be a compulsory subject for all teacher candidates & an integral part of teacher training curricula. Fundamental knowledge and skills of inclusive education, such as understanding needs and abilities of children with special needs and pedagogic skills such as instructional accommodation and activity differentiation should be provided to teacher candidates.

Training of teachers at in-service level includes professional development of teachers who are already working in the classrooms. In-service training of teachers

equips teachers with methods for community mobilization, community development, community participation and child centred pedagogies, employing active and participative learning techniques that improve teachers' capacity to teach children both with and without disabilities. Through, in-service teacher education programme, the concept, meaning, strategies of team teaching, various instructional strategies to suit challenged learners in inclusive school etc. will be introduced by orientation programmes and refresher courses.

Teachers teaching in an inclusive classroom should have the following abilities

a. To problem-solve, to be able to informally assess the skill a student needs.

b. To make appropriate expectations for each student, regardless of the students' capabilities. If teachers can do this, it allows all students to be included in a class and school.

c. To learn how to value all kinds of skills that students bring to a class, not just the academic skills.

d. Accommodate to students different learning styles and rates of learning by employing a range of teaching methods, including cooperative group learning, peer tutoring, team teachings and individualized instruction.

e. Locate appropriate material, equipment or specialists.

f. Identify and overcome barriers to learning.

g. Use appropriate forms of assessment.

h. Create an inclusive community that extends beyond the walls of the school.

Thus, at least one teacher educator from every Teacher Education Programme is supported to have short term training in the area of special education and all teacher educators have to receive a week-long orientation about inclusive education.

Recommendations and Suggestions

Teachers who can teach in settings that are inclusive, meeting the needs of all students, must be prepared. If teacher education programmes are to prepare educators to be successful in the inclusive classroom of the future they must conceptualize and redesign their approach to pre-service preparation of teachers.

Inclusive education in teacher education for pre-service should lay more emphasis on the process subsystems, which includes collaborative experiences through simulation, Role-playing, field-based activities, multiple opportunities to observe and work in actual classrooms where inclusive practices are being implemented etc.

Inclusive education in Teacher Education Programme is not so easy because it is community-based program and it depends upon the extent of interaction with the general community. Success of inclusive education in Teacher Education Programme depends upon combining efforts of teachers, teacher educators, peers, administrators, volunteers, parents and in general all members of society. More special needs departments in colleges and universities need to be opened so as to meet the staff requirement to teach special needs component in teacher training institutions. Rehabilitation Council of India (RCI), which has a statutory status can revise the norms for the maintenance of standards, curricula and can bring about improvement in teacher education.

Conclusion

It may be reasonable to conclude that with the provision of more pre-service and in-service training, adaptation of curriculum to develop skills required for inclusive settings, provision of more resources and support, inclusion can be successfully implemented in reality in schools of India. A few of the strategies that could be implemented to promote better inclusion.

The success of inclusive education in any context depends upon many factors. Teachers themselves are an essential component to ensure the quality of students' inclusion in the school and teacher education institutions. Preparing teachers with essential knowledge and skills for inclusive education requires the commitment of all actors. Out of a small number of studies conducted in the area of inclusive education, one thing has been confirmed that successful inclusive programs exist, but there are still a range of conditions that must be in place. It presents a challenge to government funding bodies to provide the resources that will facilitate inclusion and identification of a successful mode of professional development.

Building the capacity for inclusive education must be done at community level, by including awareness raising activities such as community involvement, community mobilization and community development as well as integrating pre-service and in-service teacher trainingprograms in inclusive education. More and more teaching training modules need to be developed so that not only pre-service but also in-service teachers could also be trained in inclusive practices. The administrative and management aspects of inclusive education needs to be studied at the micro and macro levels both in rural and urban settings, so that the models thus developed could be replicated in varied situation. But the Inclusive education with disabilities children's in education is a challenging task and needs a stricter government control, policies, legislative framework, mass community mobilization and involvement and above all provision of appropriate responses to wide spectrum of learning needs of special children in both formal and non-formal settings.

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