

JOURNAL OF EDUCATION AND DEVELOPMENT
Multi-disciplinary, Peer Reviewed Journal

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Multi-disciplinary, Peer Reviewed Journal

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From the Desk of Editor-in-Chief

T

he undersigned takes pleasure in bringing out the sixth issue of 'JOURNAL OF EDUCATION AND DEVELOPMENT'. This issue contains articles on various aspects of different subjects of the changing world. To keep the length of the issue within reasonable bounds, it has been necessary to be very selective in the incorporation of articles. Some of the articles still remain in the queue to get appropriate place in the next issue of the journal. The editor acknowledges his debit and gratitude to all members of the editorial board and to all contributors.

Suggestions for further improving the journal are earnestly solicited and will be cordially received.

Editor-in-Chief

Kalyani, West Bengal
15,Dec,2013

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The purpose of the journal is to foster inter-cultural communication among educators, teachers, academicians, administrators, researchers. nationwide coverage transactional collaborative effort in research and development and to promote critical understanding of educational problems in a global perspective.

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Abstract

Dr.R.S.Mani (R.Subrmani Mudaliar) and J.Sardar Paparayudu

The Right of Children to Free and Compulsory Education Act (RTE) being implemented since 2010 gives an opportunity for creating schools that are more 'child-centered' where the child is feeling that he/she is valued and included, happy and confident, and enjoy learning without fear. Learning should be linked to children's lives, through activities that help them to observe, question, discuss, think and discover new things for themselves. In order to bring about the holistic development in the child the Continuous and Comprehensive Evaluation is being suggested for implemented in all CBSE schools of India. In this paper an attempt is made to clarify the concept of Continuous and Comprehensive Evaluation in the context of Résumé of the problems of continuous and comprehensive evaluation in schools of Andhra Pradesh is discussed for the implementation.

Continuous and Comprehensive Evaluation in CBSE schools: Continuous and Comprehensive Evaluation(CCE) is an system newly introduced by Central Board of Secondary Education in India for students of sixth to tenth grades to ensure that the students study continuously and tested frequently followed by feedback for the appropriate targeting of achievements in different areas of knowledge. The main aim of the CCE is to evaluate every aspect of the child during their presence at the school. This will ensure that the student will have reduced pressure of examination for he/she has been tested throughout the year with multiple tests and most of the syllabus is covered in different tests and examination without any repetition occurring resulting in a continuum of learning. This method of evaluation will bring more consciousness in teachers and students.

The Right of Children to Free and Compulsory Education Act (RTE) being implemented since 2010 gives an opportunity for creating schools that are more 'child-centered' where the child is feeling that he/she is valued and included, happy and confident, and enjoy learning without fear. Learning should be linked to children's lives, through activities that help them to observe, question, discuss, think and discover new things for themselves. In order to bring about the holistic development in the child of this kind the marking system is abolished and grading system of 9 point grade is being

implemented. For this purpose, RTE also requires that all schools should implement an evaluation system called Continuous and Comprehensive Evaluation (CCE).It is believed that CCE has been found to be better way of ensuring every child's holistic learning in a happy and stress-free environment.

The continuous and comprehensive evaluation entails that the teachers observe children's progress as they teach and assess children's progress every day by observing, asking questions, facilitating activities, giving small assignments, projects, or tests. This will enable the teacher to find early the problems of the children to diagnose and provide the remedial instruction needed

for the specific children. The teacher could change the teaching method considering the needs of the students and use multi-modal instruction to facilitate better learning. The continuous comprehensive evaluation tries to focus on the understanding of the child and providing feedback to the child continuously for developing self confidence and better ability to achieve. The CCE tries to relate the experiences to the real life for children realizing the problems and issues in the context of learning for example, the need for cleaning water and ensure the potable water is clean to drink. The involvement of the student in the activities help the child to observe the reality outside the school and ask a question concerning the contrast seen in reality. The values that are taught in the school and the values being practiced in the society differs that creates the gap in understanding to the child. The scheme of the Continuous and Comprehensive Evaluation of CBSE schools is shown in Table No.1.

Table No.1 Showing Continuous and Comprehensive Evaluation in CBSE schools

Board of Education CBSE Examinations	
Formative Tests in a year	: 4
Summative Tests in a year	: 2
Scale of Grading	: 9 points
Grades being implemented	: 6 th to 10 th
	Course
Main Subjects	: English, Mathematics, Physics, Chemistry, Biology, History, Civics, Geography and Economics.
Additional Subjects (Optional):	Assamese, Bengali, Gujarati, Kashmiri, Kannada, Marati, Malayalam, Manipuri, Oriya, Punjabi, Sindhi, Tamil, Telugu, Urdu, Sanskrit, Arabic, Persian, French, Tibetan, German, Portuguese, Russian, Spanish, Nepali, Limbo, Lepcha, Bhutia and Mizo.

of the child. Children learn many things from their peers, discussion with others. It needs to be captured in the evaluation properly for the growth of the child. The environment must provide opportunity for the child to interact more with the peers. It must facilitate interaction with others in more academic ways to enhance their learning. An example may be development of the skill. The skills exhibited outside the school is equally important and the child may be allowed to observe and learn a few in simulation in the school in the able guidance of a teacher or a skilled person called for that purpose to the school. The Table No.2 provides the comparison between the

traditional examination system and the Continuous and Comprehensive Evaluation.

Table No. 2 showing Comparison of the traditional examination system and the CCE

Traditional Examination System	Continuous and Comprehensive Evaluation
Examinations are terminal in character and term end examination gives no time for the child to improve further in learning.	Evaluation is continuous that allows the teacher and student to make the corrections needed and change their method of interaction. It helps in identifying the levels of learners and teacher could give support to make sure that the children will learn better.
Children constantly feel anxious by the fear of the examinations.	Children are not anxious for they are better prepared. Continuous assessment gives them confidence to do better.
Children are blamed for their poor performance and due their failure in achievement they may drop out of the school.	The school takes the responsibility for the achievement of the children. The teacher provides the required help at the right time and makes it sure that every child will learn according to ones capacity. Failures are considerably reduced. They get opportunity to pass the test in the next attempt.
It focuses on the scholastic achievement tested through the paper pencil test.	It focuses on the all-round development of the child (in sports, arts, music, values, etc,) in addition to academic achievement.
Parents come to know of their children's achievement and progress at the end of	Parents are able to meet the teachers regularly to discuss their children's

the year. It makes them helpless and frustrated.	progress through face to face interaction and meetings at least 2-3 times a year.
In this system, child is severely discriminated by the system of marking.	In CCE grading system is used. Children are classifying in groups that shows more progress.
The child will not get opportunity to improve on the knowledge of the weakness, less achievement, due to various reasons such as health, inadequate preparation, excessive anxiety during examination.	The CCE provides opportunity for self assessment and teacher helps the child to grow and ultimately there are very less chances of the failure of the child.
Tests and examination scores are counted for the progress of the academic year.	In CCE, some percentage of the progress of the achievement is considered for the next year also.

Source: CCE in Right to Education, Sarva Shiksha Abhiyan, Education for all, UNICEF.

CCE will be implemented as follows:

Expectations from teachers are presented as follows:

- Teacher at the beginning of the year observes each of the child and sets a realistic learning goal for each child to achieve by the year end.
- Teacher considering the learning goal plans his/her teaching and further takes note of the students needs. The teaching activities include many questions, activities for students to perform. Teacher observes the participation and learning of each child.
- Teacher provides various activities, assignments, projects, small tests, etc., and regularly observes and updates their record each week the achievement of the children and goal of the unit. Teacher also tries to find which child requires more help.
- Teacher after analyzing the observations thinks of the additional help needed for each child. Teacher tries to provide the necessary environment to the child to perform. Children are given activities to practice helping the child learn.
- The teacher will consolidate the progress of each child in the form of a progress report card to be shared with parents periodically to discuss and give feedback to the child. The strengths and weaknesses are assessed to find the alternatives for the support required for each of the child. The sample of their work (project work, notebook, art

Under RTE, teachers have been made accountable for students' learning. Section 24 of the RTE Act says that all teachers are required to attend school regularly and punctually, complete the curriculum in a timely manner, assess each child's learning progress through CCE, provide extra help to children who need it and regularly meet with parents to share their children's progress. Teachers will be given training and academic support by the school system on how to implement CCE, including how to assess through activities and projects, maintain records and ensure every child learns

Role of Parents in CCE: The Right to Education Act provides every child a fundamental right to receive child-centred, quality education. This means that every school has to implement CCE such that the child gets the required support or help when needed and continue learning. Teachers will need some time to understand this concept of CCE and implement slowly. The parents need to help the teacher in realizing the goal. Parents need to support the school for facilitating the implementation of the CCE. Some of the ways parents could help in this process are as follows:

- Parents need to inquire with the child about the learning in the school. A free talk about the learning and events will bring to focus the development and problems of learning.
- Parents need to on a continuing basis have to observe their note books and home work to see their progress.
- Encourage your child to attend school regularly and participate in school functions and co-curricular activities.
- Make sure that teacher organizes the regular parent-teacher meetings to explain the goals, learning and progress of the child.
- Child when finds it difficult to learn something, discuss with the teacher about the reasons and try to help child improve together for continuous development.

Goals of CCE in Right to Education, Sarva Shiksha Abhiyan, Education for all,

- CCE promotes children's all round development
- CCE helps the Children to be actively involved in learning
- Teacher constantly assesses and helps each child to learn well
- CCE encourages partnership between parents and the school to observe the success of the child.

Right to Education, Sarva Shiksha Abhiyan, Education for all, UNICEF, Unite for Children

student by means of evaluation of other activities. The emphasis in evaluation is on the comprehension of the child than the rote learning. Grades are awarded to students based on work experience, skills, dexterity, innovation, steadiness, teamwork, public speaking, behavior etc. This helps the students who are not good in academics to show their talent in other fields such as arts, humanities, sports, music, athletics, etc. The Continuous and Comprehensive Evaluation has ensured the implementation of the nine point grading system in the CBSE schools in India (Table No.3). They are as follows:

Table No. 3 showing the nine point grading scale used for evaluation of school education.

CGPA Grade :
9.1-10.0
8.1-9.0
7.1-8.0
6.1-7.0
5.1-6.0
4.1-5.0
3.1-4.0
2.1-3.0
1.1-2.0

In the present system of the continuous comprehensive evaluation there are two types tests. They are:

1. Formative tests and 2 .Summative tests.

1. Formative tests –these tests are held throughout the year. It comprises the students’ work at class and home, student’s performance in oral tests and quizzes and the quality of the projects or assignments submitted by the child. Formative tests are conducted four times a year and they carry 40% weight age for the aggregate. In some schools, an additional written test is conducted instead of multiple oral tests. However, at least one oral test is conducted.

2. The summative assessment is a three hour long written test conducted twice an year. The first summative or Summative Assessment I (SA-1) will be conducted after the first two formatives are completed. The second (SA-2) will be conducted after the next two formatives. Each summative will carry a 30% weightage and both together will carry a 60% weightage for the aggregate. The summative assessment will be conducted by the schools itself. However, the question papers will be partially prepared by the CBSE and evaluation of the answer sheets is also strictly monitored by the CBSE. Once completed, the syllabus of one summative will not be repeated in the next. A student will have to concentrate on totally new topics for the next summative.

At the end of the year, the CBSE processes the result by adding the formative score to the summative score, ie. $40\% + 60\% = 100\%$. Depending on the percentage obtained, the board will

deduce the CGPA and thereby deduce the grade obtained. In addition to the summative assessment, the board will offer an optional online aptitude test that may also be used as a tool along with the grades obtained in the CCE to help students to decide the choice of subjects in further studies. The board has also instructed the schools to prepare the report card and it will be duly signed by the principal, the student and the board official.

The CBSE recently announced that the students need to keep in touch with the current knowledge and for that purpose certain papers will be circulated for reading and improving the comprehension of the students. This is in addition to the paper and pencil test the students will

give about the English language usage and oral skills. It carry's 10% weightage. At least once a year the student is tested for the oral skills for development. The test papers are given in two languages namely English and Hindi. CBSE could make attempts to provide it in other recognized Indian regional languages also. The centralized question paper preparation helps the CBSE in providing the question paper on the same day of the examination. This has reduced the copying in the examinations to a considerable extent and schools have become more conscious of the regularity in the examinations. One of the problems that are encountered often is that the resource books are not easily available for the preparation for the students in subjects such as Hindi, Social Studies, Science and Mathematics at secondary level.

Problems of implementation of CCE in Andhra Pradesh State: Considering the National Curriculum Framework (2005), RTE (2009) and the recommendations of the National Knowledge Commission SCERT, Andhra Pradesh prepared a new curriculum namely Andhra Pradesh State Curriculum Framework 2011 (APSCF). It includes and recommends the Continuous and comprehensive evaluation in school level assessment. Table No.4 shows the pattern of assessment of CCE in Andhra Pradesh.

Table No. 4 Showing Pattern of Assessment of CCE in Andhra Pradesh

Sr N	Type of Assessment	Conducte d in the mo nth	Assessment process
1.	Baseline test	June	Written test
2.	Formative assessment- 1	July	Oral assessment
3.	Formative assessment- 2	September	Oral assessment
4.	Summative assessment- 1	October	Oral and written examination
5.	Formative assessment- 3	December	Oral assessment

6.	Formative assessment- 4	February	Oral assessment
7.	Summative assessment- 2	April	Oral and written examination

Baseline Test: It is conducted at the beginning of the academic year to know the competencies of the child of the particular class. Based on this test teacher decides the student achievement level. This test is very useful to the teacher to prepare the teaching learning activities according to the student level. Teacher assesses the student achievement with the help of oral and written tests.

Formative Assessment: Formative assessment is conducted in six academic subjects namely Telugu, Hindi, English, Mathematics, General Science, and Social Studies. Formative assessment is used by the teacher to continuously monitor the student progress and provides the descriptive feedback. Teacher assesses the students' achievement with the help of the written notes, students' diaries, portfolios, activities, assignments, project reports, team activities etc., This test is conducted four times in an academic year.

Summative Assessment: Summative assessment is carried out at the end of the each term for six scholastic subjects. Subjects Assessed in the elementary level (it includes primary and upper primary) are given in the Table No. 5.

Table No.5 Showing the Subjects on offer and assessed in elementary level in Andhra Pradesh

1.	First Language (Telugu)	Offered from first standard to Tenth standard and compulsory
2.	Second language(Hindi)	6 th standard to 10 th standard
3.	Third language(English)	5 th standard to 10 th standard(urban 1 st to 10 th)
4.	Mathematics	1 st standard to 10 th standard
5.	General Science	3 rd standard to 10 th standard
6.	Social Studies	3 rd standard to 10 th standard
7.	Art education	1 st standard to 10 th standard
8.	Health education	1 st standard to 10 th standard
9.	Physical education	1 st standard to 10 th standard

10.	Music and dance	1 st standard to 10 th standard
11.	Vocational education	1 st standard to 10 th standard
12.	Technical education	1 st standard to 10 th standard
13.	Moral education	1 st standard to 10 th standard

The number of subjects being studied at primary and secondary level is increasing with frequent changes in the syllabi. When more emphasis is placed on the learning of the languages especially the mother tongue. The research evidences and the experience shows that the learning of the mother tongue is weak. The same problem is observed in the learning of the language English. The third language being a foreign language students are not able to understand the linguistic features. Many a time the teachers are also weak in English. They find difficult to get a proper role model for speaking English in rural areas and rural schools. It is further difficult to create an environment at home to speak in English. The language Hindi is considered as the national language. It is equally respected and learnt. However, there is less understanding of the language Hindi. In the sense that the students understand the textual meaning of the words and sentences. They do not get the cultural images properly for interaction is far less. The people speaking Hindi in a linguistically correct manner are also rare. Hindi is not spoken in the home. The child finds it difficult to learn Hindi. It may be surprising but true that children consider the presentation made in Hindi movies are the models to emulate. There are chances that the children copy the wrong values easily. There is a need for discussion of the civilized way of speaking and discussion in Hindi in schools.

These examinations are conducted by the DSEB (District Schools Examination Board) for two times in an academic year (S.A 1 & S.A2). The summative test consists of objective type questions, multiple choice questions, and short answer questions. In each subject there are some identified competencies. These competencies are very useful to teach and assess the learner. Table No.6 shows the competencies in different subjects (Primary and Upper Primary).

Table No.6 showing the competencies in different subjects (Primary and Upper Primary).

Telugu	Hindi	English	Mathematics	Science	Social Studies
1.Listening, speaking	1.Listening, speaking	1.Listening, Speaking	1.Problem solving	1.Conceptual understanding	1.Conceptual understanding
2.Reading, Speaking	2.Reading, Speaking	2.Reading Comprehens	2.Give Reasons	2.Asking Question	2.Reading Comprehens

with comprehension	with comprehension	ion	and proof	and Making hypothesis	ion Interpreting the text
3.Writing	3.Writing	3.Correction Of Writing	3.Expressions	3.Experimentation and Field investigation	3.Information Skills Responding in Social and Contemporary Issues
4.Vocabulary	4.Vocabulary	4.Creative Writing	4.Solutions	4.information Skills and Projects	4.Mapping, Skills, Picture Reading skills
5.Creative expression	5.Creative expression	5.Vocabulary		5.Communication through Drawing- Model making	5.Appreciation and Sensitive
6.Identifying The phrases and expression Appreciation		6.Grammatical Awareness		6.Appreciation Or aesthetic Sense values	

And project work					
				7.Applicati on To daily Life- conc ern To bio diversity	

The Co-scholastic aspects are also as important as that of the scholastic aspects for the wholistic development of the child.The co-scholastic aspects are presented in the Table No.7.

Table No.7 Showing Co-Scholastic Aspects

1.Art E d u c a t i o n	2.Music and Da nce	3.Physic al Educati on	4.Health Educatio n	5.Work Edu cati on	6.Comput er Edu cati on	7.Moral Educatio n
Drawin g & C ol o u ri n g T	Singing Songs Exhibitin g Local art Dramatiz a Tion,role pla y, mi	Followi ng The ru le s & re gu la- Tions	Physical Develop ment Personali ty Cleanline ss Environ- mental Cleanline ss	Preparatio n Of Models and Obj ects Utilization Of Tools & Materials Utilization	Learning Through Computer Usage of computer	Discrimi na tive knowledg e friendline ss patience and kindness Protectio

h e pi ct u re s Prepari n g m o d el s a n d fi g u re s	me Utilizatio n Of vocal instrume nts	Game Spirit an d Appreci a- Tion Special skills	Health & Food hab its	Of Human Resources Participati ng in events		n of the Hu ma n Rights and Values.
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Three point grading scale i.e. A,B,C(A=Excellent,B=Average,C=Under achiever) are used for Measuring Co-scholastic achievement in schools.

Table No.8 showing the five point grading scale for measuring scholastic achievement in schools Of Andhra Pradesh

Grade	Grade Range	Points	In the form of marks	Student progress
A+	3.50 to 4.00	4	Above 70	Out standing
A	2.50 to 3.49	3	61-70	Excellent
B+	1.50 to 2.49	2	51-60	Good

B	0.5 to 1.49	1	41-50	Fair
C	0 to 0.49	0	Below 40	Need help

This five point grading scale i.e.A+,A,B+, B and C are used for measuring scholastic achievement

Of students in schools.

Problems of implementation of CCE in Andhra Pradesh:

Continuous and Comprehensive Evaluation was introduced in schools of Andhra Pradesh from the year 2011.The CCE is a reform in examination that provides feedback to teachers and students. Teachers need to prepare two formative tests in the first semester and one summative test. Similarly, teachers have to prepare two formative tests and one summative test at the second semester. Each of the tests is cumulative in nature. The summative assessment score gets considerably reduced due to the weight age given to the formative tests.

There are certain problems in implementation of CCE in Andhra Pradesh.

- The Department of Education has introduced CCE as a reform in evaluation and examination. All teachers are not oriented to CCE.It may take 2 to 3 years to orient all the teachers in Andhra Pradesh.
- CCE does not have separate grant from the government. When government gives separate developmental or contingency grant for CCE or makes an award of Rs .1000/- to each class teacher for a year for the quality improvement of CCE the teacher made tests will improve in its quality.
- Students are not used to many tests. They hardly understand cumulative nature of the tests. They need to be properly oriented about the tests.
- Activities introduced along with the tests every week is more time consuming and resource oriented and students find it difficult to coup up with the pressure on time, effort and feedback on assessment. However, when the school and teacher combined way make earnest efforts students and parents could be convinced of the use of the tests, activities, and quality improvement in learning.
- CCE includes scholastic and co-scholastic aspects. The scholastic aspects are rather clearly measured with tests and interview (for example, Assessment on speaking and listening in English).The Co-scholastic aspects such as regularity, punctuality and sincerity, honesty and values are rather difficult to measure. It becomes hard for the teacher to keep the record continuously throughout the year. It is further difficult to develop the individual profile of students. For the primary class to the secondary level, each class has an average size of around 60 students. Sometimes, at secondary level the strength of the class increases to 70.This is a large class difficult to maintain and conduct CCE effectively.
- School is able to provide for the expenses of the first term end examination(summative test-I) and the second term end examination(summative test-II).The formative test design,preparation,conduct of tests, evaluation and feedback expenditure comes on the personal expenditure of the teacher concerned in the subject. Teachers find it difficult to meet the expenditure resulting in lesser quality of CCE.
- Schools do not have required adequate facilities for CCE(for example, a separate room for keeping the examination records, question papers, invigilation schedules, grade sheets, attendance etc.,).Many elementary schools and some lower secondary schools in rural area do

not have science laboratory, science kit and equipment, apparatus, chemicals and reagents. The principal has to adjust the expenditure against the contingency grant, laboratory fees, and miscellaneous expenditure.

- Many schools have established computer laboratory. But, these computers are not used for science laboratory experiments. There is a lack of mind set among teachers. Teachers of science feel that they are more empowered and they do not want to use computers in the laboratory. The computer teacher gets lesser salary or sometimes, on temporary contract that leads to low self esteem. This hierarchy created comes in the way of
- implementing CCE. Testing through LAN network or online testing is less appreciated by teachers and principal.
- There is no adequate training and supervision of CCE implementation. The number of subject experts, Assistant Education Officer's and District Education Officer are far less in comparison to the growing number of schools and students. Further, the CCE is more thought of as a government school examination reform. Majority of the primary schools are in rural area under the gram panchayat and at the district level-Mandal in Andhra Pradesh. This is a wrong notion created to hinder the progress of CCE.
- There seems to be more qualitative difference between the CCE organized by Government schools (Panchayat and Mandal schools in rural areas) and the Private (Public) schools in terms of facilities, finance, participation and programme planning and implementation for increasing the effectiveness.
- There are no incentives for teachers to implement CCE in elementary schools.
- There is no concession for the girls, SC, S.T children (5%) and OBC children including minorities such as Muslims, Christians, Parsis, and Sindhis etc.
- This programme may not empower the impoverished children performing on the low achievement or an average achievement. The achievement of girls in rural area is considerably low and the achievement of Panchayat schools is on a majority low to very low. Some schools show average achievement. The CCE becomes leverage for increasing the pass outs and showing little more on overall improvement in school achievement percentage.

Suggestions to Improve Implementation of CCE:

- Teachers and students need to be continuously oriented for CCE through conducting workshop, seminar, publication in journal and books, activities.
- There is a need to create nodal centres in each district with more resources for communication and dissemination.
- Teachers need to be trained purposively in writing objective type questions. Constructing questions in a correct language and its translation into Hindi, Telugu, Urdu or English is very essential.
- CCE must be included in the regular pre service teacher training programme and appropriate facilities must be provided for the adequate preparation of teachers.
- Teachers and students need to plan for the projects involving scholastic areas.
- There is a need to prepare an index of websites on evaluation, CCE and related scholastic and non-scholastic aspects for the easy reference and downloading.

- There is a need for developing resource material for teachers and students on CCE pattern for example, subject manuals, laboratory manuals-science, computer education etc.,.
- There is a need to train and appoint staff for monitoring the implementation of CCE.Department of Education, Government of Gujarat; Gandhinagar has created a committee to accredit schools in Gujarat. Attempts have been made to classify schools based on quality. One important feature considered is CCE and quality programmes.Quality Council of India for schools has been already working on this idea and accrediting the schools through team visit to schools.
- There is a need for developing computer software for students and teachers with easy and simple access, training and guidance for implementation.
- Allotment of one or more periods in a week for co-scholastic aspects for elementary and lower secondary for example, Art education and Dance and Music, Moral Education etc.,.
- There is a need to clearly spell out the finer components of vocational education and vocational skills for elementary and lower secondary students in consonance with the CCE pattern.
- Adequate number of teachers needs to be appointed specifically in scholastic and non-scholastic areas.
- There is a need to create a CCE learning centre for the schools in a group of three districts as a cluster.
- EDUSAT could be used for training teachers in service on CCE and providing detailed instructional modules for training and implementation(Mani,R.S.2013).
- Efforts have already been made to create Interactive Teaching Terminal through NCERT network (There are 90 interactive teaching terminals already installed under NCERT network for school education)(Mani,R.S.2013).
- There is a need to develop some standardized tools to evaluate CCE.
- The theory examiner and the examination room under CBSE School could be utilized for quality implementation of CCE.

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EDUCATIONAL PROBLEMS OF RESIDENTIAL SCHOOL STUDENTS SEEKING GUIDANCE - A CRITICAL ANALYSIS

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ABSTRACT

In the process of socialization in this developing and everchanging era, students are facing various problems. Thus Guidance is the requirement of the hour, where an expert help is sought to take care on the present needs and problems. Not only the parents but the teacher, the school and all persons concerned with the individual has the responsibility to meet and sort out the problems. Future of every country lies wholly on the shoulders of the new generation. But if the new generation is itself undergoing pressures and is facing problems it will affect their overall development and further will hamper the nation's progress as well. An individual seeks guidance from his parents, family members whenever required. But when an individual is studying in residential school, to whom should he seek guidance to problems arisen? Banasthali Vidyapith is a residential institution where students who differ in many aspects reside together. Differences may be because students come from different states, their mother tongue is different, their living style, eating habits etc. also differ. Hence because of differences many problems might be generated among the students. Guidance is needed because individuals differ in intellectual abilities, interests, motivation and in their levels of aspiration. To cater to the needs of individual students, educational guidance is needed in schools.

Individuals may make attempts to resolve the problems all by themselves. They may seek help of peer group, teachers and wardens too. While there is an opportunity to seek help from the Guidance Programme under the Faculty of Education, Banasthali Vidyapith.

When the researcher came to know about the Guidance programme of Faculty of Education, Banasthali Vidyapith, where the school students are free to express any problem. An urge to know the problems which the residential students face, has made the researcher undertake this study. Since due to individual differences a problem may not be anything to one individual but to the other it may mean everything. It can be said that every problem may be specific to an individual. Thus the present study is an attempt to find out the kinds of educational problems of residential school students who are seeking guidance. These problems are being put up by the students under an open programme (without having any boundation on the kind and nature of the problem). Since the problems of the adolescents need careful study not only because they are

important in day to day behaviour but also because they deeply affect their overall development. So it becomes imperative that all concerned should have a sound knowledge about the types of problems that often worry the adolescents. This research work will provide this valuable information about adolescents to those teachers and guidance workers who are ready to take up this huge responsibility.

KEY WORDS: *Educational problems, Residential School Students, Guidance.*

Conceptual Framework

At this present scenario each individual is facing some or the other problem, which continues lifelong. If the individual fails to get timely solution of the problem raised, then there will be frustration. Frustration hampers the individual progress and further affects the national progress. As the life is getting complex day by day, the problems for which expert help is required are increasing proportionately. Thus the need of guidance is increasing. Guidance is a process which helps every individual to help himself, to recognize and to use his inner resources, to set goals, to make plans, to work out his own problems of development. Educational guidance is aimed to aid students to solve their problems related to education at different levels of education.

According to **Myers** "It is a process concerned with bringing about, between an individual pupil with his distinctive characteristics on the one hand, and differing groups of opportunity and requirements on the other, a favourable setting for the individual's development of education."

According to **C.C. Dunsmoor**, "Educational guidance is primarily concerned with the student's success in his educational career. It relates to the student's adjustment to school and to the preparation and carrying out of suitable educational plans in keeping with his educational needs, abilities and career interests." Guidance is needed because individuals differ in intellectual abilities, interests, motivation and in their levels of aspiration. To cater to the needs of individual students, educational guidance is needed in schools.

When the need of guidance arises among students, it is being recognized that no agency of society has such access to the child and such opportunity to study him or to guide him as has the school. Thus a suitable guidance programme in schools can help in meeting our students need and problem. Expecting guidance programmes organised by each and every school of our country will prove a fallacy. Since the meagre resources of our country can ill afford it. So the responsibility to take care the needs and problems of the students and to provide guidance services is vested on the teachers when there is lack of specialists in guidance services in school.

In order to meet the challenges ahead, the Teacher Education College Programme includes Guidance and counselling as an area of specialization where the student teachers are provided the necessary skills to carry out the work of Guidance. These specialization areas are included both in pre-service as well as in inservice programmes. Pre Service Teacher Education programme (B.Ed.) is being carried by Banasthali Vidyapith under the Faculty of Education.

Guidance and Counselling is included as an area of specialisation both at M.Ed. as well as B.Ed. level. In order to make the student teacher competent to provide guidance services to their pupils, there is an opportunity for them to gain practical experience. Practical component of the Educational Guidance and Counselling at B.Ed. level includes a Guidance programme carried out by student teachers, where an attempt is made to fulfill the guidance requirements of school students. The programme is open for all kinds of problems which the school students are facing. Neither the students are bounded to disclose their identity nor they have to approach the B.Ed. student teachers. Rather, they have to write their problems in a piece of paper and submit in the question box set up at the Faculty of Education. The remedial solutions are provided by the students teachers, after referring it to various resources, and are displayed at Guidance corner.

Many researches based on guidance programme have been done. On one hand it covered areas like effect of the guidance programme upon the academic achievement of students, upon their study habits, upon their writing skills, improving their self concept, improving their career maturity and effects on school related behaviour of the students.

Mowji, M.N. (1983); An investigation into the educational and vocational problems of higher secondary students of Greater Bombay, Ph.D. Edu., Bom. U. The objectives of the study were to investigate the nature, degree and extent of the problem, both educational and vocational of the junior college students. The method employed was the normative survey method. The sample consisted of 1800 pupils of XI and XII standards out of which 623 were girls, selected from 15 co-educational secondary and higher secondary schools. The data was collected through a questionnaire, discussion with students, interviews with school and college principals, interviews and discussions with different subject teachers of standard XI and XII and data was analysed using percentages and coefficient of correlation. It was found that junior college students faced educational and vocational problems. These difficulties were mainly due to absence of guidance.

Singh, S. (1985); Guidance needs of children living in Destitute homes in Uttar Pradesh, BHU (NECRT Financed) The objectives of the study were to find out the needs of children living in destitute homes and to prepare a guidance programme for these children. The sample consisted of 201 girls and 209 boys living in 25 destitute homes of Uttar Pradesh, Almost all children studying in classes VI, VII and VIII were selected. Each child was given two tests, one questionnaire and a blank. The superintendents of destitute homes were asked to provide information about children with the help of a Guidance needs Questionnaire and a Destitute home schedule. Even Class teachers were approached to fill the Guidance needs questionnaire. The major findings were that the basic requirements of life was not adequately met in nearly half of the destitute homes.

Tripathi, Rekha, H. (1986); Determination of various Guidance Needs of the pupils of secondary and higher secondary schools, Ph.D. Psy., Guj.U. The investigation was undertaken to determine various guidance needs of the pupils of secondary and higher secondary schools and to observe the relationship between these guidance needs and some variables such as sex, grade, birth order, parents educational level, size of the family and type of school. Pupil problem checklist was developed consisting of 240 items having nine different areas (physical health, familial, social, sexual, personality, educational, financial, future

life and vocational needs, religious needs), sample consisted of 720 pupils chosen from 24 schools situated in different areas of metropolitan Ahmedabad. T-test and one-way analysis of variance were applied. Major findings were that a significant relationship exists between grades of pupils and social, personality, educational, financial, vocational and religious needs. Some of the problems which needed urgent attention were teachers lack of knowledge, their misbehaviour with pupils, difficulties in the subjects of mathematics and Sanskrit, defective teaching methods.

Sirohi, M.S. (1991); Field assessment study of guidance inputs in minorities schools, Independent Study. NCERT. Objectives of the study were to assess the extent of utilisation of career guidance inputs provided by the NCERT to the selected minorities schools. 31 teachers who attended the refresher course organized by the NCERT constituted the sample. They belonged to 7 states of the country. The tools used included a Performa designed to obtain information on two aspects of guidance related activities. The responses were analysed qualitatively. Analysis of the responses showed that teachers tried to organise guidance services in their schools.

Several other researches including the above covered areas like investigating into the educational and vocational problems of students through guidance programme. Attempts were made to explore guidance needs of children (living in destitute homes; schedule caste students; students studying in Navodaya and Govt. Schools; Pupils of secondary and higher secondary schools, both co-educational and girls/boys schools. For the above researches tools (questionnaire, checklist, schedules etc.) have been developed to collect the data. The researches have confined themselves to the questions that have been put up on their tools but no attempt has been made to explore the actual guidance needs of the students. Thus studies on the problems which the students have themselves put forward in a guidance programme are found negligible. Hence the present research is an attempt to work in this respected area.

Rationale of the Study

Future of every country lays whole solely on the shoulders of the new generation. But if the new generation is itself undergoing pressures and is facing problems it will affect their overall development and further will hamper the nation's progress as well. An individual seeks guidance from his parents, family members whenever required. But when an individual is studying in residential school, to whom should he seek guidance to problems arisen?

Banasthali Vidyapith is a residential institution where students who differ in many aspects reside together. Differences may be because students come from different states, their mother tongue is different, and their living style, eating habits etc. also differ. Hence because of differences many problems might be generated among the students. Individuals may make attempts to resolve the problems all by themselves. They may seek help of peer group, teachers and wardens too. While there is an opportunity to seek help from the Guidance Programme under the Faculty of Education, Banasthali Vidyapith.

When the researcher came to know about the Guidance programme of Faculty of Education, Banasthali Vidyapith, where the school students are free to express any problem. An

urge to know the problems which the residential students face, has made the researcher undertake this study. Since due to individual differences a problem may not be anything to one individual but to the other it may mean everything. It can be said that every problem may be specific to an individual. Thus the present study is an attempt to find out the kinds of educational problems of residential school students who are seeking guidance. These problems are being put up by the students under an open programme (without having any foundation on the kind and nature of the problem). Since the problems of the adolescents need careful study not only because they are important in day to day behaviour but also because they deeply affect their overall development. So it becomes imperative that all concerned should have a sound knowledge about the types of problems that often worry the adolescents. This research work will provide this valuable information about adolescents to those teachers and guidance workers who are ready to take up this huge responsibility.

Research Questions:

What are the various kinds of the raised educational problems?
What kind of educational problems are mostly faced by the school students?

Objectives: To analyse the educational problems of residential school students seeking guidance according to kinds of problem.

Operational Definition: *Residential School students:* In the present study the term residential school students refer to the students who were studying in Senior Secondary School (Sharda Mandir), Banasthali Vidyapith during year 2002-2003 and year 2004-2005

Hypothesis: Educational Problems of the students seeking guidance vary in kind.

Method of Study: Qualitative method of analysis is used in the study.

Population: The population of the study includes the students of Senior Secondary School, Banasthali Vidyapith.

Sample:

Through convenient sampling the data had been collected. The sample includes the questions raised by the students of Senior Secondary School, Banasthali Vidyapith, seeking guidance during the year 2002-03 and 2004-05.

Sources of Data: The sources were the records of the questions raised by the students seeking guidance during year 2002-03 and 2004-05. These records were maintained in the faculty of Education, Banasthali Vidyapith.

Nature of Data: The data collected was qualitative in nature.

Finding of the Study:

The following are the findings of the study.

The main educational problems identified are problems in selection of a subject for a particular vocation, preparing for an examination, ways to study/ study habits, learning difficulty, lack of concentration, improvement in a subject, fear of examination, rules and regulations of institution,

non availability of a particular subject, keenness to know about subject combinations for various streams, keenness to know about availability of various subjects in different schools and subject content based. The table below shows the frequency of the kinds of educational problems raised in the two years i.e. 2002-2003 and 2004-2005.

Table 01

Frequency Distribution of Educational (E) Problems of residential school Students

S.N.	Sub Areas	Frequency		
		Year 2002-2003	Year 2004-2005	Total
E ₁	<i>Selection of subject/s for a vocation</i>	11	-	11
E ₂	<i>Preparation for examination</i>	05	02	07
E ₃	<i>Way of study/study habits</i>	07	07	14
E ₄	<i>Learning difficulty</i>	11	05	16
E ₅	<i>Lack of concentration</i>	03	08	11
E ₆	<i>Improvement in a subject</i>	09	02	11
E ₇	<i>Fear of examination</i>	04	02	06
E ₈	<i>Rules and regulation of the educational institution</i>	04	-	04
E ₉	<i>Non availability of a subject</i>	02	02	04
E ₁₀	<i>Subject combination for various streams</i>	01	-	01
E ₁₁	<i>Keenness to know about the availability of particular subject in different schools</i>	01	-	01
E ₁₂	<i>Subject content based</i>	30	02	32
	Total	88	30	118

Most of the students face educational problems related to subject content. Students find various queries in General Science, General Knowledge and English. When queries in subject content are not satisfied in the class such problems arise among the students. The reasons behind for unsatisfaction or unfulfillment of queries may be due to lack of initiativeness of the learner to ask questions in the class (due to shyness). Focus in the classroom is on the syllabus only.

Further it was observed that students face problems related to selection of subjects for a vocation, which reveals that the students are career conscious. Not only the students are pursuing the education but also they are curious about their vocation. Hence they want to study those subjects which will help them in achieving their career.

It can be further said that the students have realised their learning difficulties and through these problems they have made an attempt to overcome such difficulties. Students also face learning difficulties in various subjects especially in English, Maths and Science. Students face

educational problem related to choice of subject combination for various streams. Especially when the students are opting for a new stream such as commerce. Residential students often face problems related to the rules and regulations of the educational institution including hostel also. Subject preferences often lead to the generation of queries related to availability of particular subject in different schools.

Most of the students face problems relating to lack of concentration, which affects their studies and further leads to the problems of learning difficulty. On the other hand problems on study habits show an initiative on the part of student to eradicate/overcome the hindrance in studies by changing their study habits. The above problems show that the students have identified their own deficiencies, for which they have made an attempt to overcome it by seeking guidance.

Educational implications:

1) The present study will help teachers in -

- Identifying students problems. It would help subject teachers in identifying the students who are weak in their respective subject and thus would be able to take measures for it.
- Motivating their students to raise their problems in front of them (teachers). Further it will also help them to be willing in answering the queries of their students regardless of their course content.

2) This study will help school management in -

- Arranging guidance services for the various kinds of educational problems which the students face.
- Understanding the students and thereby creating a warm- welcome atmosphere in school where student can put their words before any school authority without any hesitation.
- Making arrangements for guest lecturers, specialists according to student's problems.

3) This study will help parents in -

- Understanding the problems of their wards and would help them in creating a harmonious relationship with their children.
- Understanding their wards better and thus they will be able to accept and appreciate their child's preferences.

4) The study would be helpful to the counsellors in understanding the problems of the students. Even though students don't approach them due to hesitation, they would be able to identify the problems of students and provide timely needed guidance.

6) The study would be useful to the students since they would be able to understand their problems more deeply and thus self initiation to solve it would be encouraged.

- 7) **The teacher education training colleges** would be able to enrich their course content in Guidance and Counselling (the area of specialisation). As they would come to know about the actual educational problems of the residential school students

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CONNECTEDNESS AND LIFE SATISFACTION AMONG COLLEGE STUDENTS

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Abstract

Spirituality is a complex multidimensional concept. It is concerned with a person's awareness of the existence and experience of inner feelings and beliefs, which give purpose, meaning and value to life. Spirituality can also be viewed as a connectedness to yourself, to others, to nature, or to a higher power. Spirituality is personal, but it is also rooted in being connected with others and with the world around you. This connection can facilitate you finding "your place in the world." Connectedness is a sense of being a part of something larger than oneself. Different forms of connectedness are possible: familial, historical, social, institutional/organizational, informational (ideas), religious/transcendent. The present research defines spirituality as one's striving for and experience of connectedness with others, connectedness with nature and connectedness with the transcendent. It thus focuses on three forms of connectedness: social connectedness, transcendental connectedness, and connectedness to nature. Research has found that higher levels of spirituality have been related to life satisfaction and psychological well-being. This study examined the relationship between connectedness and life satisfaction. 50 students from Government College of Arts, Science and Commerce, Khandola, Marcela – Goa were administered the Aspires Spiritual Transcendence Scale (Piedmont, 2004), the Revised Social Connectedness Scale (Lee & Robbins, 1998), the Connectedness to Nature Scale (Mayer and Frantz, 2004), and the Satisfaction with Life Scale (Diener et. al., 1985). Results indicated a positive correlation between social connectedness and life satisfaction. No significant gender differences were found in connectedness as well as life satisfaction.

Introduction

Spirituality can mean many things in popular usage, and is often understood differently by different people. In general, the term appears to denote approaches to discovering, experiencing, and living out the implications of an authentic human life (Muldoon and King, 1995).

Meezenbroek and colleagues (2010) developed a definition of spirituality that is multi-dimensional and comprised of the connectedness a person experiences with self, others, nature, and the transcendent.

Spirituality as 'Connectedness'

Various studies have used the construct of spirituality as a form of *connectedness* and examined its impact on health factors (Kapusinski and Masters, 2010). Connectedness is a sense of being a part of something larger than oneself. It is a sense of belonging, or a sense of accompaniment. It is the force that urges us to ally, to affiliate, to enter into mutual relationships, to take strength and

to grow through cooperative behavior. Connectedness with others and with nature is related to compassion, caring, gratitude and wonder. Connectedness with the transcendent includes connectedness with something or someone beyond the human level, such as the universe, transcendent reality, a higher power or God.

The present research defines spirituality as one's striving for and experience of connectedness with others, connectedness with nature and connectedness with the transcendent.

It thus focuses on three forms of connectedness: social connectedness, transcendental connectedness, and connectedness to nature. It also attempts to determine whether life satisfaction is influenced by them. A brief understanding of these three forms of connectedness is given below:

Social Connectedness

Social connectedness is an internal sense of belonging and having a close relationship with the social world. It refers to the relationships people have with others and the benefits these relationships can bring to the individual as well as to society. It includes relationships with family, friends, colleagues and neighbors, as well as connections people make through paid work, sport and other leisure activities, or through voluntary work or community service. People with high social connectedness typically feel close to other people, easily identify with others, perceive others as friendly and approachable, and commonly participate in social groups and activities. In contrast, people with low connectedness experience feelings of loneliness, anxiety, jealousy, anger, depression, and low self-esteem. They tend to feel like "outsiders," feel misunderstood by others, are detached from society, and have difficulty relating to the social world. While these types of people are typically able to develop relationships with groups, they often lack a deep connection within themselves and with others (Lee, Draper & Lee, 2001). Connectedness is an important aspect of life. The ability to, and action of, connecting with others gives people a "social lens" with which to perceive their world, and a support system to aid them when needed. Social integration helps us define our place and role in society and our perception of this leads to many of our behaviors and beliefs.

Transcendental Connectedness

Transcendental connectedness is defined as the connection with one's spirituality. This is not the same as *religiosity* which is the beliefs, rituals, and practices of an institutional nature. Rather, *transcendence* is an aspect of personality, and is more concerned with one's personal relationship with a power such as the universe or God. People with high transcendence are able to recognize the existence of a larger context for meaning. Transcendence includes a wide range of beliefs, including structured religious practices and basic personal beliefs about daily living (Culliford, 2002). Thus, transcendental connectedness is the connection between a person and his or her spiritual beliefs.

Connectedness to Nature

Connectedness to nature has been discussed by Schultz (2002) as 'the extent to which an individual includes nature within his/her cognitive representation of self'. Engagement with nature, through both direct sensory exposure and a sense of connectedness, has been shown to have a positive effect on psychological health. Mayer and Frantz (2004) found that nature exposure and connectedness to nature were positively associated with psychological wellbeing and greater reported spirituality. Spirituality can be an important aspect of one's experience of nature and, as a consequence, the positive effects derived from it. Mayer and Frantz (2004) had people fill out questionnaires with some questions pertaining to the connectedness of nature scale, and some questions pertaining to a life satisfaction measure. They found that the connectedness to nature measure was positively correlated with life satisfaction. One possible interpretation of this finding is that feeling connected to nature makes us more satisfied with life. Feeling more

connected with nature may foster a more positive self-image. For example, feeling connected with nature may make us feel like a better-rounded person. Moreover, feeling more connected with nature may increase our perceived purpose in life.

Spirituality and Life Satisfaction

Life satisfaction can be defined as the cognitive component of subjective well-being (Martikainen, 2008). According to Beutell (2006) it is believed that life satisfaction is related to better physical, and mental health, longevity, and other outcomes that are considered positive in nature. Veenhoven (1991) conceived of Life Satisfaction as “the degree to which an individual judges the overall quality of his life-as-a-whole favourably.”

Research with adults has found that higher levels of spirituality or religiosity have been related to life satisfaction, psychological well-being, positive mood, feelings of purpose, gratitude, lower cortisol stress responses, lower blood pressure, and lower mortality rates (Fehring, Brennan, & Keller, 1987; Leak, DeNever, and Greteman, 2007; McCullough, Emmons, and Tsang, 2002; Tartaro, Luecken, and Gunn, 2005). Care must be taken in interpreting these results, however, as spirituality and religiosity were measured and defined in differing ways across studies. Nevertheless, there appears to be evidence that spirituality and/or religiosity relate to increased well-being and health in adults.

Among adolescents, spirituality was found to be positively related to health, leadership, school success, helping behavior, hope, love, purpose, self-esteem, and life satisfaction (Benson et al., 2006; Kelley and Miller, 2007; Markstrom, 1999).

According to Piedmont (2004) increasing a person’s spiritual connectedness could provide insight and an open door for how to live an emotionally fulfilling life with a greater sense of control.

Jose, Ryan and Pryor (2012) carried out a longitudinal study to investigate whether or not social connectedness predicts psychological well-being over time. Results indicated that global connectedness (i.e., connectedness combined across the domains of family, school, peers, and neighborhood) predicted well-being. Youth who reported higher levels of social connectedness at one point in time would subsequently report higher well-being (i.e., life satisfaction, confidence, positive affect, and aspirations).

Numerous studies concluded that good and close relationships with other people – partners and spouses, parents and children, kinsmen, friends, neighbours and workmates – area major source of life satisfaction (Haller and Hadler, 2006).

According to Antonucci, Lansford & Akiyama (2001) interacting with others seems to make people more integrated in society – i.e. more connected to family, friends, and community. They say that this social connectedness and integration improves one’s health mentally as well as physically.

Methodology

This study examined the relationship between the three forms of connectedness and life satisfaction.

Objectives of the study were as follows:

- To study the forms of connectedness (Social Connectedness, Connectedness with Nature, and Transcendental Connectedness) among college students.
- To examine the influence of gender on connectedness.
- To study the Life Satisfaction experienced by college students.
- To examine the influence of gender on Life Satisfaction.

- To examine the relationship between connectedness (Social Connectedness, Connectedness with Nature, and Transcendental Connectedness) and Life Satisfaction.

The following *hypotheses* were formulated and tested:

- Gender has an influence on Connectedness.
- Gender has an influence on Life Satisfaction.
- Life Satisfaction is positively correlated to connectedness (Social Connectedness, Connectedness with Nature, and Transcendental Connectedness).

Sample of the research

A sample of 67 college going adolescents (22 boys and 45 girls) was selected using purposive sampling technique on the availability as well as on the willingness to participate in the study. These were students from Government College of Arts, Science and Commerce, Khandola, Marcela – Goa. All the respondents resided in rural areas. They answered the Aspires Spiritual Transcendence Scale (Piedmont, 2004), the Revised Social Connectedness Scale (Lee and Robbins, 1998), the Connectedness to Nature Scale (Mayer and Frantz, 2004), and the Satisfaction with Life Scale (Diener et. al., 1985).

Instruments

- The ***Aspires Spiritual Transcendence Scale*** (ASTS) measures spiritual connectedness. Developed by Ralph L. Piedmont (2004), it has 9 items on the short form (used in this study), and uses a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The scale asks questions such as, “Although individual people may be difficult, I feel an emotional bond with all of humanity,” and “In the quiet of my prayers and/or meditations, I find a sense of wholeness.” The total score yields an overall spiritual transcendence score for each individual. Items 5 and 6 are reverse scored.
- The ***Revised Social Connectedness Scale*** (RSCS) measures social connectedness (Lee and Robbins, 1998). This scale measures the degree of interpersonal closeness that is experienced between an individual and his or her social network, as well as the degree of difficulty in maintaining this sense of closeness. The scale has 20 items, using a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). Higher scores indicate a strong connection between the individual and their social network. This scale has high internal item reliability with an alpha coefficient of .92, it also has “substantial validity” (1998). Items 3, 6, 7, 9, 11, 13, 15, 17, 18 and 20 are reverse scored.
- Developed by Mayer and Frantz (2004), the ***Connectedness to Nature Scale*** (CNS) is a measure designed to tap an individual’s affective, experiential connection to nature. The CNS follows from Leopold’s contention that people need to feel they are part of the broader natural world if they are to effectively address environmental issues. For Leopold, this meant understanding the extent to which people experientially view themselves as egalitarian members of the broader natural community; feel a sense of kinship with it; view themselves as belonging to the natural world as much as it belongs to them; and view their welfare as related to the welfare of the natural world. The scale consists of 14 items designed to measure the extent to which participants generally feel a part of the natural world. Participants respond on a 5-point Likert-type scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). The reliability of the scale was .84. Items 4, 12, and 14 are reversed scored.
- The ***Satisfaction with Life Scale*** (SWLS) developed by Diener et. al. (1985) is narrowly focused to assess global life satisfaction. It has shown to have favorable psychometric properties, including high internal consistency and high temporal reliability (.82). Scores on the SWLS correlate moderately to highly with other measures of subjective well-

being, and correlate predictably with specific personality characteristics. It appears that individuals who are satisfied with their lives are in general well adjusted and free from psychopathology (Diener et. al., 1985). The scale has 5 items, using a 7-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*).

Discussion

Curiosity regarding the importance ascribed by college students to the various forms of connectedness prompted the present research. The research also examined the relationship between connectedness and life satisfaction.

The first objective of the study was to study the forms of connectedness (Social Connectedness, Connectedness with Nature, and Transcendental Connectedness) among college students.

As the three scales measuring connectedness each consist of a different number of items, their scores cannot be compared per se. Therefore, the score obtained on each scale was divided by the number of items in that scale. This provided comparable scores. The scores obtained by boys and girls on the three forms of connectedness are presented in Table 1.

The rankings for boys and girls are similar. Both genders showed highest mean scores on Transcendental Connectedness, followed by Connectedness with Nature, and Social Connectedness, in that order.

Transcendental Connectedness and Connectedness with Nature rank first and second perhaps because belief in a higher power rooted in religion and nature is inherent in the psyche of the respondents. Consequently, these two forms of connectedness are predominant.

Table 1: Comparable Mean Scores on Connectedness

	Boys		Girls	
	Comparable Means	Ranks	Comparable Means	Ranks
Social Connectedness (20 items)	74.55	3	149.4	3
Connectedness with Nature (14 items)	75.14	2	154.2	2
Transcendental Connectedness (9 items)	76.89	1	157.8	1

It was hypothesized that “Gender has an influence on Connectedness”. In order to test this hypothesis, the mean scores and the standard deviations of boys and girls were calculated, which are shown in Table 2.

It is observed that for each form of connectedness, the mean scores of boys and girls were similar. On Transcendental Connectedness and Connectedness with Nature, girls scored marginally higher than boys. On Social Connectedness, boys scored marginally higher than girls.

A t-test was then conducted to find out whether there was a significant difference in the means. The values yielded were not significant at 0.05 level. Thus, we can conclude that there was no significant difference in the mean scores obtained by boys and girls on the three forms of connectedness. The hypothesis “Gender has an influence on Connectedness” is not accepted.

Table 2: Gender-wise comparison of Connectedness Mean Scores

	Gender	N	Std. Deviation	Means	t-values
Social Connectedness	Boys	22	8.035	67.77	.735
	Girls	45	6.730	66.40	
Connectedness with Nature	Boys	22	5.114	47.82	-.124
	Girls	45	4.892	47.98	
Transcendental Connectedness	Boys	22	3.961	31.45	-.133
	Girls	45	3.334	31.58	

The boys and girls in the sample studied share similar social settings and spiritual indoctrination. Naturally, there's no significant difference in their connectedness with the transcendent, with nature and with others.

Another objective of the present research was to study the Life Satisfaction experienced by college students. The scores obtained by boys and girls on the *Satisfaction With Life Scale* are presented in Table 3.

Table 3: Mean Scores on the *Satisfaction With Life Scale*

	Boys (N=22)	Girls (N=45)	Total Sample (N=67)
Total Score	549	1034	1583
Mean Score	24.95	22.98	23.63

Mean scores indicate that boys have scored marginally higher on Life Satisfaction than have girls. In order to find out whether this difference in mean scores is significant, a t-test was conducted, the results of which are presented in Table 4. It was hypothesized that "Gender has an influence on Life Satisfaction".

Table 4: Gender-wise comparison of Life Satisfaction mean scores

	Gender	N	Std. Deviation	Means	t-values
Life Satisfaction	Male	22	4.248	24.95	1.549
	Female	45	5.190	22.98	

The t-value obtained is not significant at 0.05 level. Thus, no significant difference is found in the Life Satisfaction mean scores obtained by boys and girls. The hypothesis “Gender has an influence on Life Satisfaction” is not accepted.

Both genders appear to experience similar levels of life satisfaction. This could be an outcome of sharing comparable socioeconomic backgrounds, education and life exposure.

A prime objective of this research was to examine the relationship between connectedness (Social Connectedness, Connectedness with Nature, and Transcendental Connectedness) and Life Satisfaction. Accordingly, the following hypothesis was formulated and tested: “Life Satisfaction is positively correlated to connectedness”.

Correlational analyses of Connectedness scores and scores obtained on Life Satisfaction were conducted. The results are displayed in Table 5.

Table 5: Correlations between forms of Connectedness and Life Satisfaction

	Life Satisfaction	Spiritual Connectedness	Social Connectedness	Connectedness with Nature
Life Satisfaction	1	.202	.525(**)	-.050
Transcendental Connectedness		1	.109	.058
Social Connectedness			1	.095
Connectedness with Nature				1

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

A significant positive correlation was obtained between Life satisfaction and Social Connectedness. This indicates that more the connectedness with significant others, higher the life

satisfaction experienced. This is in accordance with the findings of earlier researchers (Jose, Ryan and Pryor, 2012; Haller and Hadler, 2006).

Social connectedness being a source of life satisfaction seems natural in case of college going youth as, by virtue of their age, they are socially inclined and derive satisfaction from their social engagements. These relationships and connections can be a source of enjoyment and support. They help youngsters to feel they belong and have a part to play in society.

The other correlations did not yield significant values.

Conclusion

Spirituality is a complex multidimensional concept. It is concerned with a person's awareness of the existence and experience of a higher power, whether rooted in a religion, nature, or some kind of unknown essence, which gives purpose, meaning and value to life. Spirituality helps individuals to live at peace with themselves, to care for others, and to live in harmony with the environment. Spirituality involves connectedness. Spirituality is personal, but it is also rooted in being connected with others and with the world around you. This connection can facilitate you finding "your place in the world."

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DISABILITIES IN PROBLEM SOLVING OF THE STUDENTS IN PHYSICAL SCIENCE DIAGNOSIS AND PREVENTION

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INTRODUCTION :

In a rapidly changing country it becomes imperative that people develop the capacity to adapt to new situations, to make discriminations, think critically and creatively, and make sound judgements. The day to day ability to recognize and solve practical problems and to handle intellectual problems have become major goals of schooling. True education is not mere transmission of accumulated materials, but rather a process of assessing the development of certain natural tendencies of the child – the tendencies to initiate inquiries about new dimensions of facts. The present educational objectives demand learning to search effectively including learning to identify a problems, formulate hypothesis, gather data, analyse and evaluate evidence, and draw valid conclusions.

The problem-solving ability is the result of innate potentialities nurtured in favourable environment. So the students reading in schools possess these propensities and probabilities which must be cultivated by providing suitable stimulated teaching atmosphere. Science teaching to-day suffers much for not having these types of opportunities. It is generally felt that due to absence of right type of teaching, disability in problem-solving grows on the way of learning the subject. It was the expectation of the present investigator that problem-solving ability could be developed in the students through proper teaching. Hence the researcher took up the research project to fulfill the following purposes.

OBJECTIVES :

- i) To diagnose the extent of disabilities of the students in problem-solving in science with the help of a specially designed Diagnostic Tool;
- ii) To identify the extent and the nature of disabilities and list out the symptoms caused by the disabilities shown in the Diagnostic Tool;
- iii) To take up preventive measures with the improved instructional materials tried out on the experimental group after controlling the independent variables identified;
- iv) To determine the significance of difference between the achievement of the controlled and the experimental groups by following co-variance model.

HYPOTHESES :

- H₁ : The experimental groups taught through dynamic methods and techniques would learn significantly more than the controlled groups taught by conventional method.
- H₂ : The experimental groups would show more interest in the problem-solving tasks than the controlled groups.
- H₃ : Learning through dynamic methods and techniques of solving problems would cause more prolonged retention than that by the conventional method.

METHODOLOGY OF THE STUDY :

The present investigation was conducted under two parts. The first part was the diagnosis of the patterns of problem solving disabilities of the students (just promoted to class X) in the content chosen. The second part of this investigation consisted of the preventive measures adopted by the investigator to control the development of problem solving disabilities in these areas by better training with the help of dynamic methods and techniques.

SAMPLE :

Pupils of different secondary schools under West Bengal Board of Secondary Education were taken as sample. For the first part of the study 400 students (both boys and girls) just promoted to class X of urban, semi-urban and rural areas were selected. For the Second part of the study 230 students of class IX (both boys and girls) were selected.

TOOLS :

The study was conducted with the help of Diagnostic test (self made) and Structured Individual Interview (self made). The product moment co-efficient of co-rrrelation (r) between the results of Test and Re-test was found to be .94 which was significant at the .01 level. Even though the Test was sound in respect to content validity, this was validated against Structured individual interviews considered as outside criterion. The co-efficient of co-rrrelation between test scores and individual interview scores was found to be .95 which was significant at .01 level. The experimenter used the Standardized Creativity (verbal) Test Prepared by Biswas of the Department of Education, Kalyani University, West Bengal as pre-test for all the groups under experiment.

CONTENT AREA :

Two units of Physical Science Viz. 'change of state and light' were selected as content areas in this investigation. These content areas were included in the approved syllabus of the Physical Science for class IX by D.P.I. of West Bengal. The investigator identified seven dimensions of problem-solving ability. Under each learning point of the content, test items were framed to evaluate different dimensions of Problem-solving ability.

STATISTICAL TECHNIQUES :

The Data in relation to the Measures adopted for the prevention of Problem-solving disabilities was analysed by using co-variance model.

RESULTS AND DISCUSSION :

TABLE – 1
The Extent of reduced MXS variance and adjusted within classes variance.

	df	V_x^2	V_{xy}	V_y^2	Adjusted SS	Reduced SS	Variance
MXS	3	454.44	341.88	320.63		287.27	95.76
Within Classes	222	72315.56	3490.57	5234.91	5066.43		22.93
MXS + Within Classes		72770.00	3832.45	5555.54	5353.70	F = 4.18*	

*Significant at the .01 level.

TABLE – 2
The Extent of reduced M-Variance and Adjusted MXS variance.

	df	V_x^2	V_{xy}	V_y^2	Adjusted SS	Reduced SS	Variance
M	1	2552.73	-7254.54	20665.32		5032.21	5032.21
MXS (Error)	3	454.44	341.88	320.63	63.43		31.72
M + MXS		3007.17	-6912.66	20985.95	5095.64	F=158.64*	

*Significant at the .01 level.

DISCUSSION :

Diagnosis of problem solving disabilities of the students had been considered by the present investigator as the indispensable pre-requisite for taking up any type of model teaching. She felt that the deficit-oriented teaching was necessarily superior to ability oriented teaching. Because the former would take the stock of the student's ability prior to receiving new knowledge through teaching.

The patterns of problem solving disabilities against each individual were recorded by the investigator in Students performance chart. After analyzing and classifying the nature of disabilities in problem solving 115 major patterns of disabilities were identified. After the identification of the major patterns of disabilities, the consequent step was to employ preventive measures which might prevent from or at least minimise the development of problem-solving disabilities. In order to fulfill this intention, the investigator started her experiments with the controlled and experimental groups in each of the four schools. The results obtained through the experiment were analysed statistically with the help of analysis of co-variance which governed the investigator to draw the following conclusions.

The F-ratio between reduced methods variance and the adjusted MXS (Error) variance was 158.64 and was significant at the .01 level (Table – 2).

Hence the hypothesis (H_1) was retained on the ground that the experimental groups taught through the dynamic method and techniques had earned significantly more than the controlled groups taught through the conventional method.

- 1) The following facts revealed that the students treated by dynamic methods and techniques had exhibited greater amount of interest.
 - a) More regular class attendance
 - b) More interest in class work and home work
 - c) More interest in outside class activities like preparation of scientific models for their school exhibition and for the work education purpose.
 - d) More interest in applying problem solving ability on other school subjects like Life science, Mathematics etc. This made the fact evident that the students were highly motivated.

The above evidence made it clear that the students were very much interested in dynamic methods and techniques. This proved the retention of the second Hypothesis (H_2).

It was evident from the answer scripts of the students of experimental and controlled groups that the students of the experimental groups showed better results and better retention about the concepts learned through the dynamic methods and techniques. Thus the Hypothesis (H_3) was retained.

It was clear from this experiment that if the clusters of problem-solving disabilities were properly identified, it would be possible to check or at least reduce the development of Problem Solving disabilities. The investigator's task was not how to teach problem solving but rather how to teach content by the method of Problem solving. This experiment would claim to show new light to the science teachers.

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KINESTHETIC SENSE AND CHILDREN

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Abstract:

Kinesthetic sense plays vital role for meaningful execution of the limbs which can determine the sports movements. The purpose of the study was to observe kinesthetic sense of different age groups, intragroup analysis and age specific characteristics. The study was conducted on 6, 7 and 8years of male students only. A total of 180 subjects were selected for the present study. The subjects were randomly selected from two primary schools of West Bengal. 'Distance Perception Jump' was conducted to collect the data of kinesthetic sense. Result shows that senior students were better in relation to kinesthetic sense.

Key words: Kinesthetic sense, children.

INTRODUCTION

Kinesthetic sense and children:

Under most conditions we are consciously aware of the position of the various parts of our limbs relative to each other and whether they are moving or still. This awareness has been given, among others, the names of "kinaesthesia" and "position sense." These two terms are usually treated as synonymous and both taken to cover all aspects of the awareness, whether static or dynamic (Goodwin, McCloskey and Matthews, 1972).

A factor that is very much involved in movement and specially in learning specific skills is kinesthetic sense. Kinesthesia may be defined as the sense that gives the individual an awareness of position of the body or parts of the body as it moves through space (Barrow and McGee, 1979).

As a result of this information received from the senses, the individual is able to control his movements more accurately. This position sense is found in receptors located in the muscles, fascia of muscles, tendons, and joints. These receptors act as feedback mechanisms for making the individual aware of the intensity of stretch or contraction of the muscle, or the stress placed on the tendon, muscle fascia, or joint. With this information, the performer can tell with varying degrees of accuracy the position of the body and / or body part as it moves into space. This awareness of movement position is an important factor in learning a movement. It operates to a degree each time the body or part of it is called upon to change the forces of gravity in sports exercise, and daily tasks. It is significantly related to balance and plays a dynamic part in establishing and maintaining a pattern of good posture. In the highly complex skill encountered diving, gymnastics, trampolining and some forms of dance, this sense enables the performer to distinguish his position in space with a degree of accuracy and consistency. As a result of this awareness the performer can acquire the ability to execute the designated movement more accurately and effectively.

The term proprioceptor is commonly used as kinesthetic perception of kinesthetic sense. It is the ability to perceive the position, effect, and movement of parts of the body during muscular action is sometimes referred to as the sixth sense. In reality, we have more than just sixth sense; in fact kinesthetic sense could be considered as several senses with in itself. The term proprioceptive sense is also used to refer this sense. The sources of proprioceptive of kinesthetic perception are presumably located in the joints, muscles & tendons (Nelson & Jonson, 1988).

Purposes of the study:

The purposes of the present study were as follows:

1. To observe kinesthetic sense of three different age groups of children.
2. Intragroup analysis of this quality will be conducted to find age specific characteristics, if any.

METHODS

Subjects: For the present study the population was the school going children. 180(One hundred eighty) male students of age six, seven and eight years from two general primary schools of Alipurduar municipality which is in the district of Jalpaiguri of West Bengal were selected for the study. Subjects were chosen randomly on the basis of their birth certificate. Two schools were selected of the town where the syllabus and co- curricular activity were same. All of the subjects were non-vegetarian and non-residential (day's scholar). They were all from low middle class family. Each age group (6 years, 7 years and 8 years) consists of 60 subjects.

For the present study physical parameters and kinesthetic sense were selected as criteria measured. Data were selected from three different age groups. The selected physical parameters were height and weight. Chronological age was considered as indicator of three age groups for this study.

Kinesthetic sense is the movement sense. It simply refers to an awareness of changes in momentum, balance, pressure and body position in general. It tells us all about how we are moving our bodies. Kinesthetic intelligence includes control of the bodily motions. 'Distance perception jump' was used to measured kinesthetic sense. All the above variables were the criteria for measurement in the present investigation.

Procedure for data analysis:

Collected data have been analyzed by using appropriate statistical techniques. Central tendency was judged by calculating mean and variability was assessed by standard deviation. Standard Error of mean and Critical difference value was calculated to observe the differences among the three groups.

RESULT AND DISCUSSION

Physical parameters: Age specific physical parameters were height and weight of the subjects. The mean values of height of all the groups of subjects have been presented in table-1.

Height: The mean values of height of all the groups of subjects have been presented in table-1.

Table-1. Mean values of height of the subjects

Age	N	Height(mts)	
		Mean	Sd
6 years	60	1.11	±0.05
7 years	60	1.14	±0.052
8 years	60	1.16	±0.054
SEm ()		0.007	
CD (P=0.05)		0.020	

It is seen from the table that the values of height of three groups were different. The mean difference of physical height of 7years and 6years was (1.14-1.11) 0.03 which was greater than the critical value (0.02). So this difference was statistically significant. On the other hand the mean difference between 8years and 7years was (1.16-1.14)0.02 which was same as the critical value (0.02). So this value was also statistically significant. The mean difference between 8years and 6years was (1.16-1.11) 0.05 which was also being greater than the critical value (0.02). So this can be said that the 8years children were taller than 7years and 6years and 7years children are taller than 6years of age group in respect of standing height.

Weight: The mean values of weight of all the groups of subjects have been presented in table-2.

Table-2 Mean values of weight of the subjects

Age	N	Weight(kg.)		
		Mean	Sd	
6 years	60	17.10	±1.50	
7 years	60	18.16	±1.88	
8 years	60	19.33	±2.16	
SEm ()		0.241		
CD (P=0.05)		0.673		

Table-2 shows that the values of the weight of three groups were also different. The mean difference of weight of 7years and 6years was (18.16-17.10) 1.06 which was greater than the critical value (0.673). So this difference between the groups was statistically significant. On the other hand the mean difference between 8years of and 7years was (19.33-18.16) 1.17 which was also greater than the critical value (0.673). So this value was also statistically significant. The mean difference between 8years and 6years of age group was (19.33-17.10) 2.23 which was also being greater than the critical value (0.673). Therefore, it may also be said that the 8years of children were heavier than 7years and 6years and 7years were also heavier than 6years of children in respect of their body weight.

Kinesthetic sense: The result of kinesthetic sense measured by distance perception jump of all three groups is presented in table- 3.

Table-3. Mean values of kinesthetic Sense of the subjects

Age	N	Mean	Sd
6years	60	28.59	5.28
7years	60	25.27	4.67
8years	60	23.13	3.85
SEm ()		0.60	
CD (P=0.05)		1.67	

Table-3 shows that in case of kinesthetic sense there were differences of mean values and standard divisions among the three groups. It is noted that in respect of kinesthetic sense lower the score was better for performance. The mean difference between age group of 7years and 6years (28.59-25.27) 3.23, was greater than the critical value (1.67). So the mean difference of kinesthetic sense was statistically significant. The mean difference between 8years and 7years of kinesthetic sense was (25.27- 23.13) 2.14. This mean difference was also greater than the critical value (1.67). So the difference of mean value of 8years and 7years was statistically significant. On the other hand the mean difference between 8years and 6years was (28.59-23.13) 5.46. This value was also greater than the critical value (1.67). So this can also be said that the mean difference between the age group of 8years and 6years was statistically significant in respect of kinesthetic sense. The 8years group of subjects was better than 7years and 6years and 7years group was better than the 6years of subjects in relation to kinesthetic sense.

CONCLUSION

On the basis of data, the following conclusions were drawn:

- Kinesthetic sense is related with the age of children.
- Senior children are better in relation to kinesthetic sense to junior.

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EFFECT OF SELECTED EXERCISES ON ENDURANCE OF RURAL AND URBAN GIRLS OF BA GENERAL PHYSICAL EDUCATION OF SANTIPUR COLLEGE

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Abstract

Endurance is an essential component of physical fitness. The purpose of the study is to test improvement of the endurance of rural and urban girls after 8 weeks selected exercise treatment. The subject was randomly selected, age group of 18–21 years. Total girls were 80. They were divided into two groups. One is control and another one is experimental. They were tested by Cooper's 12 minutes run and walk test. For statistical analysis 't' test was used and level of significant was determined at 0.05 level and 0.01 level.

Key Words : Endurance, Selected Exercise treatment, 18–21 years rural and urban college girl.

Introduction :

Physical exercises are principal means of training. Without physical exercises the sports training can not lead to improvement in sports performance. Physical exercises have a direct effect on performance capacity. Exercises are used to prevent injury to improve performance and psychological preparation for any kind of physical activity. Fitness can be described as a condition that helps us for better look, pleasant feel and do our best. According to Nixon – “Physical fitness refers to the organic capacity of the individual to perform the normal task of daily living without under tiredness or fatigue having reserves of strength and energy available to meet satisfactorily any emergency demands suddenly placed upon him”.

In this study, the cardiorespiratory endurance indicate that the distance covered by the subjects in 12 minutes run-walk test was considered as the score and it was recorded in meter.

(Mc. Cloy et. al. 1951).

Cardiorespiratory endurance involved with the aerobic exercise. Aerobic literally means with O₂ and refers to use of O₂ in muscles energy generating process. It is a fabulous workout that not only helps in maintaining some one fitness level, but also makes their heart stronger. These are distinct form of aerobics like cycling, biking, jogging, running, swimming, dancing etc. which help to changes of having diabetes and other diseases are largely reduced.

Methodology :

The total subjects of this study were 80 on BA General physical education girls of Santipur College, age group ranging 18–21 years of forty girls from rural areas and for same from urban areas had been randomly selected of the study.

a) Criteria Measured : The personal data age (year), height (cm.) and weight (kg) were measured by date of birth certificate, Stadiometer and weighing machine. Endurance was measured by Cooper's 12 minutes run and walk test, the total distance of which was measured by meter of each of them.

b) Practice Schedule : Period of treatments was 8 weeks and each group practiced three days in a week for a duration of one hour per day from 3.30 pm to 4.30 pm.

Chart 1 : Weekly Training Schedule

Day	Time	Duration	Procedure
Monday	3.30 pm.–3.45 p.m.	15 min.	Warm up with jogging, loosening exercises, striding, stretching, exercises, wind sprint.
	3.45 p.m.– 4.15 p.m.	30 min.	1) Walking – 600 m × 2 2) Run – 1000 m. × 2 3) Sit up – 50 times × 3 4) Pull up 10 times × 3
	4.15 p.m.– 4.30 p.m.	15 min.	Cooling down.
Wednesday	3.30 pm.– 3.45 p.m.	15 min.	Warm up with jogging, loosening exercise, striding stretching exercises, wind sprint
	3.45 p.m.– 4.15 p.m.	30 min.	1) Walking – 800 m × 2 2) Run – 1000 m. × 2 3) Run & Walking – 12 min. 4) Sit up – 50 times × 2
	4.15 p.m.– 4.30 p.m.	15 min.	Cooling down.
Friday	3.30 pm.– 3.45 p.m.	15 min.	Warm up with jogging, loosening exercise, striding stretching exercises, wind sprint
	3.45 p.m.– 4.15 p.m.	30 min.	1) Walking – 800 m × 3 2) Run – 1000 m. × 2 3) Run & Walking – 12 min. 4) Pull up – 10 times × 2 4) Sit up – 50 times × 2
	4.15 p.m.– 4.30 p.m.	15 min.	Cooling down

Result and Discussion :

Table 1 : Comparison of Endurance of Experimental Pre Test and Control Pre Test of 18–21 years rural and urban girls

	Variables	Expt. Pre test Mean ± SD	Control Pre test Mean ± SD	SE _D	Obtained 't' value
Rural	Girls	1743.50 ± 110.08	1730.50 ± 110.21	34.83	0.31 NS
Urban	Girls	1714.50 ± 106.60	1705.15 ± 103.02	37.80	0.28 NS

NS is Not Significant.

Table 1 showed that the mean ± SD score of endurance of 18–21 years expt. pre test and control pre test of rural girls group were 1743.50 ± 110.08 & 1730.50 ± 110.21 respectively. The mean ± SD score of endurance of 18–21 years expt. pre test and control Pre test of urban girls group were 1714.50 ± 106.60 & 1705.15 ± 103.02 respectively. The 't' value for both the groups were not significant.

Table 2 : Comparison of Endurance of Experimental Post Test and Control Post Test of 18–21 years rural and urban girls

	Variables	Expt. Post test Mean \pm SD	Control Post test Mean \pm SD	SE _D	Obtained 't' value
Rural	Girls	1858.00 \pm 138.15	1730.42 \pm 108.40	39.26	3.24**
Urban	Girls	1880.00 \pm 103.73	1808.28 \pm 129.60	37.11	1.93 NS

**Sig. at 0.01 level, NS is Not Significant.

It was observed from Table 2 that the mean \pm SD score of endurance of 18–21 years expt. post test and control post test of rural girls group were 1858.00 \pm 138.15 & 1730.42 \pm 108.40 respectively. The mean \pm SD score of endurance of 18–21 years expt. post test and control post test of urban girls group were 1880.00 \pm 103.73 & 1808.28 \pm 129.60 respectively. Rural girls group 't' value was 3.24. It was significant at 0.01 level. The t-value of urban girls was 1.93 which was not significant.

Table 3 : Comparison of Endurance of Experimental Pre test and Experimental Post test of 18–21 years rural and urban girls

	Variables	Expt. Pre test Mean \pm SD	Expt. Post test Mean \pm SD	SE _D	Obtained 't' value	Improvement Occurred
Rural	Girls	1743.50 \pm 110.08	1858.00 \pm 138.15	39.49	2.89**	6.56%
Urban	Girls	1714.50 \pm 106.60	1880.00 \pm 103.73	33.25	4.97**	9.65%

**Sig. at 0.01 level.

It was observed from Table 3 that the mean \pm SD score of endurance of 18–21 years expt. pre test and expt. post test of rural girls group were 1743.50 \pm 110.08 & 1858.00 \pm 138.15 respectively. The mean \pm SD score of endurance of 18–21 years expt. pre test and expt. post test of urban girls group were 1714.50 \pm 106.60 & 1880.00 \pm 103.73 respectively. The 't' values of rural girls group was 2.89 and that of urban girls was 4.26, both were significant at 0.01 level. Improvement occurred in rural girls was 6.56% and in urban girls was 9.65%.

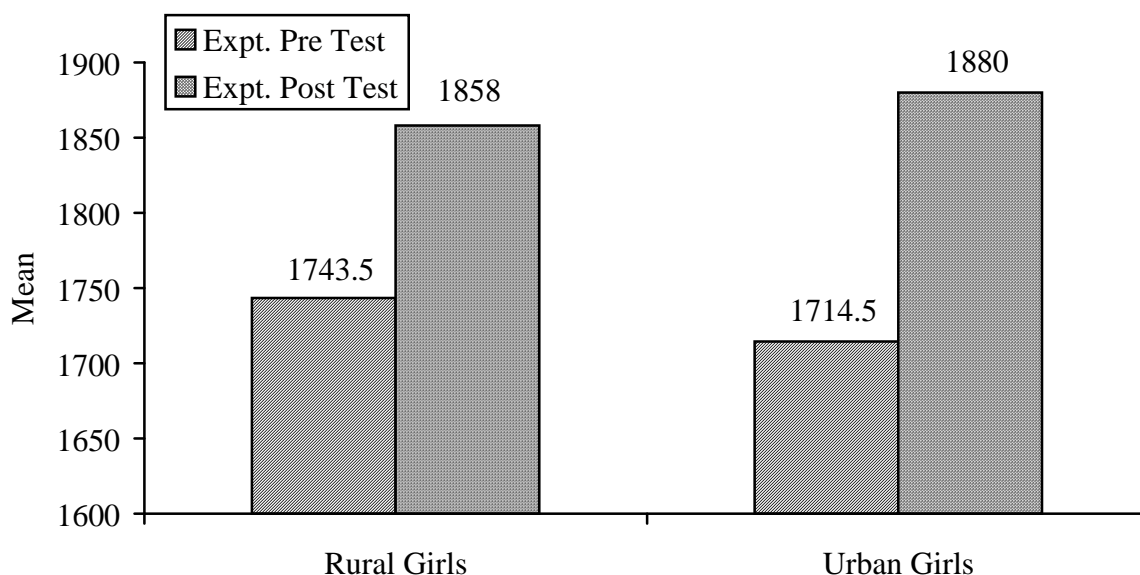


Fig. 1 : Mean Score of Experimental Pre Test and Post Test of Rural and Urban Girls**Table 4 : Comparison of Endurance of Experimental Post Test of 18–21 years rural vs. urban girls**

Variables	Expt. Post Test (Mean \pm SD)		SE _D	Obtained 't' value
	Rural	Urban		
Girls	1858.00 \pm 138.15	1880.00 \pm 103.73	38.62	0.56 NS

NS is Not Significant.

It was observed from Table 4 that the mean \pm SD score of endurance of 18–21 years rural expt. post test and urban girls were 1858.00 \pm 138.15 & 1880.00 \pm 103.73 respectively and t value was 0.56 which was not significant. It was indicated that mean score of 18–21 years rural girls were lower than that of urban girls which implies better endurance of urban girls than rural girls.

After eight weeks exercise programme endurance was increased of 18–21 years girls group. Reid et al. (1987), Gharote, M. L (1979), Cooper (1968), Barrik and Banerjee (1990) observed that after 6 weeks of conditioning programme, speed, endurance, strength, agility increased significantly.

Conclusion :

1. The endurance of 18–21 years rural and urban girls was improved through the participation in exercise programme.
2. The endurance of urban girls of 18–21 years was better than that of rural girls due to exercise treatment.

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CONSTRUCTIVE PARADIGMS FOR QUALITY TEACHER EDUCATION

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Abstract:

Teacher education is said to be a significant investment for bringing qualitative improvement in education. If a revolution in education has to be initiated, it is the teacher education which can be taken as a starting point. An efficient teacher education system helps to empower teachers and when the teachers are empowered it helps to empower the learners also. There is a dialectical process in teacher education. The student teacher is a learner in so far as under going teacher education programme is concerned. If education has to become an effective instrument of social change the teacher has to be an agent for this transformation. The education imparted should have relevance to the personal as well as social life and needs and aspirations of the people.

There should be association between the school curriculum and the teacher education curriculum. If the teacher education has to be relevant to the life, needs and aspirations of the children and the community to which they belong, it should integrate constructivist approach in its curriculum. Teacher trainee should get the basic understanding of constructive approach from teacher education system, then they can change from the traditional role of 'informer' or transmitter of knowledge to 'facilitator or guide'. Constructivism is a relatively new paradigm which focuses on subjective, contextual and pluralistic nature of knowledge. It calls for a change in the class room culture, attitudes, beliefs and practices. According to the changing roles of teacher, the teacher training institutes should train the student teachers to take up their responsibilities and perform the task successfully. The student teacher must be trained to act as facilitator who provides students with opportunities to test the adequacy of their current understanding. Hence the constructive approach helps to develop competent and creative teachers and through them a worth while generation of students.

Key words: Teacher education, constructivism, professional development, teacher's role, quality education.

"A teacher affects eternity: he can never tell where his influence stops."

Henry Adams

Introduction

Education plays a pivotal role in development of a Nation and quality of education largely depends upon the quality of teachers. So for the development of the country, it is very important to have good teachers and good teachers can be produced only through good system of teacher education.

India has one of the largest systems of teacher education in the world. Education of teachers is an important means to shape the destiny of the country. It prepares effective citizens. Therefore any change in the nature, purpose and quality in education demands a concomitant change in teacher education system.

If a revolution in education has to be initiated, it is the teacher education which can be taken as a starting point. There should be association between the school curriculum and the teacher education curriculum. If the teacher education has to be relevant to the life, needs and

aspirations of the children and the community to which they belong, it should integrate constructivist approach in its curriculum. An efficient teacher education system helps to empower teachers and when the teachers are empowered it helps to empower the learners also. The NCF 2005 visualizes a major shift in the conceptualization of learning and accordingly that of teaching. While emphasizing the primacy of the active learner, the curriculum framework views teaching as a process that enables learners construct knowledge. Teacher is a facilitator who encourages learners to reflect, analyse and interpret in the process of knowledge construction.

There is a dialectical process in teacher education. The student teacher is a learner so far as undergoing teacher education programme is concerned. For better management of classroom, teacher trainee should get the basic understanding of constructive approach from teacher education system. Then only they can change from the traditional role of 'informer' or transmitter of knowledge to 'facilitator or guide'. So it is imperative to integrate constructive approach in the teacher education system.

Constructivism

Constructivism is a relatively new paradigm which focuses on subjective, contextual and pluralistic nature of knowledge. It calls for a change in the classroom culture, attitudes, beliefs and practices. Constructivism, is a psychological philosophical perspective contending that individuals form or construct much of what they learn and understand (Shunk, 1996). It is a descriptive theory that highlights the way people learn or develop rather than the way they should teach (Richardson, 1997).

It was Jean Piaget who first set the foundations in constructivism by stating that knowledge does not have the purpose of producing representations of an independent reality, but rather has an adaptive function (Von Glasersfeld, 1996). The cornerstone of his epistemology was that cognitive development was alongside the biological development of an individual. Thus, mental functions were mainly considered as internal. The gap that constructs a "disequilibrium" between adapted and unadapted responses in activating the schemata is regarded as a means for conceptual change (Lim n, 2001, Woolfolk, 2001).

On the other hand, Lev Vygotsky counter argued and explained the notion that higher mental functions were external and social before they were internalised. Conceptual change occurs through a number of socio-cultural interactions between the individuals and the environment. Vygotsky's notion of "zone of proximal development" can be argued to be the focal point in such conceptual change.

Research reveals that constructivist environments are conducive to conceptual change, student achievement, and promoting self-regulated learners. Constructivism is grounded in students' active participation in problem-solving and critical thinking. It inquires the importance of taking responsibility in the decision-making process. Knowledge construction is based on building upon previous knowledge experiences. Thus, new knowledge is integrated with the previous intellectual constructs. Integration of such experiences is facilitated through social and collaborative natures of learning such as scaffolding (Darling-Hammond, 2000; Shunk, 1995). The emphasis is on social and collaborative nature of learning. Collaboration entails sharing responses, ideas about given complex problems that need higher order skills.

Constructivism is an epistemological view of learning rather than teaching. Constructivists believe that certain activities and enrichments in the environment can enhance the meaning-making process, such as active learning using kinesthetic, visual and auditory modalities, creating opportunities for dialogue, fostering creativity and providing a rich, safe and engaging environment (Brooks & Brooks, 1996, cited in Osberg, 1998).

The theory of constructivism is based on the idea children learn better by actively constructing knowledge and by reconciling new information with previous knowledge. The

constructivist perspective supports that learners learn through interaction with others. Learners work together as peers, applying their combined knowledge to the solution of the problem.

According to constructivist perspective, learning is determined by the complex interplay among learners' existing knowledge, the social context, and the problem to be solved. Instruction refers to providing learners with collaborative situation in which they have both the means and the opportunity to construct 'new and situational –specific understandings. Learning is not a passive receptive process but is instead an active meaning making process required to solve meaningful problems. New learning depends on learner's previous knowledge, which may sometimes interfere with the understanding of new information. Learning implies the reorganization of prior conceptual schemes. Learning is facilitated by social interaction. Meaningful learning occurs within authentic learning tasks.

Student's Role

There is a shift in the role of student from knowledge acquisition to knowledge construction. Student asks questions to teachers and questions other students' ideas, gives predictions about phenomenon, designs experiments to test his/her own ideas, formulates and tests hypothesis and discusses results. He/she compares the findings and results with those of others and draws independent conclusions, applies the new concepts to familiar situations and familiar concepts to new situations. The student verifies and validates his/her own beliefs and ideas, demonstrates solutions and procedures and elaborates and interprets ideas from text. Student develops the habit of self directed learning and takes the responsibility of their learning. Students are listening attentively to the teacher or engaged fully in completing a task in silence. Constructivist classes, opposed to the traditional ones differ much in terms of teacher and student characteristics. Interaction in constructivist learning environment is not limited between the teacher and the students, but rather occurs among all the individuals' diverse cognitive abilities.

According to Marlowe and Page (1998), effective constructivist teachers provide opportunities for students to help them become successful orators, storytellers, historians, mathematicians, or scientists. Students need to be given the opportunity to do science. This process consists of "doing and reflecting, more doing and reflecting, and then more doing and reflecting" (Marlowe & Page, 1998,). Then, it can be argued that preservice teacher education students can become great teachers by giving them the opportunity to explore the real teaching environments in their classes.

Class Room Environment

The class room environment should be conducive for student to construct knowledge. The following points should be taken in to consideration while designing constructivist class room.

- Student autonomy and initiative are accepted and encouraged
- Students are engaged in dialogue with the teacher and with each other
- Higher level thinking is encouraged
- Students are engaged in experiences that challenge hypotheses and encourage discussion
- Teacher asks open ended questions and allows time for responses
- The class uses raw data, primary sources, manipulative, physical, and interactive materials.

Role of Constructivist Teachers

Literature on constructivist teacher education argues that practices in the culture of a constructivist learning environment will help teachers to become agents of change who use knowledge of developmental theory and the ideas of inquiry and reflective teaching to learn (Kroll & Laboskey, 1996).

The teacher is expected to be prepared to manage the interaction among groups of students. She or he needs to know the problems and its solution, and the common errors, preconceptions, and misconceptions that arise. The teacher helps learners notice attributes of the rich, realistic context that had not been attended to before, and for the possibility of constructive solutions; and guides student interactions as they work cooperatively to solve complex problems that no learner could manage alone. In order to help student understanding when they are engaged with problem-based activities, teachers can use several strategies that can make components of complex tasks easier by having the teacher guide the problem-solving process. For instance, she or he can approach a problem by coaching, guiding or advising, through providing prompts, probes, or suggestions at varying degrees or explicitness. Overall, the teacher can mediate in providing the necessary guidance for the learners when they are stuck in the zone of proximate development (Windschitl, 2002; Young, Nastasi, & Braumhardt, 1996).

Brooks and Brooks (1999) lists the qualities and role of a constructivist teacher.

- ❖ Encourage and accept student autonomy and initiative
- ❖ Use a wide variety of materials, including raw data, primary sources, and interactive materials and encourage students to use them.
- ❖ Inquire about students' understandings of concepts before sharing his/her own understanding of those concepts.
- ❖ Encourage students to engage in dialogue with the teacher and with one another
- ❖ Encourage student inquiry by asking thoughtful, open ended questions and encourage students to ask questions to each other and seek elaboration of students' initial responses
- ❖ Engage students in experiences that show contradictions to initial understandings and then encourage discussion
- ❖ Provide time for students to construct relationships and create metaphors.
- ❖ Assess students' understanding through application and performance of open –structured tasks.

In constructivist approach, the role of teacher changes from transmitter of knowledge to a facilitator and a cognitive guide. The role of teacher is to analyse learners and curriculum in order to select only those experiential activities that improve motivation or conceptual understanding while choosing other more economical strategies to insure both breadth and depth of learning.

In a constructivist learning environment the teacher has to provide experience with the knowledge construction process and appreciate multiple perspectives and multiple modes of representations and in turn should encourage ownership and voice in the learning process. In turn the teacher has to prompt student inquiry by asking thoughtful and open ended questions and encouraging them to ask questions to each other. Teacher's role is interactive, rooted in negotiation providing tools such as problem solving and inquiry based learning activities with which students formulate and test their ideas, draw conclusions and inferences and pool and convey their knowledge in a collaborative learning environment.

Constructivism and Evaluation

Constructivism calls for a reconsideration of evaluation and grading procedures. Students are expected to take part an active part in their own assessment of their knowledge and in the

assessment of the learning situations. It emphasizes the need for continual evaluation, evaluation of the student understanding, performance and it should be ongoing and cumulative.

It is empirically proved that constructivist approach was found to be effective for all the age group children. So, both the pre service and in service teachers must be trained to develop an understanding and the necessary skills for the successful implementation of the model in the class room situation.

Constructivist Programs in Teacher Education

According to the changing roles of teacher, the teacher training institutes should train the student teachers to take up their responsibilities and perform the task successfully. The student teacher must be trained to act as facilitator who provides students with opportunities to test the adequacy of their current understanding. They must also be trained in using group learning techniques. It is also useful to remember the maxim "Teachers teach as they are taught, not as they are told to teach". Thus teacher training system should use model-learning activities that teachers can apply in their own class rooms. It is not enough for trainers to describe new ways of teaching and expect teachers to translate from talk to action: it is more effective to engage teachers in activities that will lead to new actions in class rooms.

Teacher educators can provide teacher trainees with opportunities to make them more responsible for their own learning. Teacher trainees need to be enabled to determine what they need to learn through questioning and goal setting: Their self-concept of what they know or do not know should be established by the guidance of the instructor. Allegedly, this may assume more responsibility in addressing their learning needs during an instructional unit. Constructivist educators strive to provide trainees with access to information on demand. Such inquiries can be utilised through educational technologies to facilitate access to information. For instance, instructional designers may include integration of multimedia software, and the Internet and World Wide Web into the curriculum (Osberg, 1997). This may enable teacher trainees to uncover, discover, and reflect on content and their conceptions of such through inquiry, investigation, research, analysis and evaluation in the context of a problem, critical question, issue, or theme (Marlowe & Page, 1998). Teachers need to facilitate such environments by providing teacher trainees with options and slowly taking control of their zones of proximal development (Dunlop & Grabinger, 1996). Teacher trainees are actively involved in hands-on learning activities that relate to their interests and that are a little above their current level of competence. Training must be given not only in theory and methods but also in the evaluation aspects also. It is also essential to give an opportunity for the student teachers to practice teaching through constructivist approach in their practice teaching.

Conclusion

Education works best when it concentrates on thinking and understanding, rather than on rote memorization. Even though we are emphasizing a shift in the teaching –learning process from teacher-centered to learning centered, in reality the teachers are still following the same old traditional methods of teaching. In this context, the teacher trainees must be trained to accept the current trends and must be well equipped with the content as well as pedagogy accordingly. They must take up the new roles and responsibilities and in turn act accordingly. They must be given both the theoretical input and practical knowledge on constructivist approach and there by, can produce creative and competent teachers and subsequently a worth while generation of students.

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INFLUENCE OF LEVEL OF ASPIRATION ON AGGRESSIVE BEHAVIOR OF ADOLESCENT STUDENTS

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Abstract

The study was conducted to find out the influence of Level of Aspiration on Aggressive Behavior of Adolescent Students of District Pulwama of Jammu and Kashmir. For this purpose 80 boys and 70 girls were selected from class 10th students of government and private high schools of district pulwama. To collect the data Aggression Scale by Pal and Naqvi and Level of Aspiration Measure by Shah and Bhargava were used. The data were analysed by using 2×2 factorial design ANOVA. The boys were found to be more Aggressive than girls. Adolescent students having high level of Aspiration were found more aggressive than the adolescent students having low level of aspiration. No significant influence of type of schools was found on aggressive behavior of adolescent students. There was no significant influence of level of aspiration and sex on aggressive behavior of adolescent students. There was no significant influence of level of aspiration and types of school on aggressive behavior of adolescent students.

Introduction

The term level of aspiration was first used by a German Psychologist by name HOPPE. This is closely related to n-ach and hope of success / fear of failure, experience. Every individual has goals and he/she aspires to achieve this goal. In the course of achieving this goal he has some expectation. The standard he/she wants to achieve in any task is described by psychologists as his level of aspiration. It is closely to his self esteem. People tend to raise their goals after success and lower after failure. Individuals who set goals that are too high will inevitably fail. Individuals who set goals that are too low are robbed of a sense of achievement no matter what they do. The ideal situation is for a student to maintain a realistic level of aspiration. The goal setting parallels what the high jumper does when he sets the bar between the posts. He sets it high enough that he might fail. He would take no satisfaction in setting it so low that he could jump successfully every time. Success and failure, experiences come in the intermediate range between the point at which successes highly probable but failure is possible, and that at which failure is highly probable, but success possible.

Level of aspiration is usually influenced by two types of factors- environmental and personal. In early childhood before the child is old enough to know what his abilities, interests and values are, his aspirations are largely shaped by his environment. As he grows older and is more aware of his abilities and interests, personal factors have a greater influence, but many of his aspirations are still environmental in origin.

There is a significant deviation in the nature and the degree of aspiration with respect to the individual as well as stages of growth and development. The aspirations of an infant, child, adolescent or adult thus will naturally differ not only in its shape or size but also in terms of motivation and anxiety felt for their fulfillment. Adolescents having high Level of Aspiration set

goals that are too high to be achieved for them so they often fail in achieving their goals. This failure of an adolescent in achieving the goals set by him may cause frustration among them which may lead to Aggressive Behavior of Adolescents having high level of Aspiration. The aspirations of the adolescents are varying in nature. They wish to become the centre of attraction and independent of their parents and the society but the social and the cultural factors do not allow them to proceed according to their own aspirations. So the adolescents having high level of aspiration may indulge in anti social acts. They often resist to the rules and regulations of the school as well as their society thus they feel that their failure in achieving their goals is because of the existing system so they want to bring changes and often revolt against them.

Many researchers have been conducted in the area of aggression like **Singh, (1969)**, studied influence of intellectual development on the aggressive attitude, **Kafiluddin, (1980)**, studied parental discipline, family structure and ordinal position as antecedent factors in the genesis of aggression. **Punetha, (1982)**, studied socialization of aggression in children, **Arunima, (1989)**, studied aggression among children from socio-psychological appraisal, **Manchanda, (2001)**, studied Role of Cognitive Behavior Therapy in the Management of Adolescent Aggression, **Malik, (2004)**, studied Aggression in Adolescents in relation to Self -Concept, Scholastic Achievement and Performance in Co-Curricular activities, **Bajpai, (2006)**, studied the aggressive behavior of adolescent with special reference to the impact of media, school environment, socio-economic status and home environment, **Soni, S. (2009)**, studied the influence of aggressive behavior on adjustment of adolescents, **Sharma and Garg (2011)** studied impact of video game and internet on psychological well being concerning aggression of adolescent students. But there is need to conduct study in the direction of aggression of adolescents in terms of level of aspiration, as this study may help to study the relationship between the aggressive behavior of adolescents and their level of aspiration and which may be useful for teachers, parents and policy makers in molding the behavior of adolescents having aggression as per the desired lines.

Objectives

The objectives of the study were;

- To study the influence of Level of Aspiration, Types of School and their interaction on Aggressive Behavior of Adolescent Students of Pulwama district of Jammu and Kashmir.
- To study the influence of Level of Aspiration, Sex and their interaction on Aggressive Behavior of Adolescent Students of Pulwama district of Jammu and Kashmir.

Hypotheses

Hypotheses of the study were;

- There is no significant influence of Level of Aspiration, Types of School and their interaction on Aggressive Behavior of Adolescent Students of Pulwama district of Jammu and Kashmir.
- There is no significant influence of Level of Aspiration, Sex and their interaction on Aggressive Behavior of Adolescent Students of Pulwama district of Jammu and Kashmir.

Sample

For the present study total 150 adolescent students studying in class 10th in government and private high schools of district Pulwama, were randomly selected including 80 boys and 70 girls. 75 Adolescent students were selected from government schools and 75 Adolescent students from Private High Schools were randomly selected for the purpose of the study.

Tools

In the present study following tools were selected for collection of data

- Aggression Scale: Aggression and its level among the male and female adolescents were assessed through “AGGRESSION SCALE” (A-Scale). Constructed and standardized by Km. Roma Pal and Dr. Smt. Tasneem Naqvi (Published by Agra Psychological Research Cell, Agra).
- Level of Aspiration Measure: Level of aspiration among male and female adolescents under study was assessed through Level of Aspiration Measure developed by Dr. M.A. Shah and Dr. Mahesh Bhargava (Published by National Psychological Corporation, Agra).

Results and discussions

I) Influence of Level of Aspiration, Types of School and their Interaction on Aggressive Behavior of Adolescent Students

The first objective of the present research was, “To Study the Influence of Level of Aspiration, Type of School and Their Interaction on Aggressive Behavior of Adolescent Students of Pulwama District of J & K. The data were analyzed with the help of 2×2 Factorial design ANOVA. The results are given in table 1.1 and 1.2

Table 1.1, Summary of 2×2 Factorial design ANOVA of unequal cell size for aggression

Source	Sum of squares	df	Mean Squares	F
Level of Aspiration	874.103	1	874.103	4.013
School type	124.230	1	124.230	0.570
Level of aspiration × School type	199.962	1	199.962	0.918
Error	31804.374	146	217.838	
Corrected Total	33080.773	149		

Significant at 0.05 Level

Influence of Types of School on Aggressive Behavior of Adolescent Students

It is evident from the table 1.1 that value of F for types of school is 0.570 with df (1/146) which is not significant. In view of this the null hypothesis that there is no significant influence of Type of School on Aggressive Behavior of Adolescent students of district Pulwama J & K, **is not rejected**. Hence the aggressive behavior of adolescent students of district Pulwama of J & K belonging to government and private high schools do not differ significantly.

Discussion of the finding;

This finding may be attributed to the fact that the different facilities which are being provided to adolescent students of district Pulwama J & K are almost same in government and private high schools. The methods and the curriculum which are being practiced in these two types of schools are almost the identical. So the behavior of the students studying in these two types of schools may be influenced by the same situations present in these schools. More over due to the disturbing situations for last 20 years both types of schools are affected with the same degree. These factors may be held responsible for the findings of the present study.

Influence of Level of Aspiration on Aggressive Behavior of Adolescent Students

From the table 1.1, it is clear that the observed value of F for level of aspiration is 4.013 with df (1,146) which is significant at 0.05 level of significance. In view of this the null hypothesis that, “there is no significant influence of level of aspiration on aggressive behavior of adolescent students of Pulwama district of J & K” **is rejected**, hence adolescent students of Pulwama district of J & K differ significantly in aggression on the basis of their level of aspiration.

Table 1.2, Estimated means of Aggression of Adolescent students having high and low Level of Aspiration

Aspiration	Mean	Std. error
High	85.319	1.655
Low	80.465	1.771

Further it is evident from the table 1.2, that the mean aggression scores of adolescent students of district Pulwama J & K having high level of aspiration is 85.319 which is significantly greater than the mean aggression scores of the adolescents having low level of aspiration which is 80.465. Thus adolescent students of district Pulwama J & K having high level of aspiration are more aggressive than adolescent students having low level of aspiration.

Discussion of the finding;

The finding of the study reveals that the adolescents having high level of aspiration are significantly more aggressive than the adolescents having low level of Aspiration. This may be attributed to the fact that Adolescents having high Level of Aspiration set goals that are too high to be achieved for them so they often fail in achieving their goals. This failure of an adolescent in achieving the goals set by him may cause frustration among them which may lead to Aggressive Behavior of Adolescents having high level of Aspiration. The aspirations of the adolescents are varying in nature. They wish to become the centre of attraction and independent of their parents and the society but the social and the cultural factors do not allow them to proceed according to their own aspirations. So the adolescents having high level of aspiration may indulge in anti social acts. They often resist to the rules and regulations of the school as well as their society thus they feel that their failure in achieving their goals is because of the existing system so they want to bring changes and often revolt against them. These factors may lead adolescent students having high level of aspiration more aggressive than the adolescents having low level of Aspiration.

Influence of Interaction of Level of Aspiration and Type of Schools on Aggressive Behavior of Adolescent Students

It is evident from the table 1.1, that the F value for interaction between level of aspiration and types of school is 0.918 with df (1/146) which is not significant. In view of this the null hypothesis that there is no significant influence of interaction of level of aspiration and types of school on aggressive behavior of adolescent students of district Pulwama J & K, is **not rejected**. . Hence aggressive behavior of adolescent students of district Pulwama J & K is independent of interaction of level of aspiration and type of schools.

Discussion of the finding;

The finding of the study revealed that the Aggressive Behavior of Adolescent students having High Level of Aspiration and low Level of Aspiration is not influenced differently with the different types of schools. The findings may be attributed to the fact that in district Pulwama J &

K the different facilities available to Adolescent students having High Level of Aspiration and low Level of Aspiration in government and private high schools are almost same. More over the conditions of both government and private schools are identical due to the prevailing disturbance in the region.

II) Influence of Level of Aspiration, Sex and Their Interaction on Aggressive Behavior of Adolescent Students

The 2nd objective of the present research was, “To Study the Influence of Level of Aspiration, Sex and Their Interaction on Aggressive Behavior of Adolescent Students of Pulwama District of J & K”. The data were analyzed with the help of 2×2 Factorial design ANOVA. The results are given in table 1.3. and 1.4.

Table 1.3, Summary of 2×2 Factorial design ANOVA of unequal cell size for aggression

Source	Sum of squares	Df	Mean Squares	F
Level of Aspiration	801.563	1	801.563	4.298
Sex	3581.234	1	3581.234	19.204
Level of aspiration × Sex	149.792	1	149.792	0.803
Error	27226.060	146	186.480	
Corrected Total	31791.393	149		

Significant at 0.05 Level

Significant at 0.01 Level

Influence of Sex on the Aggressive Behavior of Adolescent students

From table 1.3, it is evident that F value for sex is 19.053 with df (1,146) which is significant at 0.01 level of significance. In view of this the null hypothesis that “there is no significant influence of sex on aggressive behavior of adolescent students of district Pulwama J & K”, **is rejected**. Hence the adolescent students of district Pulwama J & K differ significantly in their aggressive behavior on the basis of sex.

Table 1.4, Estimated means of Aggression of Male and Female Adolescents students

Sex	Means	Standard Error
Male	87.503	1.540
Female	77.664	1.645

Further it is evident from the table 1.4 that the mean aggression scores of male adolescent students of district Pulwama J & K is 87.503 which is significantly greater than the mean aggression scores of the females which is 77.664. Thus the male adolescent students of district Pulwama J & K are significantly more aggressive than female adolescent students.

Discussion of the finding

The finding may be attributed to the factors that male adolescent students in J & K are more exposed to varying situations causing aggression than the female adolescent students. The disturbing conditions may also be responsible for the findings because it is the male population in

J & K which is more affected with the prevailing conditions as they are more exposed to violent situations than the females. The present study was conducted on the Muslim dominated community of J & K where Muslim parents are more concerned about the behavioral patterns of their female children. The females are kept away from the different Medias which may expose them to the violence and other frustration causing situations. The role of females is more confined within the boundaries of their home so there are fewer chances for them to indulge in the activities leading to aggression. More over the findings are also supported by the previous researches conducted in this field like the findings of Macoby and Jacklin (1980) and the research conducted by Bajpai (2006).

Influence of interaction of Level of Aspiration and Sex on Aggressive Behavior of Adolescent Students

It is evident from the table 1.3, that the F value for interaction between level of aspiration and sex is 0.803 which is not significant. In view of this the null hypothesis that there is no significant influence of interaction of level of aspiration and sex on aggressive behavior of adolescent students of district Pulwama J & K, is **not rejected**. . Hence Aggressive Behavior of adolescent students of district Pulwama J & K is independent of interaction of level of aspiration and sex

Discussion of the finding;The findings of the present study reveal that the Aggressive Behavior of Male and Female Adolescent students are influenced by the Level of Aspiration in same way. This may be attributed to the fact that both male and female students having high level of Aspiration, claim or expect higher goals in their respective fields but when they fail to achieve the goals they become frustrated and indulge in Aggressive Behavior leading activities, however both male and females having low level of Aspiration set relatively lower goals which they can achieve so they do not face the unfavorable situations causing Aggressive Behavior.

Educational Implications

The study was focused to study the aggressive behavior of future adults that is adolescents who can affect the shape of future society. Several key issues related to identification and interventions arise during the study. We suggest some ways to deal with it.

Since the present study revealed that the male Adolescent students are more Aggressive than female Adolescents, so parents and teachers may be accordingly guided to take great care at home as well as schools. Parents and teachers may be guided to avoid the conflicts with school going male Adolescents by using effective parenting and teaching methods. Parents and teachers should design different activities for the male Adolescent students to develop healthy moral values among them.

The findings of the research revealed that Student's having high level of aspiration is more Aggressive than those adolescent students having low level of Aspiration. So parents and teachers should help adolescent students in setting their goals in accordance with their potentials and capabilities so as to save them from frustration which may eventually lead to aggression.

The influence of type of schools on Behavior of Adolescent students was found similar so parents may be helped to develop positive attitude towards government schools as well as towards private high schools. The students may be helped to realize that both types of schools are for the proper development of their personality, so they may not discriminate among students of different types of schools.

The policy makers may be helped with these findings to design the curriculum and extra-curricular activities for the proper development of personality among Adolescents. The facilities may be made available to both government and private schools without any discrimination.

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ENVIRONMENTAL IMPACT OF FLY ASH- CASE STUDY OF KOLAGHAT THERMAL POWER STATION, PURBA MEDINIPUR, WEST BENGAL

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Abstract

Coal is India's most abundant resource, and it will continue to play a pivotal role in the country over the upcoming decades. There currently exist in India 82 coal-fired power plants. Fly ash is, alone, a waste product and its responsible disposal poses a huge problem. From each power station, thousands of tons of fly ash are pumped into the ash ponds in the form of slurry (fly ash mixed with water) every day; these ponds occupy thousands of hectares of agricultural land all over India. Kolaghat Thermal Power Station (KTPS) is the second largest thermal power station in West Bengal. Huge amount of ash from this plant is disposed off in surrounding land and water bodies leading to air, water and soil pollution. Overflow of pond ash towards residential areas is causing unnecessary human exposure and has serious health risks due to the high content of heavy metals. The villagers are even more affected when monsoon season begins, as the ash is deposited in the fields and farmers use ash-laden water to irrigate. This has an adverse affect on agricultural productivity and blocks the drainage system. Proper management of fly ash is required to avoid environmental disasters in near future.

Key Words: Air pollution, siltation of river bed, surface and ground water contamination.

Introduction

Kolaghat Thermal Power Station (KTPS) is a major thermal power station in West Bengal. It is located at Mecheda (22°24 56 N, 87°52 12 E), approx. 55 km from Kolkata in the Purba Medinipur district. The power plant is operated by West Bengal Power Development Corporation Limited. The power plant has six power generating units of 210 MW each for a total capacity of 1260 MW. The units were commissioned in two stages during the period of 1984 to 1995. The KTPS is generating about 7500-8000 metric tones of fly ash every day by consuming a total of 17500 tones of coal. Presently the plant has only 132 hectares of land located 4-5 km away from it. Five ash ponds are now operating on it. The fly ash which is coming out of the chimneys generally subsides in the surrounding areas generally 3 – 4 km away.

Table 1 Installed Capacity of the Plant

Stage	Unit Number	Installed Capacity (MW)	Date of Commissioning	Status
I	1	210	September 1990	Operational
I	2	210	March 1986	Operational
I	3	210	October 1984	Operational
II	4	210	April 1995	Operational
II	5	210	May 1991	Operational
II	6	210	January 1994	Operational

Source: KTPS Office,2012

Production of Ash

Combustion of coal in the Boiler results in generation of ash. A device called Electro Static Precipitator (ESP) is used to prevent ash from flying out the chimneys (3 big and 3 small). Ash is collected in hoppers below the ESP and is disposed off by two methods:

a) Dry System: Ash is conveyed by compressed air to storage tanks called SILO (5 big concrete tanks, each of 2000 MT capacity). Some companies (Ambuja Cement, Madras Cement Company) collect ash from SILO for their use in air proof tanks at nominal charges.

b) Wet System: Slurry (ash mixed with water) is disposed off in large ponds (ash ponds). There are six ash ponds located 4-5 km south of the power station. The ash is kept exposed in the sun to dry and is collected by many companies for their use.

Environmental Problem

i. Air Pollution: Unburnable mineral material becomes ash. The concentration of most trace elements in coal ash is approximately 10 times the concentration in the original coal. Emission of green house gases (CO₂, SO₂ etc.) is another cause of air pollution.

Each power generating unit has individual ESP as Air Pollution Control Device (APCD) and unit no. 1, 2 & 3 are connected to individual stack of height 120m and unit 4, 5 & 6 are connected to individual stack of height 220 m. The trade effluent is treated in ETP (Effluent Treatment Plant) and six ash ponds. Opacity meter was also installed to monitor the emission concentration continuously.

Table 2 PM Emission of the Plant

Sample Collected from	Parameter	Results Obtained (mg/Nm ³) on		Permissible Limit (mg/Nm ³)
		24.1. 2012	16.4. 2012	
Boiler Unit no. 1	PM	884.20	3354.6	150
Boiler Unit no. 2		1310.08	909.47	
Boiler Unit no. 3		2269.30	312.01	
Boiler 5 (Pass A)		951.90	486.67	
Boiler 5 (Pass B)		799.25	508.44	
Boiler 6 (Pass A)		232.39	968.66	
Boiler 6 (Pass B)		298.07	297.47	

Source of Data: West Bengal Pollution Control Board, August, 2012

The treated effluent from ETP (physico-chemical type) is recycled to make ash slurry and the rest is discharged to local canals (Denan canal, Banpur canal, Midnapore canal) and Rupnarayan river. The inhabitants of the surrounding area are facing severe air pollution from fly ash generated by the industry. They also alleged that Midnapore canal, Denan canal are filled up with thick layer of ash. The crops and vegetation have been damaged due to significant stack emission and discharge of ash laden effluent from the industry. The field surveys showed that more than 1000 people are affected due to fly ash exposure and 50-55% is affected with asthmatic disorder due to fly ash exposure. The West Bengal Pollution Control Board has been accused Kolaghat Thermal Power Station for causing an environmental disaster in its locality since August, 2003. At a hearing on the fly ash spill-over that affected three villages of Andulia, Ruxa Chowk and Bon Mecheda inhabited by nearly 1,000 people, PCB officials gave the responsibilities to KTPS authorities to task for failing to curb the disaster. The industry also failed miserably to meet the PM emission standard during sampling on 24.01.12 and 16.4.12 (Table 2).

The authority opined that they are trying to maintain the PM emission standard but it is difficult because it is an old plant. Planning is formulated to enhance the efficiency of ESPs to meet the PM emission standard.

ii. Surface Water Contamination: Groundwater and surface water are fundamentally interconnected. It is often difficult to separate the two because they feed each other. This is why one can contaminate the other.

Fly ash consists of silica, aluminum, iron and calcium oxides plus other minor constituents. It has been used in a variety of applications in road construction including as an addition to cement and concrete, for grouting mines and caverns, as a fill material for embankments, in road stabilized mixes etc. The mentioned application options of fly ash and a long term experience in such applications prove its advantages. But this is only waste material with variable chemical and mineralogical composition whose uncontrolled application and deposition could have harmful effects on environment.

Continuous deposition of fly ash in the Rupnarayan river results in excessive siltation of river bed and increasing potentiality to flood. Properties of fly ash depend on the type of coal used in the combustion process and the process itself in the power plants and this significantly

influences the change in ash composition, possible radioactive properties and heavy metal concentration. Studies have shown that fly ash dumping continued to cause surface water contamination during flooding. Influences on water quality have the presence of heavy metals (As, Cd, Cu, Cr, Hg, Pb, Zn etc.,) and organic matter (benzol, phenol etc.).

Pollution of Rupnarayan river results in decreasing fish population and other aquatic organisms.

Table 3 Physico-Chemical Characteristics of Water (Mean of 3 Seasons) of Rupnarayan River

Parameters	Results Obtained	Ideal /Permissible Limit
Temperature (°C)	27.3	15-20
pH	7.8	6.5-8.5
Transparency (cm)	10.9	60
Salinity (‰)	0.5	0-30
Alkalinity (mg/litre as CaCO ₃)	94.5	20-100
Free CO ₂ (mg/litre)	2.5	< 2
Total Hardness	114.9	15-120
Ca-Hardness (mg/litre as CaCO ₃)	76.6	10-80
Mg-Hardness(mg/litre as CaCO ₃)	38.3	5-40
Conductivity (micromho/cm)	1082.4	100-2000
Total Dissolved Solid (mg/litre)	613.5	500
Total Suspended Solid (mg/litre)	599.5	350
Grain Size (diameter in mm)	0.3-0.5	.001-2
D.O. (mg/litre)	7.4	5-10
C.O.D. (mg/litre)	87.9	<10
B.O.D. (mg/litre)	3.1	0.8-5.0
Total kjeldahl N (mg/litre)	2.7	<0.5
Total phosphate P (mg/litre)	0.5	<10
Chloride (mg/litre)	175	<250
Available Stream Energy (Joule)	12.4	>25
Velocity of Water (metre/ sec)	0-0.5	>1
Water Discharge (m ³ /sec)	<10-32	>50

Source of Data: Data collected by the author in 3 seasons, 2012

iii. Groundwater Contamination: Since coal contains trace levels of arsenic, barium, beryllium, boron, cadmium, chromium, thallium, selenium, molybdenum and mercury, its ash will continue to contain these traces and therefore cannot be dumped or stored where rainwater can leach the metals and move them to aquifers. Leaching and movement of water through materials containing soluble components significantly influence the surrounding soil, surface water and groundwater. Variable chemical composition of fly ash can contain elements that will infiltrate groundwater by leaching and ultimately present danger to the flora, fauna and human health.

Table 4 Physico-Chemical Characteristics of Soil (Mean of 3 Seasons) of Rupnarayan River Basin

Parameters	Results Obtained	Ideal / Permissible Limit
Temperature (°C)	35.8	15-25
pH	7.8	6.5-8.5
Salinity (‰)	0.1	<0.5
Organic Carbon (%)	4.5	6-8
Soil Texture (%): Sand	17.8	23-52
Silt	43.6	28-50
Clay	38	7-27

Source of Data: Data collected by the author in 3 seasons, 2012

Where fly ash is stored in bulk, it is usually stored wet rather than dry so that fugitive dust is minimized. The resulting impoundments (ponds) are typically large and stable for long periods, but any breach of their dams or bunding will be rapid and on a massive scale. The amount of some elements like aluminum, iron, arsenic and manganese above than WHO guideline of safe drinking water denotes significant contamination of the ground water. The pH of the water samples of tube wells range from 7.04 to 8.75 indicates alkaline nature of water.

Agricultural productivity in the surrounding region has been declining during the last three decades. Some of the farmers are of the opinion that the fly ash has also to some extent hindered the production. The layer of the fly ash sometimes blocks the air circulation in the soil and saplings cannot have sufficient amount of nutrients and food and as a result the growth is thwarted.

Radiometric survey and geo-chemical analysis of the ash ponds were taken by the Department of Radio Physics and Geology of Kharagpur IIT to assess the quality of toxic elements that contaminate the soil and ground water system. Most of the toxic elements like arsenic, cadmium, chromium, nickel, cobalt, copper, antimony etc. are infiltrated in soil and ground water through leaching from the bottom ash. Radioactivity due to the presence of uranium, thorium and potassium in ash was found 2-3 times greater than the safe level. The bricks and cement made of fly ash of KTPS show high concentration of uranium and thorium. Apart from mixing in air these radio elements are concentrated in soil and water. Tube wells located near ash ponds yield high activity of radon than those located in distant areas. Increased incidence of leukemia, bone sarcomas and chromosomal aberrations are due to radio toxicity of thorium. Prolonged exposure in this area may lead to lung and bone cancer.

Table 5 Chemical Analysis of Liquid Effluent

Parameters	Permissible Limit	Results Obtained	
		Plant Outlet	Ash Pond
pH	6.5 to 8.5	8.2	8.7
Total Soluble Salt (mg/litre)	100	72	82
BOD (mg/litre)	20	16	22
COD (mg/litre)	80	25	28
Oil Grease (mg/litre)	20	8.6	7.6
Chromium (mg/litre)	0.2	0.24	0.26
Copper (mg/litre)	1.0	0.2	0.1
Zinc (mg/litre)	1.0	0.8	0.8
Iron (mg/litre)	1.0	0.35	0.46
Phosphate (mg/litre)	5.0	0.04	1.2

Source of Data: Data collected by the author on 16.5. 2012

Disposal and Market Sources

In the past, fly ash produced from coal combustion was simply dispersed into the atmosphere and deposited in ash ponds. This created environmental and health concerns that prompted laws which have reduced fly ash emissions to less than 1% of ash produced. The recycling of fly ash has become an increasing concern in recent years due to increasing landfill costs and current interest in sustainable development. Other environmental benefits to recycling fly ash includes reducing the demand for virgin materials that would need quarrying and substituting for materials that may be energy-intensive to create such as portland cement.

Fly Ash Reuse

West Bengal Power Development Corporation Ltd (WBPDC) made an agreement with Gujarat Ambuja Cement Ltd (GACL) for supplying them ash from the Kolaghat Thermal Power Station for making portland pozzolona cement (ppc) in June, 2003. This was part of the State-owned WBPDC's long-term strategy to utilise the fly ash generated by the 210x6 MW KTPS located in Midnapore district. The initiative involving GACL is in line with the suggestions made by a Japanese consultancy organization which conducted a study on fly ash utilization for KTPS. As such, detailed project reports have been prepared for making burnt fly-ash clay bricks, fly ash lime bricks and ppc.

WBPDC exports fly ash to Bangladesh, utilizing it for making ppc. The RPG-controlled CESC already has an agreement with GACL on ppc.

A burnt fly ash brick plant has already been set up to utilize 40,000 tonnes of fly ash, as a short-term strategy, WBPDC has also taken up some other projects to reduce the fly ash problem. Under the present environment protection norms (for controlling air pollution) dispersion of respiratory particle matter has to be kept within 150 mg. This has not been the case with some of the older units of the KTPS implementation of which started in 1985 and was completed in 1993. Not all the units under KTPS conform to the stipulations (efforts are now underway to tackle this problem with installation of latest technology besides the conventional electrostatic precipitators). The industry has submitted an action plan on 02.04.12 mentioning that they are planning to improve stack

emission by replacing collecting plates and discharge electrodes in ESPs of unit no. 1 to 3.

WBPDCCL

started utilisation of its fly ash ponds for vegetation purpose with the help of the Bidhan Chandra Agricultural University. This is in addition to the efforts launched by WBPDCCL jointly with the Central Fuel Research Institute at its Bakreswar Thermal Power Plant for using ash for soil improvement. Ash is also used for railway and road embankments and for making concrete roads, cumulative utilisation of fly ash by KTPS has been 1.81 crore cubic metres till March 2003. The figure stands at 2.09 crore cubic metres for WBPDCCL as a whole. These technologies, while reducing the spread of particles (like fly ash) into the air necessitate greater attention to utilization.

Recommendations

The management and control of air, water and soil resource systems are multi-disciplinary tasks requiring different techniques and considerable changes in the present approaches towards tackling the problems. Some suggestions are given below:

1. Taking necessary steps to comply with environmental norms with efficient functioning of air pollution control devices attached to all units operations.

2.

Formulation of a time bound action plan annually regarding upgradation or modification of ESPs to meet the PM emission standard.

3. Extensive

plantation of at least 5000 saplings at suitable location in consultation with local gram panchayat in each monsoon.

4. A great integration of qualitative and quantitative aspect of both surface waters and groundwater, taking into account the natural flow conditions of water within the hydrological cycle. Dredging of Rupnarayan river and other canals should be done to enhance the water bearing capacity.

5. Physico-chemical analysis of ash ponds, river water to check the extent of remediation by using mycorrhizal inoculation. Practically all plant life is dependant upon a relationship with Mycorrhizal fungi. Mycorrhizae (meaning fungus roots) form a symbiotic relationship with the roots of 95% of the worlds' plant families, and aid nutrient exchange, increase resistance to disease and drought, and ultimately reduce the need for chemical fertilizers by around 40%. Mycorrhizae make plant growth possible, linking the roots of plants to the surrounding soil. This inoculation is found to be beneficial to attain plant growth (shoot height and leaf surface area) and thus plants get effectively rooted in the soil. Various fruits, vegetable and flowers are reported to grow well after mycorrhizal treatment.

Utilization of mycorrhizal treatment can play a very good role because of its metal sequestering properties for effective metal bioremediation on fly ash dumps. The mycorrhizal treatment offers an economically feasible biological means for assuring plant production at fly ash contaminated sites. Mycorrhizal produces organic acids that combine with some heavy metals to form compounds that are less mobile and less likely to pollute groundwater and surface runoff. *Glomus intradice* is one of the most resistant fungal species for fly ash and plays a major role in heavy metal remediation.

6. Evaluation of metal bioremediation in soil.

7. Observation of plant growth before and after mycorrhizal treatment.

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A COMPARATIVE ANALYSIS ON THE LEVEL OF SELECTED MOTOR FITNESS OF BADMINTON AND VOLLEY BALL PLAYERS (BOYS)

Dr. Susanta Jana

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Abstract

The purpose of the study was to compare the selected Motor fitness variables of Badminton and Volleyball players (age16-18 years). Fifteen (15) Badminton and Fifteen (15) Volleyball players were randomly selected for the study. To measure selected Motor fitness of Badminton and Volleyball players Speed, Strength and Leg Explosive Power were measured. For statistical analysis and Interpretation of data 't' test was conducted. It was observed that there was no significant difference in Speed, Strength and Leg Explosive Power of Badminton and Volleyball players.

INTRODUCTION

The new millennium is the age of technological excellence, where the life has become more luxurious with mechanical dependence that results into material gain and economic prosperity, yet in the process we lost our moral and spiritual realms including fitness and health too development of science and technology discouraging the human beings from doing vigorous activities as a result of which various physical and mental diseases are flourishing at a great speed throughout the world. Physical fitness is that state of body in which a person can carry his daily duties and responsibilities efficiently and with the energy left he can enjoy hobbies and other recreational activities and can meet the unusual. In other words Physical fitness can be defined as the state of body in which a person can do work for a longer duration without undue fatigue. Physical fitness not only a state of younger's but is the reality for all ages. Physical fitness is the product of physical exercises and exercise is very much related to health and wellbeing. Motor Fitness refers to the ability of an athlete to perform successfully at their sports. Speed, Strength and Leg Explosive Strength are the basic components of Motor Fitness and are required for good performance in sports like Badminton and Tennis. Fitness can be described as a condition that helps us look, feel and do our best. It is "The ability to perform daily task with vigorously and alertly, with energy left over for enjoying leisure-time activities and meeting emergencies demands. It is the ability to endure, to bear up, to withstand stress to carry on in circumstances where an unfit person could not continue and is a major basis for good health and well-being. The findings of the present study will give information regarding Motor ability of Badminton and Volleyball players.

METHODOLOGY

Fifteen (15) Badminton and Fifteen (15) Volleyball players (boys-age16-18 years) were randomly selected from Bathan beria Srinibash Vidyamandir Higher Secondary School in Purba Medinipur, Badminton and Tennis players (boys-age16-18 years) were those boys who regularly used to go for physical activities willingly and participated in matches and tournaments. To measure selected Motor fitness variables of Badminton and Volleyball players Speed, Strength and Leg Explosive Power were measured. Speed of the subjects was measured by using 50 meter run. To measure strength Standing Broad Jump was used. To measure Leg Explosive Power Vertical Jump was

employed. The best of three efforts was recorded. For statistical analysis and Interpretation of data 't' test was conducted.

RESULTS AND DISCUSSION

For statistical analysis and Interpretation of data 't' test was conducted. The results are presented in tabular form as given here under.

Table – 1: Mean SD of Speed and Comparison of t-test Between Means of Badminton and Volleyball players

Group	Mean	SD	MD	t-value
Badminton Players	9.30	1.19	0.03	1.03NS
Volley Ball player	9.27	1.20		

NS is Not Significant

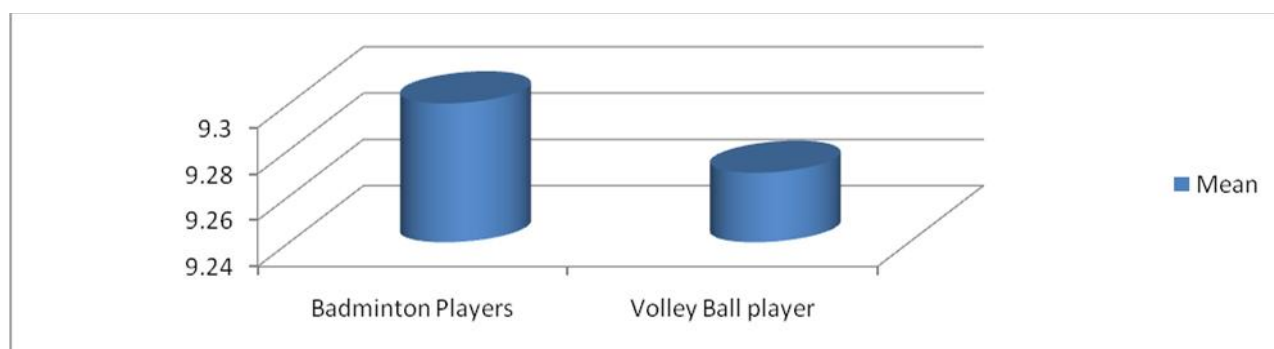


Fig. 1: Graphs Showing Speed of Badminton and Volleyball players

Table -1 show that there were no significant differences in Speed of Badminton and Volleyball players. The Mean of Speed of Badminton and Volleyball players were 9.30 and 9.27 respectively. 't' test was applied and t-value (1.03) appeared not significant at 0.05 level of confidence. Table-1 was illustrated through graphical representation (Fig. 1) for clear understanding of this study.

Table – 2: Mean SD of Strength and Comparison of t-test Between Means of Badminton and Volleyball players.

Group	Mean	SD	MD	t-value
Badminton Players	10.80	7.67	0.20	0.76NS
Volley Ball player	11.00	7.71		

NS is Not Significant

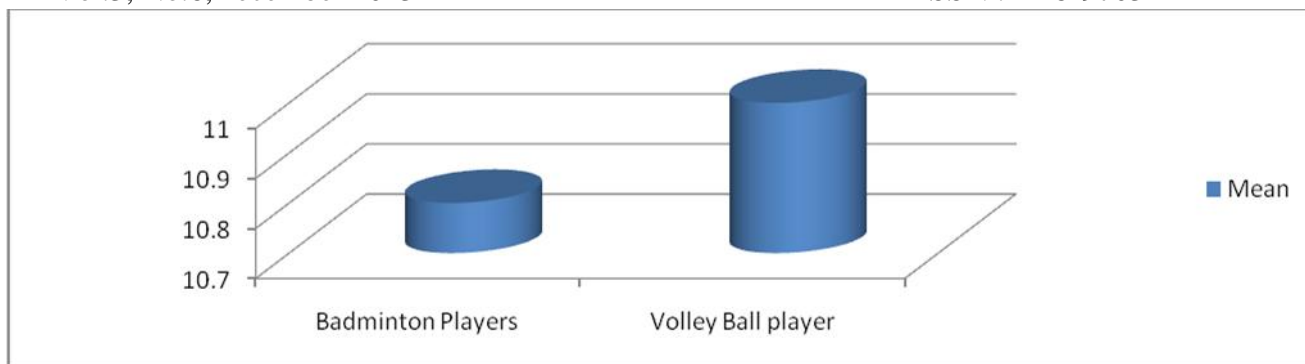


Fig. 2: Graphs Showing Strength of Badminton and Volleyball players.

Table-2 gives information regarding Strength of Badminton and Volleyball players. Table shows that there were no significant differences in Strength of Badminton and Volleyball players. The Mean of Percentage of Strength of Badminton and Volleyball players were 10.80 and 11.00 respectively. 't' test was applied and t-value (0.76) appeared not significant at 0.05 level of confidence. Graphical representation (Fig. 2) also indicates similar trend of this study.

Table – 3: Mean SD of Leg Explosive Strength and Comparison of t-test Between Means of Badminton and Volleyball players.

Group	Mean	SD	MD	t-value
Badminton Players	1.50	0.33	0.03	2.02NS
Volley Ball player	1.53	0.35		

NS is Not Significant

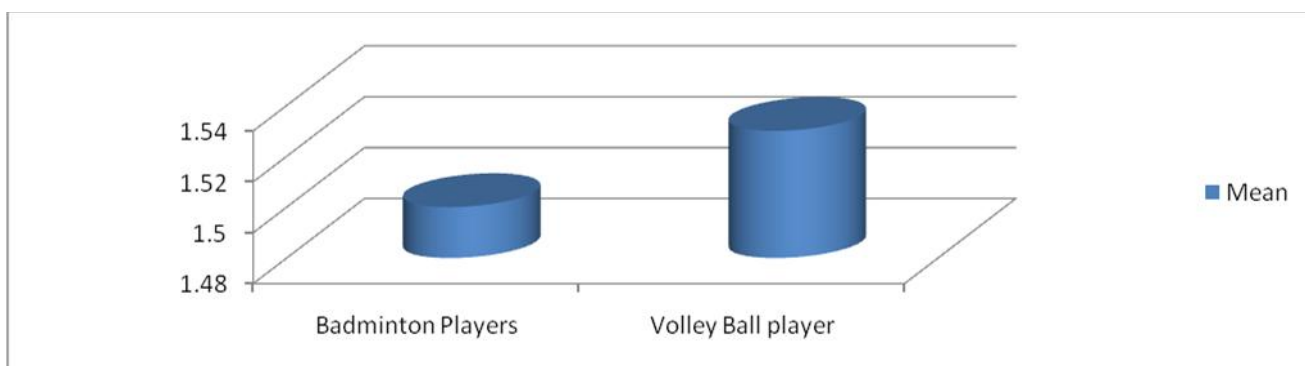


Fig. 3: Graphs Showing Leg Explosive Power of Badminton and Volleyball players.

Table-3 gives information regarding Leg Explosive Power of Badminton and Volleyball players. Table-3 shows that there were no significant differences in Leg Explosive Power of

Badminton and Volleyball players The Mean of Leg Explosive Power of Badminton and Volleyball players were 1.50 and 1.53 respectively. 't' test was applied and t-value (2.02) appeared not significant. Graphical representation (Fig. 3) also indicates similar trend of this study.

CONCLUSION

Based on the result of the present study and within the limitation, the following conclusions may be drawn.

- There was no significant difference in Speed ability of Badminton and Volleyball players.
- There was no significant difference in Strength ability of Badminton and Volleyball players.
- There was also no significant difference in Leg Explosive Power ability of Badminton and Volleyball players.

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EFFECTIVENESS OF MID-DAY MEAL IN WEST BENGAL

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This paper presents the Dissertation study on the Effectiveness of Mid Day Meal. Data collected from the school records and self report questionnaire was used to study the impact of Mid Day Meal Scheme on the enrolment of elementary school students. Significant increase in the percentage of enrolment of students at all levels.

INTRODUCTION

In a land mark order dated November 28,2001, the Supreme Court of India directed all state governments to introduce cooked mid day meals in primary school within six months. Most state governments missed the dead line, with a view to boost universalization of primary education (class – I – V) by improving enrolment, attendance, retention and learning levels of children, especially those belonging to disadvantaged sections and to improve nutritional status of students of primary stage the cooked Mid-day meal programme was started in West Bengal in 1100 schools of six districts from January 2003. There after coverage of schools increased gradually and 68,508 schools and SSKs along with an enrolment of 9184070 in nineteen districts could be brought under this scheme within March, 2005. By March, 2007, 68808 schools with an enrolment of 9195381 could be covered in this state.

OBJECTIVE OF STUDY

- Relationship between mid day meal and attitude of the elementary teacher's and guardian.
- To explore the pattern of 'Mid day Meal Programme' Attitude towards Elementary Education.
- To examine significance of difference in the attitude of elementary teacher towards guardian differing in certain background variables.
- To explore the pattern of elementary school teacher and guardian through the Mid day Meal Programme.
- To examine the significance of difference in the Mid Day Meal Programme of Elementary Teacher and Guardian.
- To suggest various ways of developing a positive and favorable Mid Day Meal Programme and attitude among the Elementary Teacher and Guardian.

Mid-day meal is to be introduced in all primary schools, and to clarify that it is only as matter of good will and specifically for resource poor status. Another important issue namely caste

discrimination. This is a gross violation of the fundamental right to equality and freedom from discrimination as well as the constitutional prescription of untouchability.

- Improving the nutritional status of children in class I-V in Government, local and Government aided school and EGC and AIE centers.
- Encouraging poor children, belonging to disadvantages sections to attend school / more regularly and help them concentrate on classroom activities.
- Providing nutritional support to children of primary stage in drought affected areas during summer vacation.

STATEMENT OF THE HYPOTHESIS

The following hypothesis were considered for the study –

Ho1. There will be no difference of opinion among the teachers regarding different dimension of the questionnaire.

Ho2. There will be no difference of opinion among the guardian's regarding different dimension of the questionnaire.

DESIGN OF THE STUDY

This part of the chapter describes the design followed to find out the study of mid-day meal on elementary level. The aim of the investigation were also

- To examine significance of difference in the attitude of elementary teacher towards guardian differing in certain background variables.
- To explore the pattern of elementary school teacher and guardian through the mid-day meal programme.
- To examine the significance of difference in the mid-day meal programme of elementary teacher and guardian.
- To suggest various ways of developing a positive and favorable mid-meal programme and attitude among the elementary teacher and guardian.

Methodology: In order to achieve the objectives of the present study survey method was used to assess the effect of mid-day meal on elementary level.

Population: In Raipur area teacher and guardian of West Bengal formed the population of this investment.

Sample: Sample consist 50 teachers and 50 guardians taken from primary school in West Bengal.

The investment does not follow the randomization process for selection of sample. He follows the purposive sampling procedure for selection of samples.

Tools : A questionnaire on curiosity for the primary teacher and primary student guardian was developed by Dr. Pal. It was used and standardize by the researchers.

Statistical Techniques Used : Description and parametric test both were used in descriptive statistics ogive, mean, scenes, kurtosis were calculated and parametric statistic test and co-relation follow for analyzing the quantitative data.

PROCEDURE OF THE STUDY

- **Selection of Content Areas for Questionnaire on the Utility of Mid day Meal**

The present investigator a test on questionnaire on the utility of mid-day meal its dimensions were selected with the help of guide under each dimension 6 items were selected thaws in total 36 items were selected for the tool.

- **Opinion of the experts with respect to the dimension's of questionnaire on the utility of Mid day Meal.**

The investigator consulted with experts at send the total questionnaires for the their validation. After getting of her opinion on the experts the investigator modify the test for test and retest purposes. In this way a preliminary modification of the tool was done.

- **Description of questionnaire on the utility of Mid day Meal**

Thus modification and correction of the item their remind six dimensions with 30 items.

- **Preparation for blue print of questionnaire on the utility of Mid day Meal**

A blue print was prepared by the investigation consisting of design of the question number of question and total number of question (Figure – 1)

Dimensions of the question	No. of Question	Total No. of Question.
i)Student present	1,6,9,11,13	5
• Attractive of Education	1,18,19,21,24	5
• Quality of Food	7,8,12,14,23	5
• Government Attitude	10,16,20,29,30	5
• Education time	3,15,26,27,28	5
• Need of Mid Day Meal	4,5,17,23,25	5
Total		30

Figure – 3 Blue print of Questionnaire on the utility Mid-day meal.

3.3.5 Time Schedule for the Questionnaire on the utility of Mid day Meal

It was a test so there was no time schedule for the tool

3.3.6 Sample Selected for Questionnaire on the utility of Mid-day Meal.

50 teachers were selected from primary schools (from both urban and rural area) of West Bengal.

3.3.7 Final Administration of questionnaire on the utility of Mid-day Meal.

It was administered on 50 primary teachers. The researcher get preliminary in structure through the teacher so that any unfavorable conditions will be avoided.

3.3.8 Evaluation of the answer script of the Questionnaire on the utility of Mid day Meal.

After having the completed the administration of final tool the researcher evaluated the response sheets against a scoring guide (Appendix – 1), scoring criteria were (4,3,2,1) and (1,2,3,4) for positive and negative answer respectively.

3.3.9 Determination of objectivity reliability and validity of the Questionnaire utility of Mid day Meal

Objectivity is considered as one of the three important technical characteristics for being a good test. Previously, objective test was regarded, as that, which was not based, not implemented by examiner opinion, attitude or judgment was considered as one aspect of object test. Besides impersonality, there must be some specific objective of the test. A test should have objectivity in construction objectivity in administration and objectivity in scoring.

A test is said to be perfectly objective in scoring if the re-scoring of a test paper produces scores identical to the initial scores assigned to those same papers.

In this present study 'Score Guide' was prepared following liker scale. Response were evaluated on the basis of the key. There was no personal influence on scoring each response sheet. Thus the objectivity of the tool in scoring was maintained.

PRESENTATION AND ANALYSIS OF DATA

This chapter has been presented and analysis of data. This presents the analysis and interpretation of the scores by means of descriptive statistics and graphical representation.

The test scores have been presented graphically for visual comparison on the spread, shape and stages of the distribution scores in different ways. In constructing the percentage cumulative frequency curves (OGIVE) and Bar graph. We can describe the nature of the distribution and also its implication for this investigation.

Table- 1 :Showing the scores obtained by the guardian for Ogive

Score	f	cf%	f	cf%	f	cf%	f	cf%	f	cf%	f	cf%
1-3	1	2	0	0	0	0	0	0	1	2	0	0
4-6	4	10	1	2	1	2	8	16	3	8	3	6
7-9	16	42	14	30	5	12	17	50	8	24	7	20
10-12	23	88	21	72	10	32	21	92	12	48	8	36
13-15	5	98	14	100	24	90	4	100	23	94	17	70
16-18	1	100	0	100	5	100	0	100	3	100	9	88
19-21	0	100	0	100	0	100	0	100	0	100	6	100

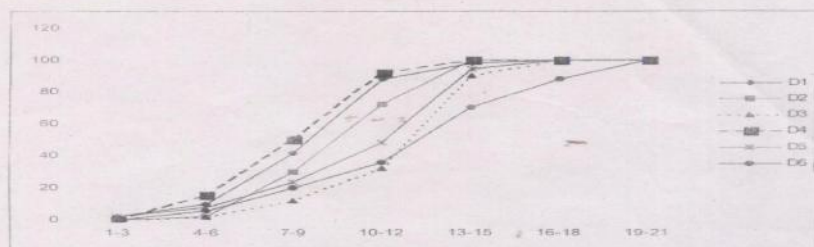


Fig. 5 : Showing the Ogive the scores of dimension on the utility of Mid-day meal towards guardian

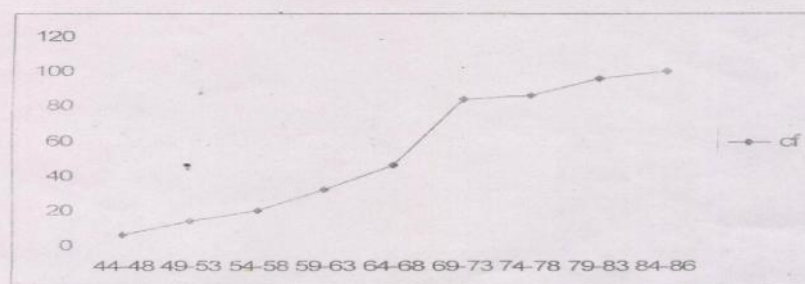


Fig. 6 : Showing the Ogive total row scores on the utility of Mid-day meal towards guardian

Table-2: Showing the scores obtained by the Teacher for Ogive

Score	f	cf%	f	cf%	f	cf %	f	cf%	f	cf%	f	cf%
3-5	2	4	1	2	2	4	1	2	1	2	0	0
6-8	2	8	5	12	4	12	4	10	4	10	4	8
9-11	5	18	9	30	11	34	7	24	7	24	7	22
12-14	20	68	18	66	29	92	19	62	18	60	13	48
15-17	14	96	10	86	4	100	13	88	17	94	19	86
18-20	2	100	7	100	0	100	6	100	3	100	7	100

Table-3: Showing the scores of % obtained by the utility of Mid Day Meal (Teacher)

Dimension Score	D1		D2		D3		D4		D5		D6	
	f	%	f	%	f	%	f	%	f	%	f	%
3-5	2	4	1	2	2	4	1	2	1	2	0	0
6-8	2	4	5	10	4	8	4	8	4	8	4	8
9-11	5	10	9	18	11	22	7	14	7	14	7	14
12-14	20	40	18	36	29	58	19	38	18	36	13	26
15-17	19	38	10	20	4	8	13	26	17	34	19	38
18-20	2	4	7	14	0	0	6	12	3	6	7	14

Table-4: Showing the scores of % obtained by the utility of Mid Day Meal Towards Guardian

Dimen Score	D1		D2		D3		D4		D5		D6	
	f	Cf %	f	cf%	f	cf%	f	cf%	f	cf %	f	cf%
1-3	1	2	0	0	0	0	0	0	1	2	0	0
4-6	4	4	1	2	1	2	8	16	3	6	3	6
7-9	16	32	14	28	5	10	17	34	8	16	7	14
10-12	23	46	21	42	10	20	21	42	12	24	8	16
13-15	5	10	14	28	24	48	4	8	23	46	17	34
16-18	1	2	0	0	5	10	0	0	3	6	9	18
19-21	0	0	0	0	0	0	0	0	0	0	6	12

Table-24 : Showing the scores obtained in each dimension on the utility of mid day meal towards guardian

Dimension	Total Score
D ₁	486
D ₂	535
D ₃	697
D ₄	456
D ₅	580
D ₆	665

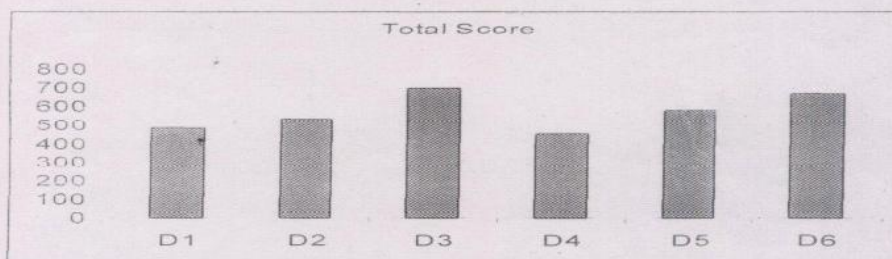


Fig. 19 : Bar graph showing the score of each dimension on the utility of Mid-day meal towards guardian

SUMMARY OF THE STUDY

In the chapter the investigator highlighted the concept of Mid sorry Elementary of Education of constitution in India and the concept of Mid day meal, and its relation to EFA. He also discussed the problem out of which the present study evolves.

The purpose of the study was:

Relationship between Mid Day meal and attitude of the primary teacher and Guardian.

To explore the pattern of Mid Day Meal programme attitude towards primary Education among the total and sub samples based on the back ground variables.

To examine significance of difference in the attitude of the elementary teacher towards guardian differing in certain background variables.

To explore the pattern of elementary school teacher and guardian through the midday meal programme the total and sub sample, based on the background variables.

To examine the significance of difference in the mid day meal programme of elementary teacher and guardian differencing in certain background variable.

To suggest variables ways of developing a positive and favorable Mid Day Meal Programme and attitude among the elementary teachers and guardian.

After analysis of the data the following observations were made and can conclusions were drawn from them.

1) There was wide graph between D4, D6, D1 is in between D4 and D6 Ogives that there is no much difference in the variation of the opinion the guardian in Mid Day meal.

2) There was a wide grape between D1 to D6 is between D3 and D6 Ogives show that there is no much difference in the variation of the teacher in Mid Day meal.

3) Through there is no wide variations among the graphs with the figure show has teacher was positive attitude towards Mid Day Meal. This was also confirmed by Bar Diagram (Fig.). The investigator was endowed with some practical experience during the time of investigation upon which he wanted to recommend some aspects some of these were stated below.

1) The reliability of questionnaire should be determined by other method also.

2) This type of project may be undertaken with more variable like effect of Mid Day meal on elementary level attitude teacher and guardian.

3) Sophisticated satisfied design may be employed to generalize the finding.

4) Due to certain limitations of the study the attitude questionnaire was administered to sample of 50 teachers and 50 guardians only. So the result from present study not is much dependable. Some further studies on wider sample were therefore recommended to arrive at a more definite and trust worth conclusion, which can be generalized over a large sample.

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SWAMI VIVEKANANDA AND HIS CONTRIBUTION TO EDUCATION

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ABSTRACT :

Swami Vivekananda (1863 – 1902), a great thinker and reformer of India, embraced education, which for him signifies ‘man-making’, as the very mission of his life. In this paper, which purports to expound and analyze Vivekananda’s views on education, an endeavor has been made to focus on the basic theme of his philosophy, viz. the spiritual unity of the universe. Whether it concerns the goal or aim of education, or its method of approach or its component parts, all his thoughts.

Swamiji laid great stress on physical health because a sound mind resides in a sound body. He often quoted the Upanishadic dictum ‘nayamatma balahinena labhyah’; i.e. the self cannot be realized by the physically weak. According to Swamiji, the mind of the students has to be controlled and trained through meditation, concentration and practice of ethical purity. All success in any line of work, he emphasizes, is the result of the power of concentration. By way of illustration, he mentioned that the chemist in the laboratory concentrates all the powers of his mind and brings them into one focus-the elements to be analyzed-and finds out their secrets. Concentration, which necessarily implies detachment from other things, constitutes a part of Brahmacharya, which is one of the guiding mottos of his scheme of education. According to him: ‘Education is not the amount of information that is put into your brain and runs riot there undigested, all your life.’ Education for him means that process by which character is formed, strength of mind is increased, and intellect is sharpened, as a result of which one can stand on one’s own feet. Founding education on the firm ground of our own philosophy and culture, he shows the best of remedies for today’s social and global illness

Keywords: education, physical health, educational philosophy

INTRODUCTION

Swami Vivekananda (1863 – 1902), a great thinker and reformer of India, embraced education, which for him signifies ‘man-making’, as the very mission of his life. In this paper, which purports to expound and analyze Vivekananda’s views on education, an endeavor has been made to focus on the basic theme of his philosophy, viz. the spiritual unity of the universe. Whether it concerns the goal or aim of education, or its method of approach or its component parts, all his thoughts.

SWAMI VIVEKANANDA’S VIEWS ON EDUCATION

In the perspective of Swami Vivekananda the following are his views on education :

- Education is the manifestation of the perfection already in man.
- The training by which the current and expression of will is brought under control and become fruitful is called education.
- Education may be described as a development of faculty, not an accumulation of words, or, as a training of individuals to will rightly and efficiently.

- Real education is that which enables one to stand on his own legs.
- If you have assimilated five ideas and made them your life and character, you have more education than any man who has got by heart a whole library.
- We must have life building, man making, and character making assimilation of ideas.

In the Neo-vedanta humanistic tradition of contemporary Indian thought, Vivekananda presented a philosophy of education for man making. The chief objection raised by Vivekananda against the contemporary educational system was that it turned men into slaves, capable of slavery and nothing else. About the prevailing university education, he remarked that it was not better than an efficient machine for rapidly turning out clerks. It deprived people of their faith and belief. Vivekananda was very critical about this scheme of education. He compared it to the person who wanted to turn his ass into a horse, was advised to thrash the ass in order to achieve this transformation and killed his ass in this process. Vivekananda also criticised the contemporary system of education from the humanistic view point.

AIMS OF EDUCATION ACCORDING TO SWAMI VIVEKANANDA

According to Swami Vivekananda there are several aims for education. They are as follows:

1. Self-Development
2. Fulfilment of Swadharma
3. Freedom of Growth
4. Character Formation

1. Self-Development: In contrast to the contemporary system of education, Vivekananda advocated education for self-development. Education according to most of the Western educationalists, aims at man's adjustment with the environment. According to the Indian philosophical tradition true knowledge does not come from outside, it is discovered with the individual, in the self which is the source of all knowledge. According to Vivekananda, the function of education is the uncovering of the knowledge hidden in our mind.

2. Fulfillment of Swadharma: Vivekananda supported the idea of Swadharma in education. Every one has to grow like himself. No one has to copy others. External pressure only creates destructive reactions leading to stubbornness and disorderliness. In an atmosphere of freedom, love and sympathy alone, the child will develop courage and self-reliance. He should be talked to stand on his own, to be himself. Each child should be given opportunities to develop according to his own inner nature.

3. Freedom of Growth: Vivekananda is a staunch champion in education. Freedom is the first requirement for self development. The child should be given freedom to grow according to his own nature. The teacher should not exert any type of pressure on the child. The child should be helped in solving his problems himself. The teachers should have an attitude of service and worship. Education ultimately aims at realization. It is a means of a sorority of mankind.

4. Character Formation: Character is the foundation for self development. The aim of education as self-development, therefore, leads to the aim of education for character. The aim of education is character building. This depends upon the ideals cherished by the individual. The educator should present high ideals before the educands. The best way to develop a character is the

personal example of high character set by the teacher. In ancient Indian system of education, the teachers used to present high ideals before the pupils, who in their turn imitated these ideals according to their capacities.

Following things are required for character formation:

→Hard work- Character formation, according to Vivekananda, requires hard work. This is not possible by those who have a wish for all types of enjoyment. Struggle is the best teacher in character building.

→Moral and Spiritual Values- Besides hard work, character formation requires traits such as purity, thirst for knowledge, perseverance, faith, humanity, submission and veneration, etc. These qualities may be developed by the teacher's example and the pupil's efforts.

→Gurukula System- Relationship between the teacher and the taught is possible only in a Gurukula system of education. Therefore, Vivekananda favoured the ancient Indian Gurukula system of education. In these Gurukulas, the pupils served the teacher, who in his turn helped the pupils everywhere to achieve knowledge.

→Formation of Good Habits- Character is intimately connected with habits. Habits express

-character Good habits make for good character.

→Learning through mistakes- The child should be allowed to commit mistakes in the process of character formation. He will learn much by his mistakes. Errors are the stepping stones to our progress in character. Strong will, is the sign of great character.

→Will makes men great- Vivekananda himself was an ideal teacher. His words worked like magic upon men and women. Vivekananda asked the people to build up their character and manifest their real nature which is the Effulgent, the Resplendent the Ever Pure.

CONTRIBUTIONS OF SWAMI VIVEKANANDA TO THE MODERN WORLD

Some of the main contributions that Swamiji made to the modern world and which are also important for all round development of man are mentioned below:

1. New Understanding of Religion: One of the most significant contributions of Swami Vivekananda to the modern world is his interpretation of religion as a universal experience of transcendent Reality, common to all humanity. Swamiji met the challenge of modern science by showing that religion is as scientific as science itself; religion is the 'science of consciousness'. As such, religion and science are not contradictory to each other but are complementary. This universal conception frees religion from the hold of superstitions, dogmatism, priestcraft and intolerance, and makes religion the highest and noblest pursuit – the pursuit of supreme freedom, supreme knowledge, supreme happiness.

2. New View of Man: Vivekananda's concept of 'potential divinity of the soul' gives a new, ennobling concept of man. The present age is the age of humanism which holds that man should be the chief concern and centre of all activities and thinking. Through science and technology man has attained great prosperity and power, and modern methods of communication and travel

have converted human society into a 'global village'. But the degradation of man has also been going on apace, as witnessed by the enormous increase in broken homes, immorality, violence, crime, etc. in modern society. Vivekananda's concept of potential divinity of the soul prevents this degradation, divinizes human relationships, and makes life meaningful and worth living. Swamiji has laid the foundation for 'spiritual humanism', which is manifesting itself through several neo-humanistic movements and the current interest in meditation, Zen etc all over the world.

3. New Principle of Morality and Ethics: The prevalent morality, in both individual life and social life, is mostly based on fear – fear of the police, fear of public ridicule, fear of God's punishment, fear of Karma, and so on. The current theories of ethics also do not explain why a person should be moral and be good to others. Vivekananda has given a new theory of ethics and new principle of morality based on the intrinsic purity and oneness of the Atman. We should be pure because purity is our real nature, our true divine Self or Atman. Similarly, we should love and serve our neighbours because we are all one in the Supreme Spirit known as Paramatman or Brahman.

4. Bridge between the East and the West: Another great contribution of Swami Vivekananda was to build a bridge between Indian culture and Western culture. He did it by interpreting Hindu scriptures and philosophy and the Hindu way of life and institutions to the Western people in an idiom which they could understand. He made the Western people realize that they had to learn much from Indian spirituality for their own well-being. He showed that, in spite of her poverty and backwardness, India had a great contribution to make to world culture. In this way he was instrumental in ending India's cultural isolation from the rest of the world. He was India's first great cultural ambassador to the West. On the other hand, Swamiji's interpretation of ancient Hindu scriptures, philosophy, institutions, etc prepared the mind of Indians to accept and apply in practical life two best elements of Western culture, namely science and technology and humanism. Swamiji has taught Indians how to master Western science and technology and at the same time develop spiritually. Swamiji has also taught Indians how to adapt Western humanism (especially the ideas of individual freedom, social equality and justice and respect for women) to Indian ethos.

CONCLUSION

The exposition and analysis of Vivekananda's scheme of education brings light its constructive, practical and comprehensive character. He realized through education that the uplift of masses is possible. He states it emphatically that if society is to be reformed, education has to reach everyone-high and low, because individuals are the very constituents of society. Swamiji also laid great stress on

physical health because a sound mind resides in a sound body. He often quoted the Upanishadic dictum 'nayamatma balahinena labhyah'; i.e. the self cannot be realized by the physically weak. According to Swamiji, the mind of the students has to be controlled and trained through meditation, concentration and practice of ethical purity. All success in any line of work, he emphasizes, is the result of the power of concentration. By way of illustration, he mentioned that the chemist in the laboratory concentrates all the powers of his mind and brings them into one focus-the elements to be analyzed-and finds out their secrets. Concentration, which necessarily implies detachment from other things, constitutes a part of Brahmacharya, which is one of the guiding mottos of his scheme of education. According to him: 'Education is not the amount of information that is put into your brain and runs riot there undigested, all your life.' Education for him means that process by which character is formed, strength of mind is increased, and intellect

is sharpened, as a result of which one can stand on one's own feet. Founding education on the firm ground of our own philosophy and culture, he showed the best of remedies for today's social and global illness.

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**RELATIONSHIP OF EIGHTH GRADE GIRLS' INVOLVEMENT IN
STUDIES WITH THEIR PARENTAL INCOME AND EDUCATION
WITH EXAMINATION MARKS IN SOME SELECTED
SCHOOL SUBJECTS IN NADIA DISTRICT**

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Abstract

Learning is said to be the main wheel of success in life, especially in today's world, which is experiencing the greatest momentum of change. Today's knowledge, skills, techniques are becoming obsolete in tomorrow reality of life. It also seems to be dead wood to a person when he/she likes to enter into the future work station. How to become a real knowledge worker, continuous knowledge creator is the greatest challenge to the curriculum designer, facility planners, curriculum transactors and more so for the young learners. The future demand today's chilled to become a tool maker for unlocking the look of the future. In spite of such demand and challenges today's learners like to remain in their known world to become book-worm memory worker or just carrier of some information to be used in the examination halls and getting good marks. At this instance the learners' knowledge is not applicable to their future life as it is highly volatile. Ultimately such memory workers destine to be rubbles in the waste boxes of the so called educated under employed or unemployed. The call of the destiny of life is to learn, to digest, to lay hands on it and to change its landscape accordingly.

Key words: Learning, Success, Challenges, Demand, Information, Unemployed

Introduction :

The traditional school learning is solely examination result oriented. Students become energize and put efforts only for external rewards of many kinds known to all. The crush of the present situation demands enjoyments tasks of student learning itself. This enjoyment in learning was its source in the task itself. The type of motivation needed is not supported by external controller of behavior, rather the source of motivation remain locked within the learner, a state of mind which supplies emotion of joy and feeling of success. This motivation is called intrinsic motivation, now it is learning task. It also refers to self responsibility of the learner in learning. It is sometimes called Ego Involvement or Involvement in Studies. It is sometimes linked with joyful learning.

In the context of EFA (Education For All) especially at the initial stage of formal learning. It is coined as joyful learning in joyful environment. About hundred years ago the great poet R. N. Tagore called it 'Anandapath' which is the central theme of child-centered learning.

Learning is a systematic endeavor on the part of the learner. It is conditioned not only by motivation, but study, drill, practice, reinforcement are also the essential conditions of learning. Advancing this notion it implies that learner's true involvement in study and study materials is a positive contributing factor of learning. Students involvement in studies demonstrated by its

relationship with the measure of outcome of student learning.

Further students' involvement in study is a function of the characteristics of the home and school in which he lives or study. In case of home they more stood determining factors parents' level in income, consumptions and education outside the school. The parents' level of educational qualification is contributing factors in developing children involvement in studies.

Keeping mind all the above themes in mind and being interested in studying the present state of students' involvement in studies among the girl students the present study has been undertaken. The title of the study has been formulated as:

Relationship of eighth grade girls' involvement in studies with their parental income and education with examination marks in some selected school subjects in Nadia district.

Objectives :

The major objectives of this study are as follows :

1. To find out relationship of students' involvement in studies and their family income.
2. To examine relationship of students' involvement in studies and their fathers' level of education.
3. To explore relationship of students' involvement in studies and their mothers' educational level.
4. To find out relationship of students' involvement in studies and their academic achievement in three selected subjects (Bengali, Physical Science and Mathematics).

Hypothesis :

Three major hypotheses have been formulated in this study.

- H₁ : There is no significant relationship between students' involvement in studies and their parental income.
- H₂ : There is no significant relationship between students' involvement in studies and their parental educational level.
- H₃ : There is no significant relationship between students' involvement in studies and their examination marks in a) Bengali, b) Physical Science and c) Mathematics.

Assumptions :

There are five assumptions related to students' involvement in studies.

1. Students' involvement in study can be defined.
2. Students' involvement in study can be assist.
3. Students vary in involvement in studies.
4. The measure of students' involvement in study maintains interval scales.
5. Examination marks and the measure of students' involvement in studies are normally distributed in the population.

Significance of the Study :

The present investigator has undertaken a humble attempt in order to answer some questions which are implied in the objective of the study. The researcher thinks that the study itself as well as the findings of the study has of special educational significance described in the following lines.

1. The findings would be helpful in understanding the nature and extent of eighth grade girls' involvement in studies. Moreover how their involvement in studies are affected by parents' income and education. Further note to what extent eighth grade students' involvement in studies is related to their examination marks in Bengali, Physical Science and Mathematics.
2. The above findings will give some stimulation to the future researchers who are interested in

designing study materials or modifying teaching-learning process.

3. The findings of the study may be useful to the teachers, parents, curriculum planners, counselors etc., for improving quality of studying among the learners.

Related Studies :

1. **Socio-economic Status :** Various studies have been conducted to find out the relationship between the socio-economic status of the family and student's academic motivation. These studies are Entwistle (1968), Barial (1966), Hayes (1969), Desai (1971), Chaudhary (1971), Parikh (1978), Mehta (1969), Tamhankar (1968), Stavros (1972), Sewell & Shah (1968) and Seidel (1970).
2. **Scholastic Achievement :** These studies are Sutton (1961), Singh (1965), Lowell (1952), Mehta (1969), Russell (1969), Bhatnagar (1976), Verma (1966), Srivastava (1967), Shaw (1961), Barial (1966), Sinha (1965) and Hass (1963).

Variables :

In this study following variables have been involved :

- Parental level of income.
- Parental level of education.
- Students involvement in studies.
- Examination marks in a) Bengali, b) Physical Science and c) Mathematics.

Sample :

A purposive sample of 142 eighth grade girls studying in three girls' high school within Chakdaha Municipality has been selected. All the three schools are government aided recognized high schools. The medium of instruction is Bengali In each school only one section of class 8 has been selected.

Tools Used :

The preset investigator employed a Bengali version of study involvement inventory originally developed by Bhatnagar (1982). It measures intrinsic motivation in the field of studying. The above tool has also been used for collecting information relating to family income, fathers' educational qualification, mothers' educational qualification and examination marks. There is no fixed time limit to answer the inventory but an average student takes about 10–15 minutes to complete it.

Reliability and Validity :

The test-retest reliability with a time gap of one month is found to be 0.87 (N = 150). The split-half reliability applying the Spearman-Brown formula has been found to be 0.67 (N = 150) with an index of reliability of 0.70. The inventory has a high content and construct validity as expressed by 33 experts of Psychology.

Research Design :

In the study general descriptive statistics have been used for organization and presentation of data.

- Hypothesis 1 and 2 has been tested by the application of analysis of variance.
- Hypothesis 3 has been tested by applying product moment correlation.

Three levels of parental income have been designated as:

- Annual income below Rs. 15000 = Low group.
- Annual income above Rs. 60000 = High group.
- Annual income in between high and low group = Middle

Three educational levels have been marked as:

- Educational qualification up to Madhyamik = Low group.
- Educational qualification above Madhyamik but below Post-Graduate = Middle
- Parents with Post-Graduation qualification and other professional qualification like MBBS, Engineering = High group.

Organization of Data :

The collected data have been organized and some common descriptive statistics have been calculated. The results have been presented in the following:

Table – 1 : Descriptive Statistics for Students' Involvement in Studies

Number	Mean	Median	Q	S. D.
142	88.7	89.3	11.4	7.2

Table – 2 : Descriptive statistics for School Examination Marks for Various Subjects

Subjects	Number	Mean	Median	Q	S. D.
Bengali	142	57.8	57.0	6.85	10.40
Physical Science	142	53.8	52.4	10.45	14.10
Mathematics	142	50.4	48.3	12.40	17.08

The above values of means and medians indicate that the collected score distributions are nearly normal. Therefore it is reasonable to use parametric statistics for analysis of data.

Testing of Hypotheses :

As per design of the study this section has been divided into two sub-sections.

- 1. Study of Analysis of Variance :** In the sub-section student involvement in study has been consider as the dependent variable and parental income and family income have been treated as two separate independent variables. The sole purpose of this study has been to find out relationship if independent variables on the dependent variable. Hence analysis of variance has been employed.

A. Relationship of parental income and students' involvement in studies.

The concern results have been presented in Table – 3.

Table – 3 : Basic Data for ANOVA demonstrating and Relationship of Students' Involvement in Studies (SIS) and Parental Income

	Low	Middle	High
N	69	51	22
dx	6145	4478	1054
dx ₂	549061	395544	174536
Mean	89.057	87.803	88.818
SD	5.144	6.867	6.85

Table – 4 : ANOVA summary showing the relationship of students' involvement in studies and parental income

SV	SS	df	MS	F
SS tr	47.719	2	23.859	0.644
SS within	5143.081	139	37.00	
SS total	5190.80	141		

The obtained value of F for df 2, 141 is found only 0.644 which is not significant at 0.05 level. Therefore H_{01} could not be rejected at 0.05 level. Hence the alternative hypothesis H_1 stating “There is significant relationship between parental income and students' involvement in studies”, is not accepted.

The findings shows that family income and children involvement in studies as one of the dimensions if intrinsic motivation is a one type of personality variable not influenced by income of the family.

B. Relationship of parental level of education and students' involvement in studies.

In the layer parental level of education has been separated out into two dimensions i.e., Fathers' level of education and Mothers' level of education.

a) Here the results relating to fathers' educational level have been presented in Table 5 and 6.

Table – 5: Basic Data for ANOVA demonstrating Relationship of Students' Involvement in Studies and Fathers' Educational Level

	Low	Middle	High
	63	62	18
	5582	5469	1521
	496862	484941	136433
Mean	88.603	88.209	89.470
D.	6.062	6.430	4.665

Table – 6: ANOVA Summary showing the Relationship of Students' Involvement in Studies and Fathers' Educational Level

Sv	SS	df	MS	F
	21.71	2	10.85	0.29
within	5149.59	139	37.04	
total	5171.30	141		

The obtained F value is only 0.29 which is not significant for df 2, 141 at 0.05 level. Therefore the H_{02} could not be rejected at 0.05 level. Hence the alternative H_2 stating, “There is significant relationship between Fathers' level of education and students' involvement in studies” is not accepted.

b) Here the results relating to Mothers' educational level have been presented in Table 7 and 8.

Table – 7 : Basic Data for ANOVA demonstrating Relationship of Students’ Involvement in Studies and Mothers’ Educational Level

	Low	Middle	High
n	83	51	8
Σx	7428	4451	698
Σx₂	667248	390829	61064
Mean	89.493	87.274	87.25
S. D.	5.506	6.884	4.832

Table – 8 : ANOVA Summary showing the Relationship of Students’ Involvement in Studies and Mothers’ Educational Level

Sv	SS	df	MS	F
SS tr	170.396	2	85.19	2.35
SS within	5020.40	139	36.11	
SS total	5190.796	141		

The obtained F value is only 2.35 which is not significant for df 2, 141 at 0.05 level. Therefore the H_{02} could not be rejected at 0.05 level. Hence the alternative H_2 stating, “There is significant relationship between Mothers’ level of education and students’ involvement in studies” is not accepted.

- 2. Study of Product Moment Correlation:** In this sub-section product moment correlation have been performed for examining relationship of students’ involvement in studies and Marks in three school subjects. The results have been presented in Table – 9.

Table – 9 : Product Moment Correlations between Students’ Involvement in Studies and Results of Three School Subjects

Subjects	Number	‘r’
Bengali	142	0.00056
Physical Science	142	0.00029
Mathematics	142	–0.092

The results presented in above table show at the obtained co-efficient of product moment correlations are not significant at 0.05 level. Hence the H_{03} could not be rejected. The alternative H_3 is not accepted.

The findings indicate that students’ involvement in studies and their examination marks in Bengali, Physical Science and Mathematics taken separately are not significant. Putting in

other words it is revealed that students' involvement in studies have not influenced examination marks of the students in the above three subjects.

Interpretation :

The students have obtained examination marks and put their efforts due to other influencing factors that may not be included in the domain of involvement in studies which is practically intrinsic motivation or joyful learning.

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PHYSICAL EDUCATION AND SPORTS LACUNA IN DARJEELING

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jyanchandragurung@yahoo.co.in**ABSTRACT**

The purpose was to find out the lacuna of Darjeeling district of west bengal in terms of physical education and sports. The Darjeeling being situated in high altitude cannot produce a requisite number of athletes and sportsperson to represent the country except few in archery and football. Having lot of advantages like haemoglobin level and other physiological factors like shorter height and lower centre of gravity cannot produce a lifter or gymnasts which compelled the researcher to find out the lacuna of Darjeeling district. At present compare to earlier years and now we can come across the decline of physical education in education compare to present is one needs to overcome the hurdles and battles to improve the structure and infrastructure status in around to develop the overall discipline in physical education and sports. It is very important to take an urgent step to help physical education to help the future generation. Physical does not only deals with sports and sportsperson but it mainly deals with the health of general people which is very important. Our ancestors were healthy and happy than us as because they are more hard working and devoid of machine dominated society. So Darjeeling being a part of the India it has its own lacuna and researcher had tried to give some suggestion regarding the subtraction of lacuna of Darjeeling in the field of physical education and sports.

Introduction

India is lacking far behind in the physical education and sports than other developed countries. We can see that developed countries are very much concerned about their health and sports but India being second highest populated country could not able to produce athletes as sports comes under the sphere of physical education that can win Olympic medals except few and can participate in world cups of football and other sports. Physical Education act as well as the provision of resources for the country and in the construction of evaluation system in educational progress. At present compare to earlier years and now we can come across the decline of physical education in education compare to present is one needs to overcome the hurdles and battles to improve the structure and infrastructure status in around to develop the overall discipline in physical education and sports. Physical education is very much important in this era as today the technology has changed life style of man largely and it will continue to do so. Physical work of person living in very fast lifestyle and pushbutton technology has become negligible. Things that were produced by labors system have been replaced by machines. Due to this reason man of today losing health and laziness has become contemporary. People become idle and dependent on technology. Obesity is the biggest issue now a day. Many invention has been made by the medical science. They invent to cure the person after they become ill. Not all the persons attached to respective field should be inactive. On the contrary, they should be active to ensure that they may not be ill. So it is better to note -'Prevention is better than cure'. We should concentrate on contributing factors of physical-happiness. We should spare some time for physical labors, exercise, naturopathy, yoga & Asana, walking, jogging, swimming, recreational games to be healthy and fit in modern technologically featured life. We should know as to what are the physiological aspects among constituents of physical happiness, and what should be done

for its proper development and what should be done for problem have developed. Persons work in various fields, if food habits are according to their duties and type of work, then serious problems of health do not rise. In existing circumstances, health and hygiene are important for everybody. Physical-Education is not only limited to physical activities but it helps to develop the art of learning, leaving intellectuality and attitude towards life. From the ancient time sports and games have been the part of human instinct to enjoy life and be happy. In tune with the growth of man and the value system in the society around him, the intensity and the goal of games and sports have changed. The modern era of science and technology is featured by the analysis and accuracy of questioning mind with a deterministic approach and economy based value system in the society. In tune with this the sophistication and complexities in sports and games have also increased. If we try to be practical, education comes after health. What could we do with unhealthy engineers, professors, politician etc. how can we aspect growth and development of nation with those who are fighting with their own unhealthy body. West Bengal being one state that came under the developing states of India. Being the health is a primary factor even west Bengal is not giving so much importance in physical education. It is very sad that physical education is being treated as optional subject which means it has no importance as other subject. As education system is seems to be pragmatic the student will are not concerned about the subject whose marks are not added in calculating their overall percentage of marks. As they don't know importance of physical education (health) in their life it is the responsibility of an authority to implement physical education as a compulsory subject to make nation healthy resulting wealthy nation. As we can notice the lacking of country in physical education, it is obvious that state will also in the same queue. Now we can spot lot of lacuna in Darjeeling being a part of west Bengal in terms of physical education and sports. Through different research it is known that hill people (high altitude) are superior to that of plains (low altitude) in case of physical fitness as because the daily living activity of hill people is strenuous than that of plain people. Again in comparison hill people has physiological advantage i.e., they have more haemoglobin than that of plain people. Despite of these fact athletes from hill are not able to show their dominance in the field of games and sports except few in football. So researcher has tried to find out the possible hazards of athletes residing especially in Darjeeling areas are as follows;

- The numbers of playgrounds are very less. Due to geographical condition it is very difficult to get sufficiently spaced grounds. Till now there is only one stadium i.e., Leborg stadium which is not furnish. So due to lack of sufficient grounds many activities will be played at same time which will impede the practice of one another.
- Due to lack of earning sources athletes are more concern to jobs than their athletic practice because there is very few clubs which will pay for their talents or athletic performance.
- There is very few indoor sports facility which will discourage the athletes interested in indoor games.
- Lack of adequate number of coaches is the matter of concern. The idealistic view of the coaches should be changed with new inventions.
- Due to lack of school ground and physical education teacher athletes are not able to practice and choose their respective events in which they can achieve the Olympic medals.

- Lack of awareness program in the hill is also one of the reasons for poor number of sportsperson.
- There is no adequate number of sport equipments in the school which will discourage the athletes. Since the numbers of sports clubs are rare the school should provide these facilities.
- Most of the Parents regard sports as the mode of recreation and not as their career which will results restriction of children in future.
- There are very few sports equipments and are not advanced as in the real competition so they became psychologically diffident.

RECOMMENDATION AND SUGGESTION:

To overcome these problems following steps should be taken;

- The number of playgrounds should be increased as well as stadium [indoor and outdoor] should be constructed.
- Each school must have their playground because it is better to have playground without school building than school building without playground.
- Athletes with good performance should be permitted the stipend so they can concentrate on their sports than daily earning for their livelihood.
- Sports facility like infrastructure, equipments, protective equipments etc should be increased.
- Proficient coach for clubs and competent physical education teacher for school should be recommended.
- The awareness program should be conducted for sports excellencies and career in the field of sports.
- Compulsory physical education as a subject should be implemented from primary section to university level.

EFFECTIVENESS OF E-CONTENT STRATEGY IN TEACHING SCIENCE AT UPPER PRIMARY LEVEL

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ABSTRACT

The present study examined the effectiveness of E-Content strategy on the achievement of pupils in science at VI standard. For this purpose, sample of 60 students was taken. The pupils were divided into two groups. 30 pupils were in experimental group while 30 pupils were in control group were taken. Pre-test was conducted for both the groups. The control group pupils were taught through conventional strategy of teaching. The treatment was given to experimental group pupils through E-Content strategy. In E-Content strategy, the digital content were presented to the pupils in the integrated form of text, graphics, animation, audio, video, and interactivity. After completion of the treatment, the science achievement test was administered as post test to the pupils of experimental group and control group. Reaction of experts and students towards different aspects of developed E-Content was also studied. Both experts and students were found to have favourable reaction towards different aspects of developed E-Content. The pre test and post test scores were used to arrive at the following conclusion. The E-Content was found to enhance achievement in science of pupils. Further, e-content was found to improve achievement in science significantly higher in comparison to conventional strategy when groups were matched on pre-achievement in science. This is due to the favourable impact of E-Content strategy in the learning of the VI standard science students because it encourages them to take an active role in the learning process and have better control over their education.

Key words: E-Content, E-Content Strategy, Conventional Strategy

Introduction

graphics, animation, audio, video and also provide interactivity.

Teaching methods in recent years have moved from a predominantly teacher-oriented and teacher-controlled approach to teacher-pupil interactive system. Such a system requires a number of changes in the instructional procedure and the material used for effective teaching and learning. So, there is a need to make use of new opportunities offered by E-Content, plans have to be realized giving educators, teachers and students access to necessary equipments. The most important competence building in this field is the development of pedagogical E-Content is the digital content presentation to the learners in the integrated form of text, methods. That can happen only when long-term competence programmes can work along with real-life experience, where educators, teachers and students are using E-Content in their daily work and daily learning experiences.

Use of E-Content encourages self-expression and discovery by means of its interactive non-linear access of information. Students will be more motivated to learn since a multimedia lesson can provide near-reality information through its variety of available media elements (text, sound, animation and video). The students may learn by using their multiple senses, which provides new and enriched experiences. The learning process will be an active one, leaving the students to learn

by their own. The conventional and/or interactive individualized lesson will provide a stimulating environment that can improve the learning process by enhancing understanding and retention of the subject matter. Therefore, it was thought worthwhile to study the effectiveness of E-Content strategy over conventional strategy of teaching science.

Objectives of the study

- To compare mean scores of Science achievement at pre and post stages of the E-Content Group.
- To study the Reaction towards E-Content of teachers and students.
- To compare the adjusted mean scores on Science Achievement of the E-Content Group and Conventional Strategy Group by considering Pre Science Achievement as covariate.

Hypotheses

- There is no significant difference between mean scores of Science achievement at pre and post stages of the developed E-Content Group.
- There is no significant difference between adjusted mean scores of Science Achievement of the E-Content Group and Conventional Strategy Group by considering Pre Science Achievement as covariate.

Sample

For selecting samples the investigator has employed **Random Sampling Technique**. The present study was consisted of a sample of 60 pupils studying in class VI of C.R.M. Public School running under Jat Education Society, Rohtak. One section formed experimental group and one section formed the controlled group.

Tools Used :

The instigator had developed the E-Content for eight units of class VI science.

To measure the students at Pre-test and Post-test stage the following tools were employed for the collection of data:

- Reaction towards E-Content Scale for Teachers and students developed by investigator to assess the usability of developed E-Content.
- Science Achievement Test developed by investigator herself to measure the achievement of students in Science.

Experimental Procedure

The experimental procedure was executed. One experimental and one control group was formed. The E-Content group as experimental group was taught Science with the supplement of E-Content, the control group was taught Science through Conventional Strategy. The design had comprised three stages: the first stage has involved pre-testing of all the students of two groups on the Science Achievement Test. The second stage has involved treatment of six months. The experimental treatment was consisted of teaching Science to VI class with E-Content to experimental and through Conventional Strategy to control group. During the third stage i.e. post-test stage, the students were post-tested on achievement in Science just after the treatment so as to determine the effect of treatment.

Results

The first objective was to compare mean score of Achievement in Science at Pre and Post stages of E-Content Group. The data were analyzed with the help of correlated t-test. The results are given in Table 4.1.

Table 1.1: Testing-wise M, SE, r and Correlated t- values of Achievement in Science

Testing	Mean	SE	r	Correlated t- value
Pre-test	46.63	1.76	0.98	31.10 **
Post-test	63.63	1.31		

** Significant at 0.01 level

From Table 1.1, it is evident that the correlated t-value is 31.10 which is significant at 0.01 level with $df = 29$. It reflects that the mean scores of Achievement in Science at Pre-test and Post-test stages of E-Content Group differ significantly. Thus, the null hypothesis, namely, there is no significant difference between mean scores of Achievement in Science at Pre-test and Post-test stages of E-Content Group is rejected. Further, the mean score of Achievement in Science at Post-test stage is 63.63 which is significantly higher than the mean score of Achievement in Science at Pre-test stage which is 46.63. It may, therefore, be concluded that the E-Content was found to enhance Achievement in Science of students.

OBJECTIVE 2: REACTION TOWARDS E-CONTENT

The second objective was to study the Reaction towards E-Content of Experts and Students. The data were analyzed separately by computing mean and coefficient of variation. The results are given in Table 1.2.

Table 1.2: Mean and CV of Reaction towards E-Content of Experts & Students

S. No.	Groups	Mean	CV
1.	Experts	96.85	8.0 %
2.	Students	96.83	7.85 %

For experts the Reaction towards E-Content Scale consisted of 27 statements. There was a five point scale against each statement. Thus, the scores could vary from 27 to 135. The score falling between 81 and 135 indicated a favourable reaction towards different aspects of E-Content. The mean score of Reaction towards E-Content was 96.85 (vide table 1.2). It reflects that on the

whole Experts had a favourable Reaction towards different aspects of E-Content. Further, the coefficient of variation was 8.0 percent which is quite low. It shows coherence on reaction towards different aspects of E-Content of Experts.

The Reaction towards E-Content Scale for students consisted of 25 statements. There was a five point scale against each statement. Thus, the scores could range between 25 and 125. The mean score of Reaction towards E-Content was found to be 96.83 (vide table 1.2). It falls between 75 and 125, indicating favourable reaction towards different aspects of E-Content by students. Further, the coefficient of variation was 7.85 percent which is quite low. It shows coherence on reaction towards different aspects of E-Content of students.

OBJECTIVE 3: COMPARISON OF ADJUSTED MEAN SCORES OF ACHIEVEMENT IN SCIENCE OF E-CONTENT GROUP AND CONVENTIONAL STRATEGY GROUP BY CONSIDERING PRE-ACHIEVEMENT IN SCIENCE AS COVARIATE

The third Objective was to compare adjusted mean scores of Achievement in Science of E-Content Group and Conventional Strategy Group by considering Pre-Achievement in Science as covariate. The data were analyzed with the help of One Way ANCOVA. The results are given in Table 1.3

Table 1.3: Summary of One Way ANCOVA of Achievement in Science by considering Pre-Achievement in Science as covariate

Source of Variance	df	SSy.x	MSSy.x	Fy.x - Value
Treatment	1	2147.36	2147.36	372.38**
Error	57	328.70	5.77	
Total	59			

** Significant at 0.01 level

From Table 1.3, it is evident that the Adjusted F – Value is 372.38 which is significant at 0.01 level with df = 1 / 57. It shows that the adjusted mean score of Achievement in Science of students taught science through E-Content and those taught the same topics through Conventional Strategy differ significantly when groups were matched with respect to Pre-Achievement in Science. Thus, the null hypothesis that there is no significant difference in adjusted mean scores of Achievement in Science of E-Content Group and Conventional Group when Pre-Achievement in Science is taken as covariate is rejected. Further, the adjusted mean score of Achievement in Science of E-Content Group is 62.35 which is significantly higher than those of Conventional Strategy Group whose adjusted mean score of Achievement in Science is 50.25. It may, therefore, be said that the E-Content was found to improve Achievement in Science significantly higher in comparison to Conventional Strategy when groups were matched on Pre-Achievement in Science.

Discussion of the Results

The present study showed that the E-Content improve Achievement in Science significantly higher in comparison to Conventional strategy when groups were matched on Pre-Achievement in Science. This study's finding is supported by the findings of previous studies in which students learned academic material (subjects) using Multimedia Program performed significantly better

than those taught using the Conventional Strategy, **Nimavathi, V. and Gnanadevan, R. (2008)** found that a Multimedia Program was effective in improving students' understanding of academic material. Also, **Jyothi, K.B.S. (2007)** claimed that Computer Based Learning had a significantly better effect than Traditional Instruction on learning. In addition, these findings are consistent with **Jayaraman, S. (2006)**, who found that the computer based Multimedia Learning Packages were effective on performance and behavioral outcomes of students of different age groups, **Sharma, A. and Sansanwal, D.N. (2002)** who found that Video-based Instructional Strategies for Teaching Science were effective on achievement in science of class IX students, **Panda, S.C and Chaudhury, J. (2000)** who found that Computer Assisted Learning (CAL) was very effective in Achieving Higher Cognitive Skills among students. Researcher gives the fact that the E-Content Strategy has promoted learning because it encourages students to take an active role in the learning process and have better control over their education. However, the overall value of E-Content in schools depends on: level of education; cost; availability of support, maintenance, and software; suitability and availability of curriculum; and national E-Content Strategy and commitment.

Computers are highly promising educational tools, but it is the way computer are used rather than the actual machines themselves that contribute to learning. Researcher is of the opinion that effectiveness of E-Content improved student learning as demonstrated by the present study may be attributed to the software used in the experiment and the way it was used. The software used in the study was developed by the researcher as no software was available to serve the purpose. Educational software development is not the task of an individual. It requires a team effort and host of resources. In spite of these limitations, software used in the experiment proved effective for student learning as compared to Conventional classroom strategy and both experts and students have shown favourable reaction towards developed E-Content. Review of studies showing the reaction of experts and students towards developed software by **Prabhakar, S. (1995)**, **Khirwadkar, A. (1999)**, and **Vekaria, V.J. (2002)** found precedents in support of developed software for Science.

Conclusions and Suggestions

This showed that the E-Content strategy has enhanced the achievement of students in science of E-Content group and both experts as well as students were having favourable reaction towards different aspects of developed E-Content. Further E-Content has improved the achievement significantly higher in comparison to Conventional Strategy when groups were matched on pre-achievement in science.

In India, the use of E-Content in education has remained almost completely unexplored. Very few numbers of studies have been conducted in this direction. Based on the findings of the current study, some of the suggestions in the area of E-Content are identified as follows:

1. Potential of E-Content should be utilized to enhance quality of education at school level.
2. Government should also establish E-Content portal in various organisations such as Institutes of Education and Research, Curriculum Wing, Test Book Boards, Curriculum Research and development Centers, and Education University. These departments may conduct research studies and make efforts to develop E-Content software.
3. Private organizations can step forward to educational software development if copyright act prevails and a system to check the software piracy is established.
4. Government should offer incentives for teachers who increase their proficiency in computer studies and contribute to enhance E-Content.

5. There is a scarcity of literature about E-Content in the libraries of our institutions. Steps should be taken to meet the needs of the literature. There are a number of E-Content learning journals, which can be purchased or subscribed for the libraries.

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MARINE BIODIVERSITY OF INDIA : ONE OF THE MOST PRODUCTIVE BIODIVERSITY IN THE WORLD.

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Introduction

India is one among 12 mega biodiversity countries and 25 hotspots of the richest and highly endangered eco-regions of the World. Among the Asian countries, India is perhaps the only one that has a long record of inventories of coastal and marine biodiversity dating back to at least two centuries. In terms of marine environment, India has a coastline of about 8000 km, and Exclusive Economic Zone (EEZ) of 2.02 million km² adjoining the continental regions and the offshore island and a very wide range of coastal ecosystem such as estuaries, Lagoons, mangroves, backwaters, salt marshes, rocky coasts, sandy stretches and coral reefs, which are characterized by unique biotic and abiotic properties and processes. Mangroves are among the most productive and biologically diverse ecosystem in the World. Marine biodiversity is mostly studied in waters along the coast and around the islands. Coastal zone represents 18% of the Earth surface providing space to about 60% of the human population. It is very important bio-geochemically as it buries and mineralizes 89 to 90% of organic matter and acts as a sink for an estimated 50% of the global carbonate deposition. It has a high biological potential as it provides feeding, nursery and spawning grounds to a rich variety of marine life forms.

Status of the Indian Marine Biodiversity

Like its rich terrestrial biodiversity, India is equally rich in marine biodiversity. India's coastline which is about 8000 km in length including those of islands of Andaman & Nicobar groups and Lakshadweep, harbours unique marine habitats which display a wide variety of marine biological diversity. The variety of coastal ecosystems along Indian coastline includes estuaries, lagoons, mangroves, backwaters, salt marshes, rocky coasts, sandy stretches and coral reefs. These marine habitats play a very significant role in ecological and economic stability of the country.

The coastal waters along the East and West coast of the country and also around the two island groups have a plethora of marine species. The marine floral diversity includes 844 species of marine alga (sea weeds) belonging to 217 genera, 14 species of sea grasses and 69 species of mangroves. The marine faunal diversity includes a wide variety of life forms. The Indian coastal water harbours 451 species of sponges, more than 200 species of corals, more than 2900 crustaceans, 3370 species of marine mollusks, more than 200 species of bryozoans, more than 1300 marine fishes, 26 species of sea snakes, 5 species of sea turtles and 30 species of marine mammals including dugong, dolphins, whales etc. In addition a wide variety of sea birds can be observed around the coast.

Indian Marine Ecosystems

The marine environment in India consists of a variety of ecosystems occurring along the coastline which borders the Indian peninsula and encircles the two major island groups-Andaman & Nicobar Islands and Lakshadweep. The main land coast is divided into the West coast and the East coast. The coastal zone of India exhibits a wide range of coastal ecosystems such as estuaries, lagoons, mangroves, backwaters, salt marshes etc. A brief description of major marine ecosystems of India is given here.

(i) Estuarine Ecosystems:

Estuaries mark the transitional zone between the lower tidal region of a river and the marine environment. They are sheltered coastal water bodies which act as nutrient traps, shelter and nursery for a wide variety of marine life forms. They are very important from commercial, industrial and recreational point of view. There are 14 major estuaries on the East coast and 16 on the West coast. Major east coast estuaries are Adyar, Agniyar, Corum, Edaiyur, Ennire, Godavari, Hoogly, Kallar, Kavery, Kollidam, Krishna, Rushikulya, Uppanar and Vellar. The major West coast estuaries are Asthamudi, Amba, Beypore, Gangolli, Kali, Kaninamkulam, Korapuzha, Madavi, Mahi, Mahim, Netravathi, Gurupur, Pavenje, Periyar, Vembanad and Zurai. The total estimated area under the estuaries in India is approximately 2 million ha.

The estuarine ecosystems are under heavy anthropogenic pressures mainly due to urbanization and industrialization. Dumping of sewage, inflow of municipal waste water and industrial effluents into these ecosystems. The aquaculture activities around estuaries have also resulted in heavy accumulation of heavy organic and inorganic pollutants.

(ii) Lagoon Ecosystems:

A lagoon is a shallow water body along the low lying coast separated from the ocean by a barrier but also connected to the ocean by one or a few restricted inlets. There are 8 major lagoons on the East coast and 9 on the West coast. Major lagoons on the East coast are Bende, Chilka, Gulf of Mannar, Muthupet, Muthukadu, Nizampatnam, Pennar and Pulicat. Lagoons on the West coast are Asthamudi, Ettikulam, Lagoons of Bombay coast, Lagoons of Lakshadweep atolls, Paravur, Murukumpuzha, Talapady, Veli and Vembanad. Lagoon ecosystems are also getting adversely affected by the urbanization, industrialization and aquaculture activities in the same ways as estuarine ecosystems.

(iii) Seagrass and Seaweed Ecosystems:

Seagrasses are monocotyledonous plants found submerged in shallow and sheltered localities of sea, gulf, bays, backwaters and lagoons. They play an important role in the conservation of many endangered species like Dugong, marine Turtles etc. About 14 species are reported along the Indian coast. In Andaman & Nicobar Islands, 9 species are found extensively.

Seaweeds on the other hand are found mostly on flat and rocky coastal wetlands which are submerged during high tides and subsequently get exposed during low tides. They are found in abundance on the West coast, Andaman & Nicobar Islands and Lakshadweep, but less frequently along the East coast. About 120 species of seaweeds have been recorded in the coastal region of India. Seaweeds are known to remove or consume the nutrients like nitrogen and phosphorus from domestic sewage and other effluents, thus, reducing eutrophication. They contain bioactive substances and are important sources of fertilizers and many other commercially important substances.

(iv) Mangrove Ecosystems:

Mangroves are salt tolerant forest ecosystems found mainly in tropical and sub-tropical inter-tidal regions of the world. They are trees or shrubs that have the common trait of growing in shallow and muddy salt water or brackish water, especially along quiet shorelines and in estuaries. They exhibit remarkable capacity salt water tolerance.

The most dominant and single large mangrove chunk of the world is situated in the Ganga-Brahmaputra-Meghna deltaic regions or estuarine mouth in both India and Bangladesh. In India, 69 species of mangroves belonging to 42 genera and 27 families are found. Area under mangrove cover in India represents about 2.6% of world's total mangrove area. As per the latest satellite data based survey done by the Forest Survey of India, mangrove cover in India is 4,461 km². Of this, about half of the mangrove cover is in Sunderbans of West Bengal (2,120 km²), followed by mangrove cover in Gujarat (960 km²) and Andaman & Nicobar Islands (671 km²).

Mangroves protect shoreline from the action of waves, storms and cyclones, thus prevent coastal erosion. They provide shelter and breeding ground to a wide variety of marine life forms and also act as nursery to juveniles and larvae of many marine animals. Mangrove ecosystems play an important role in the economy of people living around the coastal areas. They provide a wide variety of goods and services including wood, fuel and support for fishing, aquaculture and tourism.

Mangrove ecosystems are considered as one of the most productive ecosystems on earth, yet they are under serious threats from anthropogenic activities. Development works along the coast, urbanization, flow of pesticides and insecticides from the agriculture fields, over-exploitation, heavy tourism etc lead to degradation in these unique ecosystems.

(v) Coral Reef Ecosystems:

Corals are tiny organisms belonging to group Anthozoa of phylum Cnidaria. These animals are capable of secreting a massive calcareous skeleton and collectively deposit calcium carbonate to build ornate and sometimes large colonies. Concerted growth of a variety of corals in a localized habitat gives rise to a coral reef, a complex system which consists of a variety of animals including corals and plants. The combinations of shapes and colours as well as the variety of corals and other animals in a reef make it a fascinating and unique ecosystems.

There are mainly three types of coral reef formations-fringing reefs, barrier reefs and atolls. In India, all three types occur. Fringing reefs are found in Gulf of Mannar, Gulf of Kachchh and Andaman & Nicobar Islands. Barrier reefs are reported on the western side of Andaman group of Islands and atoll formations are common in Lakshadweep islands. Coral reefs are among the most dynamic and productive ecosystems of the World. They prevent coastal erosion, act as primary producer and are important breeding and nursery ground for shell fish. They provide shelter to juvenile fish and larvae of many organisms. They also provide sustenance and employment to people living around.

Coral reefs are affected by both natural as well as anthropogenic threats. Natural threats include damage by storms, hurricanes, strong waves, diseases like white-band disease, predation by the 'crown of thorns' starfish and bleaching due to rise in sea surface temperature. Coral reefs are very fragile ecosystems and sensitive to changes in surrounding environment. Therefore, increased sedimentation and siltation, oil spills from motorized boats and ships, faulty anchorage of boats and ships, destructive fishing methods etc cause damage to reefs. Deforestation, faulty agricultural practices, sewage, eutrophication etc are also responsible for degradation of coral reefs.

Threats and Prospects of Indian Marine Biodiversity

Owing to its long coastline and continuous increase in population in the coastal areas and islands, the marine biodiversity in India is facing serious anthropogenic threats. Large scale fishing, over-exploitation of marine resources, pollution and marine litter, physical alteration of watershed and coasts, land-use changes, faulty land-use practices, introduction of exotics, species invasion, increasing tourism, construction along the coasts leading to increased sedimentation, excessive use of fertilizers and chemicals in area near coasts etc are some of the anthropogenic activities leading to degradation, fragmentation and loss of habitats and damage to marine biodiversity.

India is a signatory to various International instruments and conventions related to the marine environment, notable of which are the UNCLOS, IWC, CBD, CMS, Tuna Commission, International Oceanographic Commission, Antarctica treaty etc. and therefore, has an obligation to develop proper conservation and management of the marine habitat and its management. However, it appears that marine conservation efforts have not been given due importance in India in spite of the fact that about 30% of country's population is supported by the Indian coastline. The main constraints in protection and conservation of marine diversity include a long coastline, poor infrastructure available with enforcement agencies, lack of coordination among enforcement agencies, poor awareness among masses about the importance of marine biodiversity and ecosystem, inadequate information on status of marine diversity due to lack of proper survey and monitoring mechanisms, no mechanism for sharing of information among the survey and research organizations, lack of effective management plans and practices, inadequate involvement of people, poor implementation of eco-development plans, inadequate funds for scientific research and management, excess tourism without study of carrying capacity of marine areas and without following ecotourism norms etc.

Main Acts and Rules to regulate the coastal and marine activities in India include Indian Fisheries Act 1899 and its amendments in 1920 and 1980, Indian ports Act 1902, Merchant Shipping Act 1974, Wildlife Protection Act 1972, Water Prevention and pollution Control Act 1974, Indian Coast Guard Act 1974, Marine Zones of Indian Act 1981 and the environment Protection Act 1986.

There are presently only five marine protected areas including four marine National parks and one marine sanctuary through there needs to be more marine protected Areas. Management in these Protected Areas is regulated by the Wildlife protected Act, 1972 and there is no separate Regulation/Act for marine life protection. Coastal Regulation Zone notification 1991 under the Environment Protection Act 1986 is an effective means to conserve coastal areas by prohibiting construction activities along the coast but its implementation has been poor in many areas.

One must understand various aspects of coastal ecosystems-the environmental process, functioning, flow of marine resources and various conflicts before drawing a strategy of marine biodiversity conservation. Proper legislative measures, socio-economic analysis and surrounding terrestrial areas are required to develop a sound marine biodiversity conservation strategy. Scientific research, awareness generation and involvement of local community should be an integral part of such strategy.

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COMPARATIVE STUDY ON PHYSICAL CHARACTERISTICS BETWEEN TWELVE-YEAR OLD NAVODOY STUDENTS OF BIHAR AND WEST BENGAL

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Abstract

A physical characteristic incorporates many physique-related as well as physical performance-related characteristics. The purpose of this study was to compare selected physical characteristics of twelve-year old Navodoy students of Bihar and West Bengal. Ninety two twelve-year students from Katihar and Kishanganj Navodoy school of Bihar and ninety twelve-year old boys from Kalyani and Lakshmikantapur Navodoy schools of West Bengal were the subjects of the study. Selected variables for this study were height, weight, body mass index (BMI) flexibility and muscular strength-endurance (MSE). The physical characteristics were measured following appropriate procedure. Inter-group comparison of data showed significant difference ($P < 0.05$) in flexibility and MSE, however, in height, weight and BMI the twelve-year Navodoy students of Bihar and West Bengal did not differ. The conclusion of the study was that the twelve-year Navodoy students of Bihar and West Bengal did not differ in physique-related physical characteristic, but they differed in performance-related physical characteristics.

Key words: *Physical characteristics, student, Bihar, West Bengal*

Introduction

Participation in physical activities during childhood can aid the development of motor abilities (Okely et al., 2001), lays the foundation for good health (Bar-Or O, 1994), especially, the cardiovascular health (USDHHS, 2010). Human body is the most studied object of science (Harris et.al; 2002). Scientist from the field of biological sciences use to study the human body in different points of view. Sports scientists consider human body as a machine that gives performance during various physical activities. Therefore physique plays an important role to understand and analyze sports performance. Flexibility measures mobility or range of motion of one or multiple joints of the body. Muscular strength measures amount of muscle contraction force in a single effort. Muscular strength- endurance measures the ability of muscle contraction against a resistance for a given period of time. Cardio-respiratory endurance measures circulo-respiratory systems' ability to supply O₂ during sustained physical activity (Lacy & Hastad, 2006).

Physical educationists, now-a-days, consider human body as the manifested from an individual's total health in general, and organic health in particular (Lacy & Hastad, 2006).

Health Related Physical Fitness (HRPF) consists of those components of physical fitness that have a relationship with good health (ACSM, 1998).

Components of HRPF are – Body Composition, Muscular Strength- Endurance, Flexibility, Cardio-respiratory Endurance, and Muscular Strength. From 1980s onwards, the prevalence of childhood over-weight and obesity has increased at an alarming rate (NCHS, 2001). However, on participation in physical activities, a group of experts from various countries has generated a consensus statement, which includes the following guidelines for adolescents (Sallis & Patrick, 1994).

1. All adolescents should be physically active daily, or nearly every day, as part of play, games, sports, work, transportation, recreation, physical education, or planned exercise; in the context of family, school, and community activities.

2. Adolescents should engage in *three or more sessions per week* of activities that last twenty minutes or more at a time and that require *moderate to vigorous* levels of exertion.

The purpose of the study was to observe the difference, if any, on selected parameters of physique and performance related physical characteristics of Bihar and West Bengal Navodoy School students.

Methods and Materials

One hundred and eighty two students of twelve-year old were the subject of this study. Data of this study were collected during the 1st term examination of the school. Ninety two twelve-year students from the Kishanganj and Katihar Navodoy Schools of Bihar and ninety two twelve-year old boys from Kalyani and Lakshmikantapur Navodoy Schools of West Bengal were selected for the study.

Parameters of physique category were height, weight and body mass index (BMI). Performance related physical characteristics parameters were flexibility and muscular strength endurance (MSE). Height was taken with a stadiometer and weight with a standard weighing machine. BMI was predicted from weight and height ratio (kg/m^2) of each subject. Mean, standard deviation (SD) and independent t-test were used for assessment and interpretation of data. For statistical calculations SPSS software version 11.5 was used.

Results and Discussion

Table-2 represents the description of data of Bihar and West Bengal. Results of physique parameters with respect to norm i.e.; height, weight and BMI have been presented in mean and SD.

Table – 1: Mean, SD and t-ratio on Physique Parameters

Parameters	Bihar		West Bengal		t-value	Sig. Level
	Mean	SD	Mean	SD		
Height (cm.)	149.29	6.98	150.14	10.43	0.648	0.518
Norm†	147.00		147.00			
Weight (kg)	37.47	5.95	36.83	10.31	0.513	0.609
Norm†	37.00		37.00			
BMI (kg/m^2)	16.74	1.82	16.06	2.37	2.159	0.032
Norm†	17.12		17.12			

ns = not significant, † = ICMR (1990)

In height parameter the students of Bihar was 149.29 ± 6.98 cm and the students of West Bengal was 150.14 ± 10.43 . No significant difference was found between the students of Bihar and West Bengal.

In case of weight the students of Bihar was 37.47 ± 5.95 kg and the students of West Bengal was 36.83 ± 10.31 . There was no significant difference between the Navodoy school students of Bihar and West Bengal.

In case of BMI the students of Bihar was 16.74 ± 1.82 kg/m² and the students of West Bengal was 16.06 ± 2.37 . There was a significant difference between the two groups.

For height, weight and BMI the standard with which the data of this present study compared was ICMR (1990). The height of Navodoy school boys in Bihar and West Bengal was significantly higher than our national standard. Their weight was at par with the standard. In the case of BMI, the difference was found to be significant in Navodoy school students of Bihar and West Bengal in this measurement, and the students of Bihar were superior than their Bengali counterpart.

Table-2 shows the data (in mean and SD) of performance related physical characteristics and the 't' result with respect to norm.

Table – 2: Mean, SD and 't' results of Motor Performance Parameters

Parameter	Bihar		West Bengal		t-value	Sig. Level
	Mean	SD	Mean	SD		
Flexibility (cm)	10.90	5.35	21.24	6.88	11.33	.000
Norm#	21		21			
MSE (no. / min)	18.27	3.78	29.18	7.12	12.94	.000
Norm#	20		20			

President's Challenge Norm (2005), MSE = Muscular strength-endurance

In case of flexibility, it was for the students of Bihar 10.90 ± 5.35 cm and for the students of West Bengal 21.24 ± 6.88 . The 't' result shows that there was significant difference. In muscular strength endurance, the students of Bihar were 18.27 ± 3.78 and the students of West Bengal were 29.18 ± 7.12 . Therefore, the difference between the students of Bihar and West Bengal were statistically significant.

Flexibility and muscular-strength endurance was compared with President's Challenge (2005). In flexibility it was observed that our Navodoy school boys in Bihar are lower but the Navodoy school students in West Bengal are at par with the age matched children of the U. S. standard. In muscular-strength endurance Navodoy school boys in Bihar were lower than the age-matched U. S. Boys and the Navodoy school boys were superior when it was compared with President's Challenge norm (2005).

Conclusion

From the findings of the study following conclusions are drawn.

On Physique:

Though the height and weight of the Navodoy students of Bihar and West Bengal did not differ, but the students of Bihar were superior inn BMI.

On Health-Related Physical Fitness:

The students of West Bengal Navodoy School were superior in Flexibility and Muscular Strength- Endurance in compare to the students of Bihar Navodoy School.

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POSITIVE PSYCHOLOGY AT THE BACK DROP OF INDIAN CULTURAL TRADITION: A REVIEW

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Abstract

Positive Psychology is a contemporary psychology that focuses on human strengths rather than the pathology, evolved in the stream line of western psychological legacy. The positive psychological aspects include a range of traits or characteristics but the four basic personal traits are recognized as contributing to positive psychology: subjective well being, happiness, optimism, and self determination (Seligman & Csikszentmihalyi, 2000). This paper attempts to discuss the correspondence between these positive psychological aspects and other related characteristics like motivation ,self-development ,self-realization and their respective view in the Indian Cultural tradition as it is conceptualized in its various schools of Indian thought developed through the ages of the past. As it is said ...'almost 35 centuries before the science of psychology turned from a focus on the pathological to the positive dimensions of human experience (Seligman & Csikszentmihalyi, 2000), India had developed sophisticated ideas about human personality, purpose and happiness (Roeser, R.W. (2005)., this paper also tries to identify these positive psychological aspects of human strength in varied literature in which they are envisaged at the light of the Indian cultural context.

Positive psychology is an emerging movement within the contemporary western psychological tradition which demands the concentration on the human strength, its enormous potential and intrinsic well-being rather than the pathology of human behavior. The aim of positive psychology is to catalyze a change in psychology from a preoccupation only with repairing the worst things in life to also building the best qualities in life (Seligman, 2002). This discipline strives hard to establish the limitless realms the human potential could reach out by amplifying the strengths and not on repairing the personal weaknesses. Therefore the psychology ... a science of human beings should include; to understand what is and what could be (Seligman, Csikszentmihalyi, 2000). Subsequently, the discipline of positive psychology is shaping itself in multiple ways equipped to develop the positive traits characterized by positive psychology, moving from describing and defining the meaning of good life to exploring ways to achieve them (Baumgardner, Crothers, 2009). As the field of positive psychology is marching forward discovering the wide range exercises and techniques to foster those human virtues or strengths that combat against the mental illness and distortions as a task of prevention on one end, on the other end , the many eminent psychologists are examining and evaluating the relevance and the applicability of the Indian psychology , a prominent chunk deeply rooted in the Indian tradition evolved through centuries, to the contemporary western psychological faculty.

At this common ground, this paper attempts to discuss the highlights of the correspondences of the positive psychological aspects at the subjective level in the Indian psychology which is entrenched in the wide-ranging spectrum of Indian Cultural tradition. This

paper also tries to recognize the relevance of the Indian Psychology and its potential contribution it can offer to the field of positive psychology.

The field of positive psychology is at the subjective level is valued subjective experiences: well-being, contentment and satisfaction (in the past); hope and optimism for the future; and flow and happiness (in the present). At the individual level, it is about the positive individual traits; the capacity for love and vocation, courage, interpersonal skill, aesthetic sensibility, perseverance, forgiveness and originality, future mindedness, spirituality, high talent and wisdom. At the group level, it is about civic virtues and the institutions that move the individuals toward better citizenship: responsibility, nurturance, altruism, civility, moderation, tolerance and work ethic (Seligman, Csikszentmihalyi, 2000). Within the field of positive psychology, there are four personal traits contributing to the positive psychology; subjective well-being, happiness, optimism and Self-determination (Seligman, Csikszentmihalyi, 2000).

The single term "Indian cultural tradition" is highly extensive, comprehensive and collectivistic, encompassing various cultural traditions that had emerged, nurtured, institutionalized, from the ages very antique. If the cultural tradition of India which has an antiquity of apparently three millenniums, is thought of as a rope, its philosophical, spiritual and religious traditions may be considered to be the different strands of the rope interwoven inseparably with each other its permeating impact from the mundane everyday living to the heightened level of spiritual enlightenment, both at the individualistic and collectivistic level. It is inclusive of diverse schools of thought, Hinduism with its different sects, Buddhism, Jainism that they share the similar basic constructs.

The positivistic western psychology has failed to function in certain aspects of human pain and suffering. The proposition of the human being as a mere psycho-biological being has hindered to lift the human mind above the materialistic perspectives, otherwise capable of reaching the higher spiritual boundaries. The concept of human being as epicenter of the universe and container of myriads of psychological attributes (e.g., abilities, motives, interests, goals, dispositions, cognitions, aptitudes) is flawed as it does not capture the totality of existential context of life (Dalal & Misra, 2010). The theories which are developed within this positivistic framework to a larger extent are short of considering the human affirmative phenomenon such as love, compassion, values, spirituality, suffering, authenticity, collectivism (Dalal & Misra, 2010). Though the positive psychology recognizes the above virtues as human strength, being emerged as a movement within the frame work makes it unequipped to handle the inner, personal and subjective concerns of human nature. In that case, the positive psychology has abundant opportunities to discover its applicability in the light of the Indian psychology and extend its arms to share the wisdom of the same, for the reason that it can be pertinent at the global context. The theories which are developed within this positivistic framework to a larger extent are short of considering the human affirmative phenomenon such as love, compassion, values, spirituality, suffering, authenticity, collectivism (Dalal & Misra, 2010). Though the positive psychology recognizes the above virtues as human strength, being emerged as a movement within the frame work makes it unequipped to handle the inner, personal and subjective concerns of human nature. In the Indian psychological tradition, the inner state of an individual is the primary concern of study which revolves around the consciousness being the principal focus. In the long history of the Indian civilization there have been, no doubt, materialist or agnostic schools, but the vast majorities of Indian thinkers take consciousness, rather than matter as the basis of reality (Cornelissen, 2001). This consciousness is not an object but state of being which is described as *sat-chit-ananda* a state of absolute bliss, consciousness and joy, marked by an unity with absolute existence and is found unanimously in every school of thought of Indian traditional spectrum. The Mandukya Upanishad in Atharva Veda expounds the states or *avasthas* of consciousness. There are four states in which man perceives the world,

jagrut (waking), *swapna* (dream), *sushupti* (dreamless sleep) and *turiya* (the fourth state, the illumined or blissful). The prime focus of the myriad of rigorous intellectual practices that have evolved even from the very beginning of the Indian tradition, one among them is the *yoga* which means “to unite “ is to attain the fourth state, the *turiya* the highest state of consciousness, a state marked dissoluble unity.

In Buddhism, the stream of consciousness is referred as the basis of subjective feeling of continuity and identity which affects our perceptions, thoughts, actions and emotions (Dalal & Misra, 2010). According to Jainism, consciousness is the substratum, the essence of life and the ground condition of all its physical, vocal and psychic activities, viz feelings, volition and different forms of cognition and it is called the internal psychic vitality which has two aspects or facets: as capacity or power and as function or manifestation (Jain, 2008).

The Indian tradition blossoms out of the consciousness rather than the materialistic reality is because it acknowledges the impermanence of the reality. The materialistic reality is perceived within the limits of our sensory perceptions and the mental conditioning. Materialistic explanations tend to trivialize, distort or even completely miss out on inner values, beauty, love, freedom, -- in other words on all those more subtle aspects of reality that for most people make up the real meaning and value of life (Cornelissen, 2001). The Indian thought demands to look beyond the materialistic reality uncovering the outer sheaths and look for the more subtle meaning and value the existence. This transcendental state of pure consciousness surpasses all materialistic implications. In such a state, the reference point is grounded not on an individual, suffering due to a conflict or distortion from a world view, but is widened in a holistic view, to deliver endurance to attain the superior goals in the cycle of life. The transcendental view distributes the locus of control where in the *Self-ego* is not burdened with the attachment of cause- effects or fruits of all the actions. In Bhagavad Gita, there are extensive explanations describing the transcendental state (*sthithaprajna*), and the verse 56 of chapter 2 states that, “One whose mind is undisturbed by without desires for happiness, free from attachment, fear and anger, that sage is known as steadfast in consciousness.” Hence any mind which has retreated from any attachments, where there is no conflict arising due to dualities attains the pristine state.

Regarding the life's motives the Indian tradition has conceived a hierarchy of life's pursuits or goals as four classes starting from

Kama, the need to fulfill the physical self, the pursuit of pleasures,

Artha, the need to fulfill the psychological self, the pursuit of wealth and power, which involves of earning wealth and gaining power in order to fulfill the needs of the physical self,

Dharma, the need to fulfill the social self, the pursuit of righteousness, which involves social conduct and ethical behavior, outlines the dispatch of social duties as a student, householder and a community member (Roeser, 2005). Furthermore, it sets up the code of conduct for pursuing the first two goals.

Moksha, the need to fulfill the spiritual self, the pursuit of liberation from the bondage of this life and this pursuit is placed at the highest or the ultimate level of attainment.

Though the hierarchy of needs have been orchestrated in above manner where liberation is placed at the highest order, the Indian thought does not relinquish the pursuit of the first three, rather than fulfilling the needs of sensual pleasures and wealth in the ethical manner is a way to attain liberation. In Indian tradition, unlike the western the needs of sensual pleasures can be pursued without guilt according to the socially and morally accepted “*Dharma*” and never demands to retreat from them but pass through them with “detachment” on the worldly objects and experiences because the satisfaction and happiness they deliver is transient and momentary. The Bhagavad Gita, the sacred text revolves around “detachment”, advocates to be the master of ones' actions and not the master of fruit of one's action, just performing one's duty without

pondering over the consequences. In the Bhagavad Gita, Chapter 5, text 10 speaks about the detachment as a beautiful metaphor,

*brahmany adhaya karmani
sangam tyaktva karoti yah
lipyate na sa papena
padma-patram ivambhasa*

which means, “One who performs his duty without attachment, surrendering the results unto the Supreme God, is not affected by sinful action, as the lotus leaf is untouched by water”. So the goals of life *Artha* and *Kama* can be pursued concomitantly, contained within the ethical principles of *Dharma* which would promise a fulfilling life of contentment and happiness.

According to Buddhist school of thought, the correct understanding of consciousness (*Vinnana*), can lead to enlightenment and freedom. If a person through proper understanding of consciousness, can eliminate the motive commitments to the world of experience, that person will at the same time be spewing out attraction, revulsion and confusion (Kalaupana 2008). The central aspect of Buddhist philosophy is “*dhukka*” or “suffering” which means “unsatisfactoriness”. The four noble truths constituted by Buddha outlines that, life is full “*dhukka*”, it is caused because the mind has the tendency to crave for and cling to certain sensations, beliefs, perceptions, expectations, opinions, rituals, images of self and models of reality. It is caused because the mind always resists to change and it is not ready to lose its clinging and one may suffer from “*dhukka*”. The fourth noble truth is to get free from craving and defilement, the eightfold path (Milukas, 2008). The eightfold path includes right view, right intention, right speech, right action, right livelihood, right effort, right mindfulness and right concentration. It is practical guideline to free from suffering and the ultimate aim is to attain the true understanding, the transcendental state. Buddhist psychology acknowledges the state of transcendence, and it strives to understand the nature of the state and tries to attain that state with various practices (Rao, 2005).

Transcendence is the common undercurrent in all major schools of Indian thought liberating the individual from the materialistic reality to attain the consciousness in its pure form. It helps to rise above the constraints of body-mind complexities. Transcendence is movement from the mundane to the sublime, from *samsara* to *nirvana*, or in the Vedanta jargon, from *vyavaharika* to *paramarthika* states, though variously described in Buddhism as *nirvana*, in Yoga as *kaivalaya* and Advaita Vedanta by Sankara as *jivamukti* (Rao 2005). This virtue, transcendence which is based on the notion that there is higher meaning or purpose other than mere existence is classified as the one six important positive traits that form the basis for positive psychological research, resulted from examination of the religious and philosophical traditions of China (Confucianism and Taoism), South Asia (Buddhism and Hinduism), and the West (Athenian philosophy, Judaism, Christianity, and Islam) (Dahlsgaard, Peterson, Seligman, 2005).

The attainment of liberation or *moksha* has the central concern of Indian traditional systems from ages very ancient. It has generated various techniques and practices, that can be followed to approach salvation, the three main groups being *Karma* (through the action), *Jnana* (through enlightenment or knowledge) and *Bhakti* (through love or devotion). The three paths prescribe different ways, though overlapping occurs, to accommodate the different faculties and nature of the seeker. According to the Indian systems of thought, the life is regarded as the soul's (*atman*) journey to get united with the absolute reality or *Brahman*, the state of pure consciousness and the problems and sufferings caused during its journey is considered to be the obstacles in the way to liberation. Eradicating the ignorance which causes suffering, with true knowledge, delayering the outer sheath (*koshas*) of this materialistic reality is chief purpose of the yoga and meditative practices, rituals, constructs, sacred texts and scriptures conformed in the Indian tradition developed through centuries old schools of thought. All these endeavors are directed towards the inner self, endocentric and not exocentric, aimed to gain control over one's

self, its emotions, rather imposing control over the environment or subjugating it, but developing a co –existence with the environment. In its quest for truth, the Indian tradition turning inward, attempts to identify the elements that tend to distort and falsify our general understanding of the world around us (Rao, 2005).

Meditation is considered to be the first stage of yoga and practice of yoga is common to Buddhism, Jainism and Hinduism. The yoga and meditative practices are proved to be useful gaining over body and mind control. These kind of psychotherapeutic practices whose optimal purpose of practice is to attain this highest state of consciousness can be utilized to treat the psychopathological problems as pure-conscious states are states of realization in which there is no dissociation between belief and behavior, they are necessarily conflict-free states of profound mental health (Rao,2005). In Indian tradition it is believed that the problems of mental illness are caused in the way towards this state of realization and these practices help to handle the mental illnesses, depression, anxiety and failure. Meditation is not simply a psychic development technique as it often assumed. Rather it is a process initiated by focusing attention for a prolonged period on an object or a mental or bodily state. Sustained one pointed attention is believed to lead to a state of absorption in which one experiences expanded awareness that transcends the limitations imposed by the normal psychobiological processes. – an awareness that gives an unbiased knowledge (Rao & Paranjpe, 2008).

Recalling the positive trait subjective well-being, this is defined as a person's cognitive and affective evaluations of his or her life (Diener, Lucas & Oishi, 2000). It means how an individual feels and values about her life. In the Western stream, the Utilitarians were the intellectual forerunners of subjective well-being researchers, focusing on the emotional, mental, and physical pleasures and pain that individual's experience. Unlike, Happiness and well -being according to the transcendental perspective is subjective in the sense that they do not depend on any objective conditions of reality, including one's state of body-mind. Further, transcendent view is rooted in an all-encompassing universal vision (Kumar, 2003).

With these subtle implications of looking beyond the material manifestations and achieving the body –mind coordination channeling through sophisticated practices the constructs of Indian Traditional system are far beyond the concerns of positive psychology. By paving a path to perfection and striving for the cultivation of virtues to attain the ultimate goal, these traditions may be considered as a system of positive psychology (Kumar, 2010). This paper has tried to highlight only very few implications of Indian Psychology, which is rich in content and sophisticated in its methods of investigation and experimentation. Many a body of empirical research and understanding has to be brought in spot light, to provide a promising contribution to improve the human condition.

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ICT AND PARADIGM SHIFTING OF TEACHER EDUCATION

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ABSTRACT:

In almost all sectors of education the role of the teachers is very eclectic; Role of teachers has changed from being transmitter of knowledge to facilitator of the teaching-learning process. Every Nation's future is depends upon the education system of the School and Higher education. There is big responsibility on the shoulder of teachers. Changing Scenario of Student and Societal expectations demands more comprehensive effort from Teachers. Paradigm shifting from Student centred approach to Learner centred approach, Objectivism/Subjectivism to Constructivism to Social Constructivism has transformed role of Teachers. With the growing demands of the Technology in all aspect of life, Education also has significant influence of Information and Communication Technology. There is Paradigm shifting from Chalk and Duster to White board, Note book to Tablet. Techno savvy students demand Techno savvy teacher. There is essential need to integrate technology into classroom as well as outside classroom also to facilitate learning among youngster. Acquisition of ICT skills and incorporate those skills into a new pedagogical approach at all level of learning may help teachers to fulfill demands of the Students and Society.

Keywords: ICT, Paradigm shifting, ICT Skills, Social Constructivism

INTRODUCTION:

Information and communication technologies (ICTs) are a major factor in producing rapid changes in society. It has potential to transform the nature of education. Information and Communication Technology as an educational, Pedagogical, Social and political forces will shape the structure of educational systems across the globe. There are many changes taking place in the all aspect of the life that changes course to prepare students for information and technology based society. Contemporary generation Students have large amounts of information and exposure in an increasingly technological society. This Shifting of shift from teacher-centred instruction to learner-centred instruction is needed to enable students to acquire the new 21st century knowledge and skills. This Paradigm shifting from Student centred approach to Learner centred approach, Objectivism/Subjectivism to Constructivism to Social Constructivism has transformed role of Teachers also. ICTs provide powerful tools to support the shift to student-centred learning and the new roles of teachers and students.

The is big challenge for Teacher Education Institute to assure that the contemporary teachers should well prepared to use new learning methods, processes and materials with the new ICT tools for learning to fulfill demands of the Students and Learners with Paradigm Shifting in Education.

PRESENT SCENARIO OF TEACHER EDUCATION:

There is paradigm shift in Teacher education from knowledge generation to knowledge creator, like Teacher should teach student in such a way that S/he can develop certain skill among students like skill of Scientific attitude, skill of knowledge creation, skill of information access, skill of collaboration, skill of listening, skill of understanding, skill of budgeting, skill of writing, skill of creation etc. Today's generation is more advanced and far ahead than the last generation, their thinking and grasping capacity is very fast. But due to lack of proper guidance, motivation and concern of the parents as well as Teachers may ruin potential of the youth. And the influence of the Television, media and Internet add more into it. One more observation of the research is that Student teachers are very active and enthusiastic at the Pre-service training, it gives promise to education to become good quality of teaching, but somehow they cannot devote their competency to fulfill their promise towards education due to certain reasons like School climate that is quite different from the College Climate, at pre-service level, they have to work as a student and in school they have to play a role of a teacher with lots of responsibility with insufficient salary scale. Due to lack of interaction and collaboration among the teaching staff also let down the morale of novice teacher. Country's future depends upon the future of a youngster and School children and their future largely depends upon the school education and teaching of a teacher. There is big responsibility on the shoulder of teacher education.

According to Dodia (2012) and Swamy (2012), school teachers do not use email, internet to collect information to enhance teaching learning process. They do not have knowledge about subject related educational software, ICT based tools & materials. They do not maintain continuous, positive, constructive feedback to encourage student's participation in ICT based activities, and cannot maintain healthy & social relations with other teachers and students for academic Discussion. Through professional development or retraining the teacher models life-long learning and acquires good ICT skills incorporated into a new pedagogical approach at Pre-service level may help student teachers to furnish with 21st century Techno- savvy and techno-savvy skills. The skills and knowledge of the older teacher then evolves into a rich tapestry of knowledge that can only serve to create fuller teaching styles that will ultimately benefit the student and society.

ROLE OF ICT IN PRESENT EDUCATION SYSTEM:

In present scenario, teachers need to help their students in: how to learn, how to grow in future, how to develop study skills, how to conduct fundamental research, how to examine, evaluate and assess information and also how to question and then dismantle unauthentic structure of knowledge and cognition if need be. This is necessary if the teachers really want to survive in the ICT savvy world of education (Rani and Shukla, 2012).

In almost all sectors of education the role of the teachers is changing from being not only a transmitter of knowledge but also that of facilitator of the teaching-learning process. Owing the onset of information and communication technology (ICT). New applications of technology and enhanced accessibility to it are introducing new possibilities of teaching and learning. The traditional boundaries of the classroom are giving way to virtual learning and online courses. All these development would have profound impact on teacher education programmes and processes. This technology invites learners to be more independent and the curricula to be more dynamic. Teachers need to complement their content and pedagogy expertise by utilizing online facilities. Use of ICT effectively requires a change in classroom practice rather than mere acquisition of technical skills. Teachers need to familiarize themselves with possibilities approaches and

application in the use of ICT, the facilitation of teaching learning. These technologies along with overhead projector and computer projections have the potential to make teaching. Learning and training processes more efficient and cost effective. It has opened up new possibilities of reaching out to the still un-reached disadvantaged groups and children with special needs.

Thus, it is great responsibility on the shoulders of the Teacher education to equip them with some short of competencies or Skill at Pre and In service level which leads to quality enrichment in teaching learning. ICT skill is the pre-requisite of the techno savvy skills and skill and knowledge of hardware and software is essential to become techno-savvy teacher.

ICT AND PARADIGM SHIFT:

As technology has created change in all aspects to society, it is also changing expectations of teacher education in terms of what student must learn in order to function in the 21st century. According to Takwle (2003), IT driven educations are changing the methods of content generation, content storage, content packaging and content delivery and hence offer a new paradigm of education. 21st century is characterized with the emergence knowledge based society wherein ICTs play a vital role. The National Curriculum framework 2005 (NCF, 2005) has also observed major paradigm shift is imperative characterized by imparting instructions, Collaborative learning, multidisciplinary problem solving and promoting critical thinking skills. We can see that there is a decentralization of the knowledge source. This has overall input abilities among the children. For education to reap the full advantage of ICTs in leaning, it is necessary that pre-service and in-service teachers have basic ICT skills and competences.

UNESCO (2002) organized ICT competencies into four groups presented in Figure 1. **Pedagogy** is focused on teachers' instructional practices and knowledge of the curriculum and requires that they develop applications within their disciplines that make effective use of ICTs to support and extend teaching and learning. **Collaboration and Networking** acknowledges that the communicative potential of ICTs to extend learning beyond the classroom walls and the implications for teachers development of new knowledge and skills. Technology brings with it new rights and responsibilities, including equitable access to technology resources, and respect for intellectual property included within the **Social Issues** aspect of ICT competence. And **Technical Issues** is an aspect of the Lifelong Learning theme through which teachers update skills with hardware and software as new generations of technology emerge. Four Competencies of ICT given by the UNESCO (2002) is elaborate as follow:

Pedagogy:

Pedagogy is the most important aspect of infusing technology in the curriculum. When implementing the pedagogical competencies for infusing technology, the local context and the individual approach of the teacher and subject discipline must be intermingle. Teachers move through stages as they adopt ICTs. Teachers should develop their pedagogical use of ICTs to support learning, teaching, and curriculum development, including assessment of learners and the evaluation of teaching.

Collaboration and Networking:

ICTs provide powerful new tools to support communication between learning groups and beyond classrooms with the help of advanced technology and Internet Access. The teacher's role is to expand Information and Communication Technology to collaborate globally. The Inter-cultural exchange and sharing of Information and equitable access to electronic learning resources should be expand with the help of ICT. Both local and global understandings can be enhanced using

ICTs. Through collaboration and networking, professional teachers promote democratic learning within the classroom and draw upon expertise both locally and globally.

Social Issues:

The great power becomes great responsibility is also applicable in the context of ICT. Legal and moral codes need to be extended. Plagiarism is the major disadvantage of ICTs. One should aware of Copyright Issues. The challenges faced by society, locally and globally, by adoption of technology should become part of the curriculum in a way that involves learners and helps them to develop an effective voice in the debates. Professional teachers need to understand socials surrounding ICTs and apply that understanding in their practice.

Technical Issues:

Technical issues regarding integration of ICTs into the curriculum include the technical competencies and provision of both technical infrastructure and technical support for technology use throughout the curriculum. In many contexts, the lack of technology competence, infrastructure, and technical support can create barriers to access and reliability resulting in diminished support for the curriculum. Simply providing the technology for learners and teachers is not enough. They should have basic ICT skills to integrate Technology into teaching learning.

For the integration of ICT, reliable technology infrastructure and technical assistance, Pre-service and In-service training of ICTs Skills should be provided to the teachers. Teacher should upgrade his/her knowledge of current and emerging applications of ICT within education and local and global society. In the new phase of the knowledge resolution the source of knowledge has shifted from one source to a different source.

PARADIGM SHIFT THROUGH ICT IN TEACHER EDUCATION:

There is a paradigm shifting of Teacher education with the increasing demands of the society and learners. There is need to facilitate training on ICTs for teacher both at the pre-service level and In-service level. Contemporary Students do not restrict themselves to Book and classroom lectures, they have varied accessibility of the large number of information from the internet and intranet. They will need to be lifelong learners, collaborating with others in accomplishment complex task, and effectively using different systems for representing and communication knowledge to other. There is paradigm shift from Objectivism to Social Constructivism.

Paradigm Shifting: Objectivism to Social Constructivism

Objectivism believes that everything related to learning is predictable therefore; one learning-model fits all. Likewise, behaviorism gives priority to the stimulus response relationship in learning. Constructivism advocates that reality does not exist out there objectively rather it is constructed by the human beings subjectively. It is not predictable in total rather most of it depends on the human interaction with the situation resulting into human perception (giving meaning), which in turn draws the picture/image of reality. According to Patel et. Al, (2011) The moves towards constructivism from Objectivism have been pushed by the emergence of universal connectivity through ICTs. Technology-adoption as a process of involving social groups into the innovation process where learning takes place on the learners experiences, knowledge, habits and preferences leads to a Social Constructivism, it is diagrammatically presented in Figure 1.

In contrast to traditional classrooms where teachers used a linear model and one-way communication, the modern learning is becoming more personalized, student-centric, nonlinear

and learner-directed. This paradigm shifting through ICT is shown in figure 3 and elaborate it as follow.

1. Teacher centric, stable designs learner-centre, flexible designs: Learning approaches using contemporary ICTs provide many opportunities for constructivist learning through their student centered environments based on their context (Oliver, 2002). Given, that knowledge is constantly advancing; the design and development principles need to be aligned with teacher and students emerging requirements. The current trend in e-Learning is to provide cognitive tools, which can be adapted for intellectual partnerships among teachers and students and facilitate critical thinking and higher-order learning (Young, 2003).

2. Teachers direction & decisions Learner autonomy: Traditional teaching learning process is more teachers centric. Today's teachers are more autocratic thus scope of students' expression are very less and ICT. With the effective use of different tools of ICT, scope of interaction with classmate and teachers may open a door to express themselves. This may reduce the shyness of the student also and makes student autocratic with self learning.

3. Passive reception in learning active participation in learning: Students have more burden in the classroom due to heavy classroom activities, homework, school activities and formative as well as summative evaluation, in such hectic learning sometime makes passive also. Advent use of advance technology like Synchronous learning, Asynchronous learning, E-learning, M-learning, Web based learning makes learning effective and interesting also. Through online learning and instant messaging and easily accessible internet, students takes help of classmates in development of assignments, activities, homework, solution of Problems outside classroom also. Such effort of blend education and entertainment and formation of EDUTAINMENT makes learner active, positive and compatible.

4. Learning within the four walls learning in the wider social of classroom context: Now a day, learning is not restricted upto four wall of the classroom. Stage of Formal Education exceed to online education. Technological constructivist approaches lead students to more collaborative diversity of education. With the influence of High bandwidth internet, Web 2.0 Tools and Social Networking, learning outside classroom is also possible, where students share their ideas, discuss educational threads. So Paradigm shifting to wider social of classroom context.

5. Knowledge as given and fixed knowledge as it evolves & created:

Does not treat knowledge as fixed, static or confined in books but as something being constructed through various types of experiences. It is created through discussion, evaluate, explain, compare and contrasts i.e., through interaction.

Paradigm shifting needs well equipped teachers with basic ICT skills that acted as a facilitator, as a guide in every aspect of the life and facilitate lifelong learning.

ICT skills required for technology integration:

The 21st century teachers and student require the lenses of learning from ICT with ICT around ICT with the ICT skills. After reviewing Khirwadkar (2007), Goel and Goel (2008), and March (2009), Rani and Shukla (2012), researcher is able to locate few ICT skills which is essential for the ICT integration in Teacher education:

1) Skill of Accessing: Take advantage of Internet and Intranet and locating useful information for the development of lesson plans.

2) Skills of Integration of Technology: Integrating application of technology/software in the teaching learning process.

3) Skills of Technology Choice: Evaluating and selecting appropriate software for a particular subject and as per student needs.

4) Skills of Creativity enrichment: Generating printed documents like student assignments, newsletters, communication, etc. utilizing a variety of applications Educational software.

5) Skills of Information Management: Managing student data; using data management tools for efficiently managing learning. Using technology to gather, organizes, and report information about student performance like Excel and Access for database management.

6) Skills of Media Design: Developing tools to evaluate technology-based student projects including multi-media, word processing, database, spreadsheet, PowerPoint, and Internet/telecommunications.

7) Skills of Communication and Collaboration: Using the Internet to support professional development including locating professional organizations, communicating with other teachers electronically, and participating in on-line Collaboration.

8) Skills of Creative and Critical Thinking: Developing assignments and project work for students; giving them broader and deeper knowledge in a field of study; developing critical thinking and infusing creativity among students.

9) Skills of Techno Pedagogy: Integration of technology into real time teaching. Practicability of the technology is enhanced.

10) Skills of Creating Web enhanced Learning Environment: Learning environment for teaching with the help of technology developed. Online collaboration, Virtual learning, Blended learning is possible. Web 2.0 tools are integrated into teaching learning. For the collaboration, Professional Development, Discussion, Sharing Web 2.0 Tools can be used.

Pre- service and In-service training on such ICT skill will increase application of ICT in Teacher education. As these are 21st century skills that the teacher must possess in the technologically driven world to meet the requirement of teaching-learning.

CONCLUSION:

With the increasing demands of the students and Society, there is a paradigm shifting of Teacher education from Objectivism/Subjectivism to Social Constructivism. Teacher should take into consideration of Pedagogical Issues, Social Issues Technical issues, Collaboration and Networking before ICT integration. In service and Pre service basic ICT skill training should be provided to the Teachers to sustained ICT integrated Teacher education.

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Abstract

The fishermen community is the largest segment of the local community of Sundarban area. A large number of fishermen are totally depended on the fishing related livelihood in this region. Every day or seasonally they go to mangrove forest area for fish collection. They use most wonderful indigenous traditional knowledge and technique for fishing. Not only they only use net but also use different kind of fishing traps. Fishing gears used in open water bodies are different from that used in closed water bodies. The reason behind developing particular fishing methods in open as well as closed water bodies are due to geographical differences, landscapes and fish population abundance. Most of the fishing methods have been developed based on open water bodies mainly river and creek. The paper describes the wide range of traditional fishing traps used by inshore and offshore fisheries in Sundarban, as well as their impact on the social life and the environment.

KEY WORDS: Indigenous fishing traps, traditional knowledge, Sundarban

INTRODUCTION

The Sundarban is the largest single block of tidal halophytic mangrove forest in the world. It is located at the great delta of the Ganges, Brahmaputra and Meghna rivers at the edge of Bay of Bengal. It is known as a home of Royal Bengal Tiger. The Indian part of the Sundarban covers an area of 9630 sq. kms and is designated as a Biosphere Reserve forest. This forest is also an important nursery and breeding ground for many species of shrimp, crab and finfish¹. The aquatic resources of the Sundarban Mangrove Forest are an important component of its biodiversity and are main source of food and income for local indigenous fisher community. Fishing zone in the SMF cover a broad area. Inshore fishing areas refer to river and *khari* (creeks) within the forest, while offshore fishing ground refer to the estuaries². Inshore fishing area is divided by two parts- Buffer Zone and Core zone. It mentions that fishers are allowed to fish only within the Buffer Area of the Sundarbans according to existing legislation applicable to the area; provided they do not disturb the habitat and the wildlife³. Generally they go to fishing on the August to March. When they go for fishing then have to paid permission fee and received BLC permit. They have paid 100 rupees for *Janata* (one year life insurance). Naturally they go to journey with local country boat (*Nouka*) that must be permitted by the forest department. They use various type of fishing gears. At first the fishermen collect permission letter from the forest office by the deposit of some fixed money. After that they start journey for fishing from forest river or creek area. Generally they catch different type of fishes whose local name is *vetki*, *parshe*, *kaine*, *bagda*, *bele*, *kakra*, *tangra*, etc. They do not catch some kind of fishes which has marked by forest department; these are *kamat*, *chakol*, *kata bol*, *koibol*, *timi*, *jon kede*, *tepa* etc. Total twelve types of fishes are restricted for fishing in Sundarban.

The study was conducted in 2 selected panchayets of Hingalganj block under North 24 parganas district. The panchayets were selected on the basis of certain sets of criteria such as (a) the areas having extensive fishing culture; (b) I selected the hamlets situated on the river-bank because most marginal and poorest people reside here; (c) fishing is the main livelihoods and major share of income of the fishermen of the area. Information's were collected from 60 respondents belonging to two panchayets. Interview, questionnaire survey, field observation based on perception of local people and recorded documents of relevant studies were used for this study.

Table-1: Study area and Sample size

Community	Block	Panchayets	No. of respondents		
			M	F	Total
Fisher folk	Hingalganj	Kalitala (Shamsernagar)	20	0	20
		Kalitala	18	2	20
		Gogeshganj	18	2	20

M= Male, F= Female

RESULT AND DISCUSSION

Fishing is one of the primary sources of livelihood of the local, forest-dwelling population, as few people have access to agricultural land⁴. My survey found that all fishers other than shrimp farm owners have to catch fish in order to meet their daily needs. No other alternative income generating activities are available in the off season. So fishing is their main source of income. The fishermen use different traditional traps to capture small fish from River, creeks, channel and marsh. The principal categories of fishing traps that are traditionally used in Sundarban can be mentioned as the following:

Ghuni

The box shaped fishing trap is used for capturing small fishes from channel and marsh. This trap is used in association barrage traps. The trap is a fully closed trap in which there are two valves at the opposite side of the trap, and a partial opening at a side. The mesh size is about 0.2cm × 0.3cm. A standard *ghuni* measures about 0.90 meter in length, 1m in height and the 0.25 meter in wide. The valves size of the *ghuni* is 7.5 × 12.5 cm⁵. It is made of bamboo sticks and nylon twines. There is an opening on one side for fish to enter and the other side is covered with closed so that the fish that have entered cannot escape. That is used in running or static water. In running water the mouth of the trap is set against the direction of the water flow. Their traditional knowledge is that fish moves in anti water current. These traps are also fixed along the edges of paddy fields or marsh area, one after another at small intervals⁶. That is kept in vertically position against the direction of the water current. When the fish enters into open side of the *ghuni* then the valve is open completely and fish goes on but can't return, because of valve is closed to the direction of water current.

Atol

The *atol* is a one of the popular fishing trap use for capturing *telapiya*, *chingri*, *parshe gule* during the period of August to December. It is rectangular in shape and closed type. It is made of bamboo sticks, cane and nylon twines. Generally *atol* shaped in five type of structure. These are *chara atol*, *jal atol*, *galchera atol*, *khulla atol*, *mon atol*. The *chara atol* trap contains four valves (*ghai*) at the front side and back side is only one. Fish go into at the front side with water current. An opening is present at the side of the trap for collecting captured fishes. The mesh size of the trap is 0.2 cm \times 6 cm. The mesh size of *jal atol* is very small only 0.4cm. It has three valves, two at the front side and other at the back. Total measurements of *jal atol* are 1 meter in length, 1 meter in high and 0.75 meter in wide. The *galchera atol* has a unique structure this like to stare with open mouth. It consists with only one valve. There is one valve in front. It is 0.68 meter long, 0.40 meter in height and 0.70 meter in wide. The mesh size of *atol* is 0.2 \times 6cm. The *Khulla atol* is a very costly fishing trap for fishermen. It is similar to *ghuni*. The mesh size is 0.5 \times 4 cm and 0.87 meter in long, 0.68 meter in high and 0.40 meter in wide. The *mon atol* is rectangular shape and it has only two valves at the one in front and other in middle position. Mesh size is 0.4 \times 6cm. It is 0.40 meter in long, 0.42 inch height and 0.60 inch wide⁷. It is used and applied in same as *ghuni*.

Don

The *don* is a popular fishing gear in Sundarban area. It is used to capture *kakra* (Crab), *vetki*, *arh*, *med*, *chhele*, *jaoya*, *koivol*, etc. Naturally three types of *don* are used in Sundarban area; these are *kakra don*, *vasna don*, *buro don*. It is made of long nylon twines which hanging a small size of twines. The small twines are fixed by the different types of fish hook. With the two ends twines are fixed on floats (local name is *sole*) or sinkers (local name is *dulo*). Floats are made by bottle of coconut oil and sinkers are also made by small piece of bricks. The *kakra don* is 550-600 meter long which 1.3 meter long small twines (local name is *tukni*) are hanged from 1 meter distance. Generally it is used for capture in *kakra* (Crab). The *vasna don* is only used for capture in *vatki* fish. It is similar to *kakra don* but measurements are little different with *kakra don*. It is 400 meter long and hanging twines are 3 meter long which attached with 2.5 inch fish hook. Floats are used between 3 meter differences. The *buro don* is long 550-700 meter long and it is also like to *vasna don*. Fish hook size is 2 inch and sinkers are used between 60m differences⁸.

Table-2 A detail list of selective fishing traps used on the Sundarban area

Type of Fishing gears	Local Name	Target species	Size(M)	Mesh size (cm)	Valve No. And Size	Technique	Operation period	Habitat	Cost
Fish trap									
Ghuni	Ghuni	Talapiya, Chingri, Parshe, Gule	L-0.90 H-1 W-0.25	0.2 ×0.3	V.N.-3 MO-7.5 cm W-12.5 cm	Kept vertically and set against the direction of the water flow	Day + Night	MA	90.00
Atol	Chara atol	Talapiya, Chingri, Parshe, Gule	L-0.37 H-0.12 W-0.40	0.2 ×6	V.N.-1 MO-5 W-12	Kept vertically and set against the direction of the water flow	Day + Night	MA	140.00
	Jal atol	Talapiya, Chingri, Parshe, Gule	L-1 H-1 W-0.75	0.4	V.N.-3 MO-20 W-30	Kept vertically and set against the direction of the water flow	Day + night	MA	400.00
	Galchara atol	Talapiya, Chingri, Parshe, Gule	L-0.68 H-0.40 W-0.70	0.2 ×6	V.N.-1 MO.F-64 MO.B-37	Kept vertically and set against the direction of the water flow	Day + Night	MA	140.00
	Khulla atol	Talapiya, Chingri, Parshe, Gule	L-0.87 H-0.68 W-0.40	0.5 ×4	V.N.-3 MO-12 W-17	Kept vertically and set against the direction of the water flow	Day + Night	MA	325.00
	Mon atol	Talapiya, Chingri, Parshe, Gule	L-0.40 H-0.42 W-0.60	0.4 ×6	V.N.-2 MO-30 W-49	Kept vertically and set against the direction of the water flow	Day + Night	MA	120.00

Don	Kakra don	Kakra	L-550-600	It is made of long nylon twines which the two ends twines are fixed on floats (local name is sole) or sinkers (local name is dulo) and fish hook hanging with long nylon twines.	Day + Night	R, C	800.00
	Vasna don	Vatki	L-400	It is made of long nylon twines which the two ends twines are fixed on floats (local name is sole) or sinkers (local name is dulo) and fish hook hanging with long nylon twines.	Day + Night	R, C	1400.00
	Buro don	Arh, med, chhele, koivol	L-550-700	It is made of long nylon twines which the two ends twines are fixed on floats (local name is sole) or sinkers (local name is dulo) and fish hook hanging with long nylon twines.	Day + Night	R, C	2000.00

* R = River; MA = marsh; C= Creeks CM = Centimeter; M = Miter; L = Length, W= Wide, MO= Mouth, H= Height, V.N.=Valve Number, MO.F= Mouth Front, MO.B= Mouth Back

Socio-Economical Impact

1. Marginalization of rural poor
2. Decreased live security
3. Increased skin and water disease
4. Increased number of money Leander
5. Lose of other job
6. Effected agriculture system
7. Lose of bio-diversity
8. Infrastructure development (roads, markets, embankment)
9. Increase education level

Traditional Norms

The traditional resource collectors (not the traders) believe that Sundarban is very sacred or holly place and they strictly maintain the holiness of the forest. Even they do not urine or do any bathroom activity inside the forest. If necessary they do it on the large leaf. They do not smocks or drinks (beer) in side of the forest. Their believed it is the gift of God and Goddess. All resource harvesting including fishing and honey is required permission from FD (Forest Department) and they abide the rules of FD and traditional cultural practices. Especially fishermen are maintained following rules:

- ⇒ Not catching fish fry
- ⇒ Not using Net *jal* (Very small looped net lower then 90mm.)
- ⇒ Using big-looped net for rivers and small looped-net for pond or closed water bodies
- ⇒ Not catching all kind of fishes
- ⇒ Not catching fishes that have eggs
- ⇒ Avoid fishing in spawning period

CONCLUSION

The fishermen in Sundarban are usually ranked very low in the hierarchy. But they are leading a very miserable life. They work hard for only foods and clothes. Their only capital is their strength. They live in ruthless and challenging situation, as, in most cases, their homes are in remote areas, with nominal or no access to drinking water, basic sanitation, education and health facilities. The community life of fishermen has been changed due to the decrease of fishing grounds, fishing resources, some social or environmental pressure and lack of knowledge. In this situation they have tended to leave their traditional occupation in search of other job. Moreover, there is no guarantee of daily income. Hence, the new generation feels discouraged to opt for their traditional occupation.

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RELATIVE EFFECTIVENESS OF TEACHING MATHEMATICS WITH CONCEPT ATTAINMENT MODEL AND CONVENTIONAL METHOD

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ABSTRACT

Concept Attainment Model of teaching is concerned with concept formation and concept attainment. Concept attainment is the search for and listing of attributes that can be used to distinguish exemplars from nonexemplars of various categories. Concept formation is the basis of inductive model which requires the students to decide the basis on which they will build categories. Concept Attainment Model engages students in formulating a concept through the use of illustrations, word cards or specimens called examples. It is well suited to classroom use. Keeping in view the importance of Concept Attainment Model in the teaching learning process, a study was conducted to determine the relative effectiveness of teaching mathematics with Concept Attainment Model and Conventional Method. The study was conducted on class VIII students by using experimental method. The sample of the study included 50 class VIII students. Random sampling technique was used to collect data. The students were divided into two groups (25 students in each group). The experimental group was taught through Concept Attainment Model and the control group was taught by using Conventional method. After completion of teaching a self-developed achievement test was administered. For drawing out the result, t-test was used. The result showed that students exposed to Concept attainment Model possessed higher score than the students taught through Conventional Method.

KEYWORDS : Effectiveness, Concept Attainment Model, Conventional Method and Mathematics.

INTRODUCTION

The chief business of traditional education is to transmit to a next generation those skills, facts and standards of moral and social conduct that adults deem to be necessary for the next generation's material and social success. As beneficiaries of this scheme, which educationist John Dewey described as being "imposed from above and from outside", the students are expected to docilely and obediently receive and believe these fixed answers. Teachers are the instruments by which this knowledge is communicated and these standards of behaviour are enforced.

Traditional education or back-to-basics refers to long established customs found in schools that society has traditionally deemed appropriate. Some forms of reform promote the adoption of progressive education practices, a more holistic approach which focuses on individual student's needs and self-expression. In the eyes of reformers, traditional teacher-centered methods focused on rote learning and memorization must be abandoned in favour of student-centered and task-based approaches to learning. However, many parents and conservative citizens are concerned

with the maintenance of objective educational standards based on testing, which favours a more traditional approach. Depending on the context, the opposite of traditional education may be progressive education, modern education (the education approaches based on developmental psychology) or alternative education.

Concept attainment model is an approach to teaching concepts with the help of examples and non-examples which a teacher provides to the students. This model emerged out of the study of thinking process in human beings. It is concerned with the concept formation and concept attainment. Concept formation is the process of sorting of given observation of phenomena into meaningful classes. Concept attainment is a process of finding out defining attributes of a given category. In concept formation the examples of a concept are categorized together and in concept attainment the negative and positive examples are differentiated. Thus it may be said that concept formation is the basic step towards concept attainment. A significant factor in developing concepts is the learner's previous experiences. In this model, students figure out the attributes of a group or category that has already been formed by the teacher. To do so, students compare and contrast examples that contain those attributes.

Concept attainment is indirect instructional strategies that use a structured inquiry process. It belongs to the category of information processing model. This model helps to clarify ideas and to introduce aspects of content. It engages students in formulating a concept through the use of illustrations, word cards or specimens called examples. All thinking abilities can be challenged throughout the activity with experience. They also provide practice in inductive reasoning and opportunity for altering and improving student's concept building strategies and nurture an awareness of alternative perspectives sensitivity to logical reasoning in communication, and a tolerance of ambiguity. It also helps the teachers to understand the effectiveness and necessity for the application of model approach in teaching.

OBJECTIVES OF THE STUDY:

The objectives of the study had been formulated as follows

1. To find out the effectiveness of Concept Attainment Model of teaching on achievement of Class VIII students in Mathematics.
2. To find out the effectiveness of conventional method of teaching on academic achievement of Class VIII students in Mathematics.
3. To compare the effectiveness of Concept Attainment Model with Conventional method of teaching of mathematics.

HYPOTHESES OF THE STUDY:

The hypotheses of the study had been

1. There is no significant increase in learning achievement of Class VIII students in mathematics when taught by using Concept Attainment Model.
2. There is no significant increase in learning achievement of Class VIII students in mathematics when taught by using Conventional Method.
3. There is no significant difference in learning achievement of Class VIII students in mathematics by using Concept Attainment Model and Conventional Method.

METHODOLOGY

Research Method

To find out the relative effectiveness of teaching mathematics with concept attainment model and conventional method, experimental method of research was used.

Sample and Sampling Technique

A sample of 50 students was selected from a school of Gurgaon District through Simple Random sampling Technique.

Tool used

Self-developed pre-test and post-test were used to find out relative effectiveness of teaching mathematics with concept attainment model and conventional method. The validity of the test was assessed on the basis of the judgment of the experts.

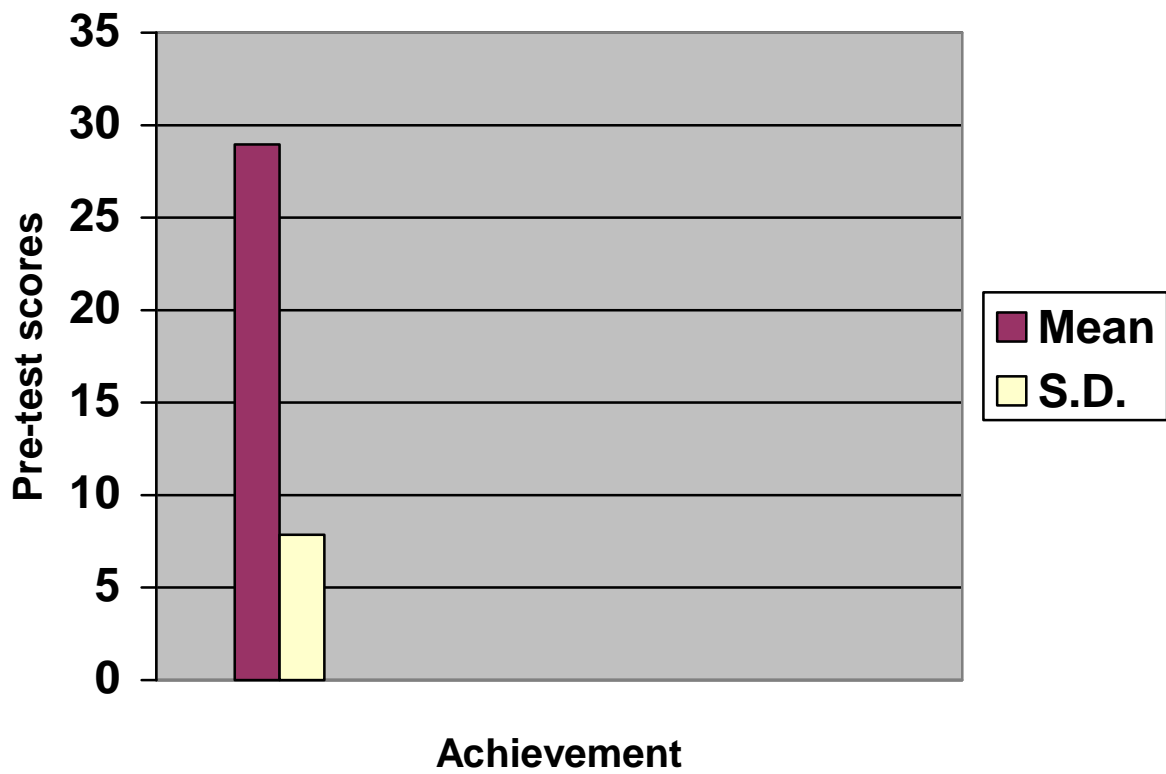
Statistical Techniques

Statistical measures such as Mean, S.D. and t-test were used to interpret the obtained data.

ANALYSIS AND INTERPRETATION

Table 1. MEAN AND STANDARD DEVIATION OF PRETEST SCORES OF TREATMENT GROUP-1

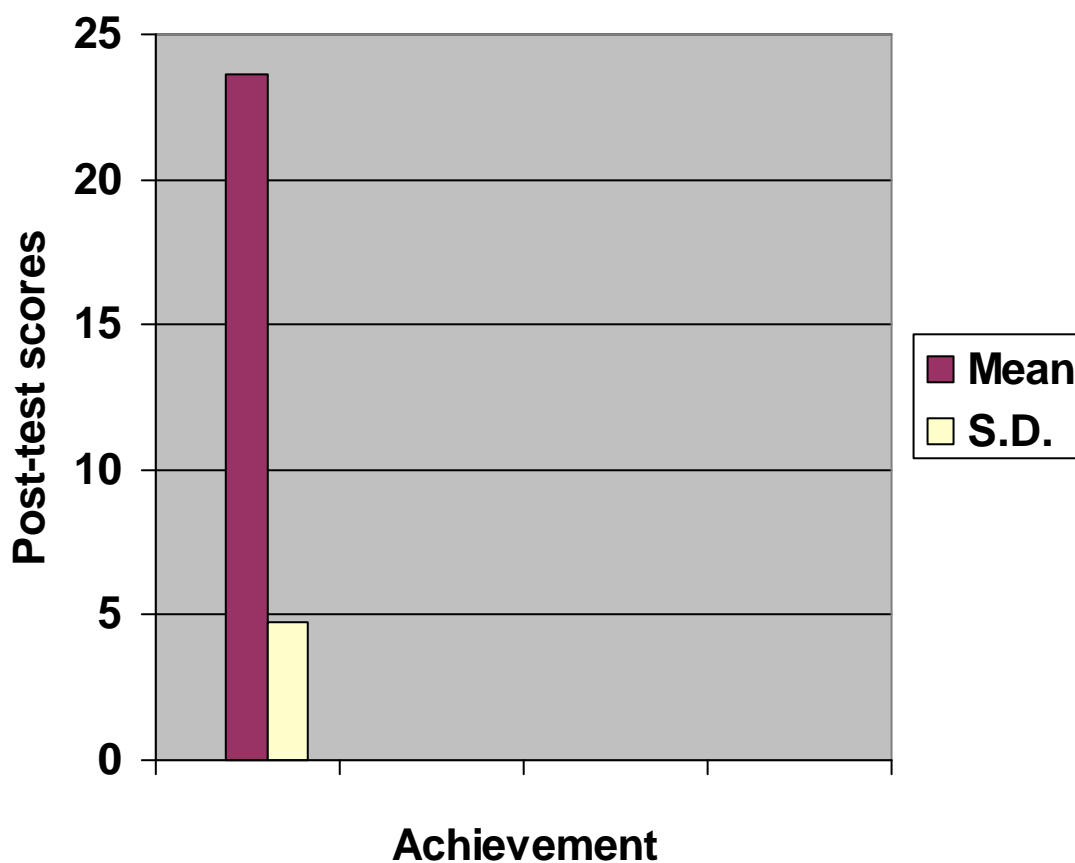
Variable	N	Mean	S.D.
Pre-test scores	25	28.96	7.85



GRAPH 1

Table 2 MEAN AND STANDARD DEVIATION OF POST-TEST SCORES OF TREATMENT GROUP-1

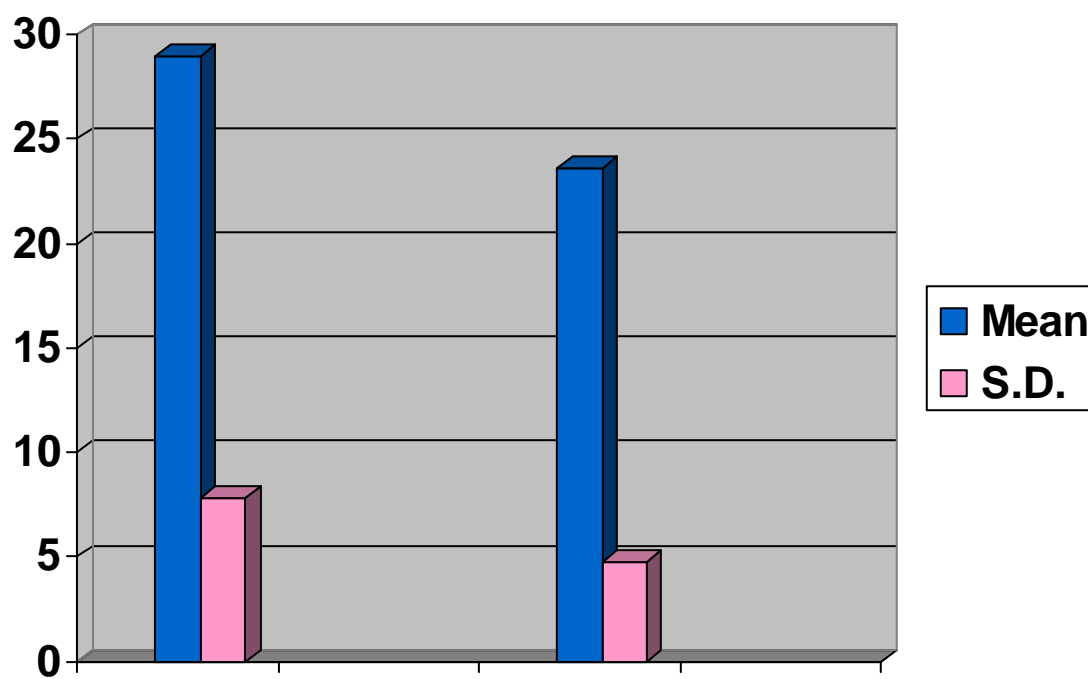
Variable	N	MEAN	S.D.
Post-test scores	25	23.6	4.75



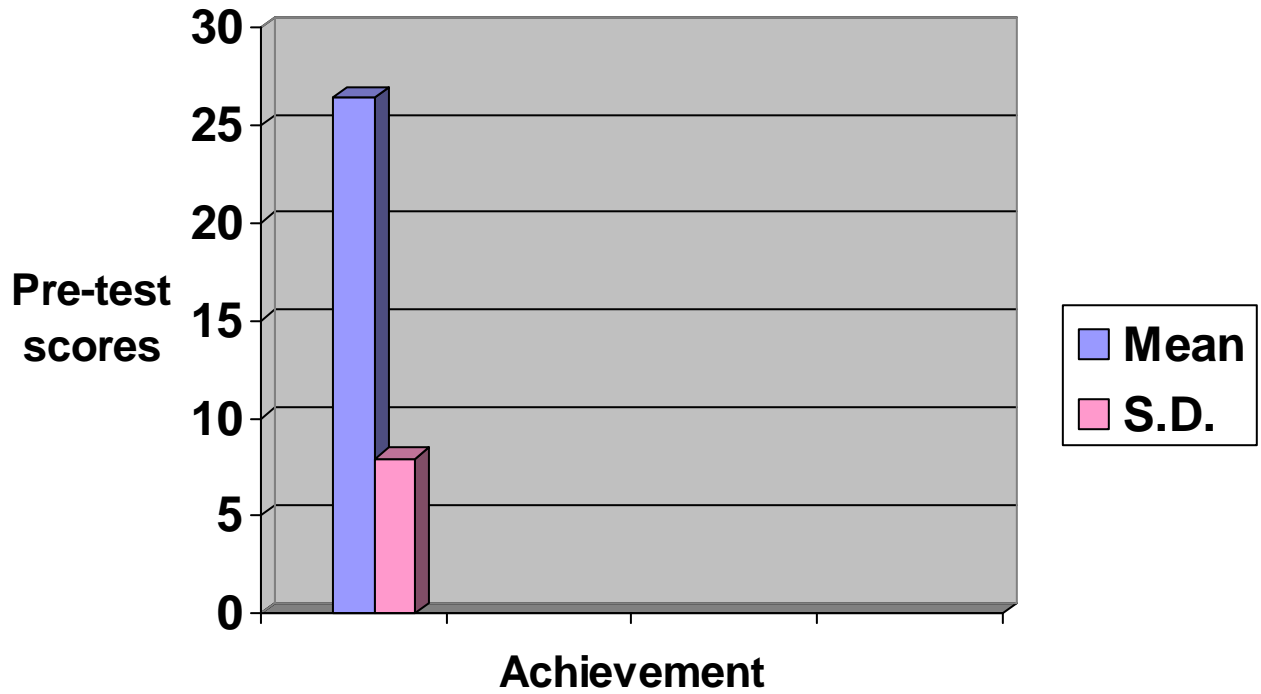
GRAPH 2

Table 3 t-value of Concept Attainment Model of experimental group

Variable	N	Mean	S.D.	t-value	Remarks
Pre-test scores	25	28.96	7.85	2.86	Significant at 0.01 and 0.05 level of significance
Post-test scores	25	23.6	4.75		

**GRAPH 3****Table 4 MEAN AND STANDARD DEVIATION OF PRETEST SCORES OF TREATMENT GROUP-2**

Variable	N	Mean	S.D.
Pre-test scores	25	26.4	7.92



GRAPH 4

Table 5 MEAN AND STANDARD DEVIATION OF POSTTEST SCORES OF TREATMENT GROUP-2

Variable	N	Mean	S.D.
Post-test scores	25	25.68	5.04

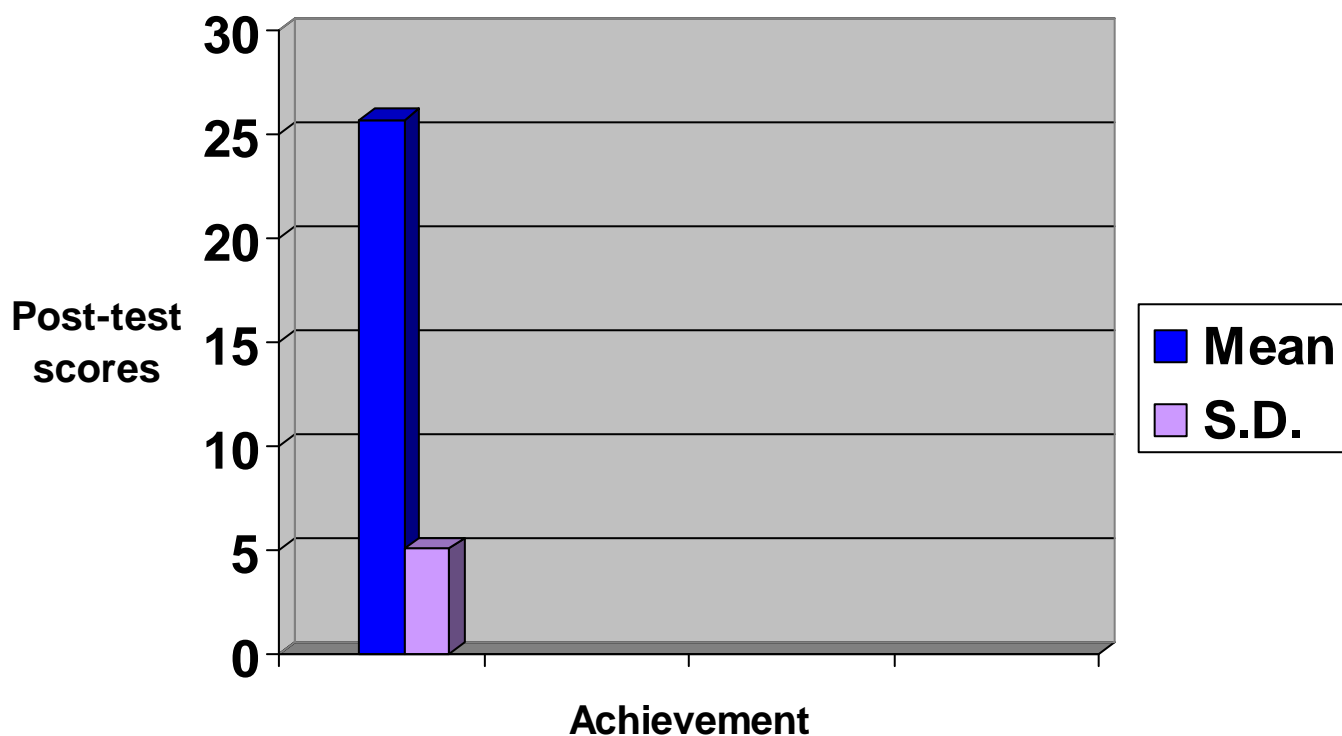
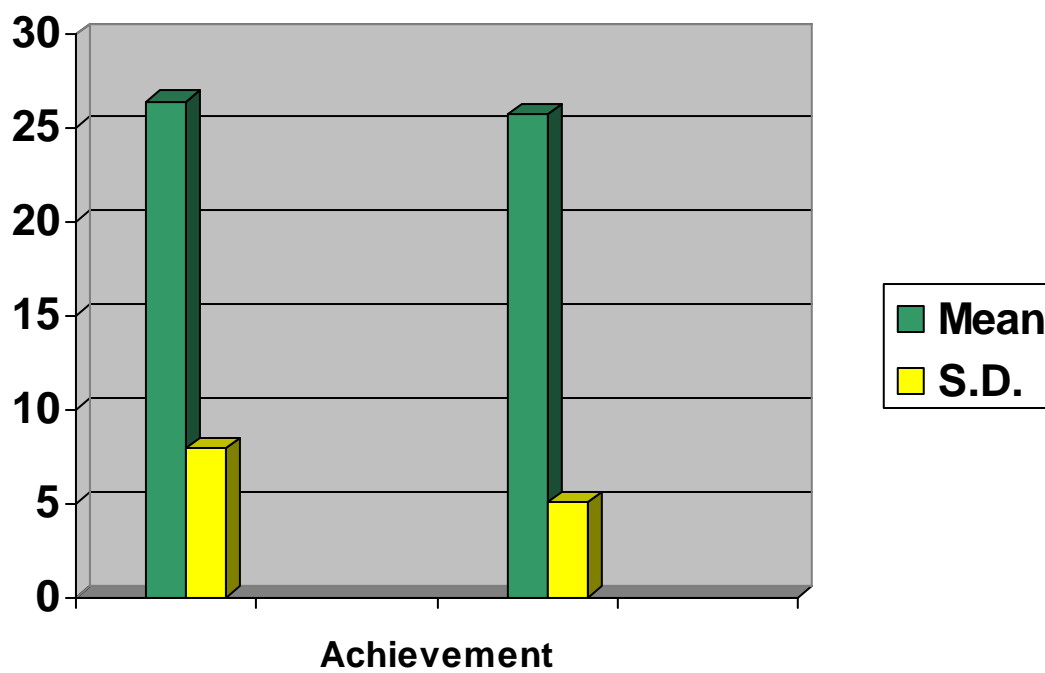


Table 6 t-value of control group

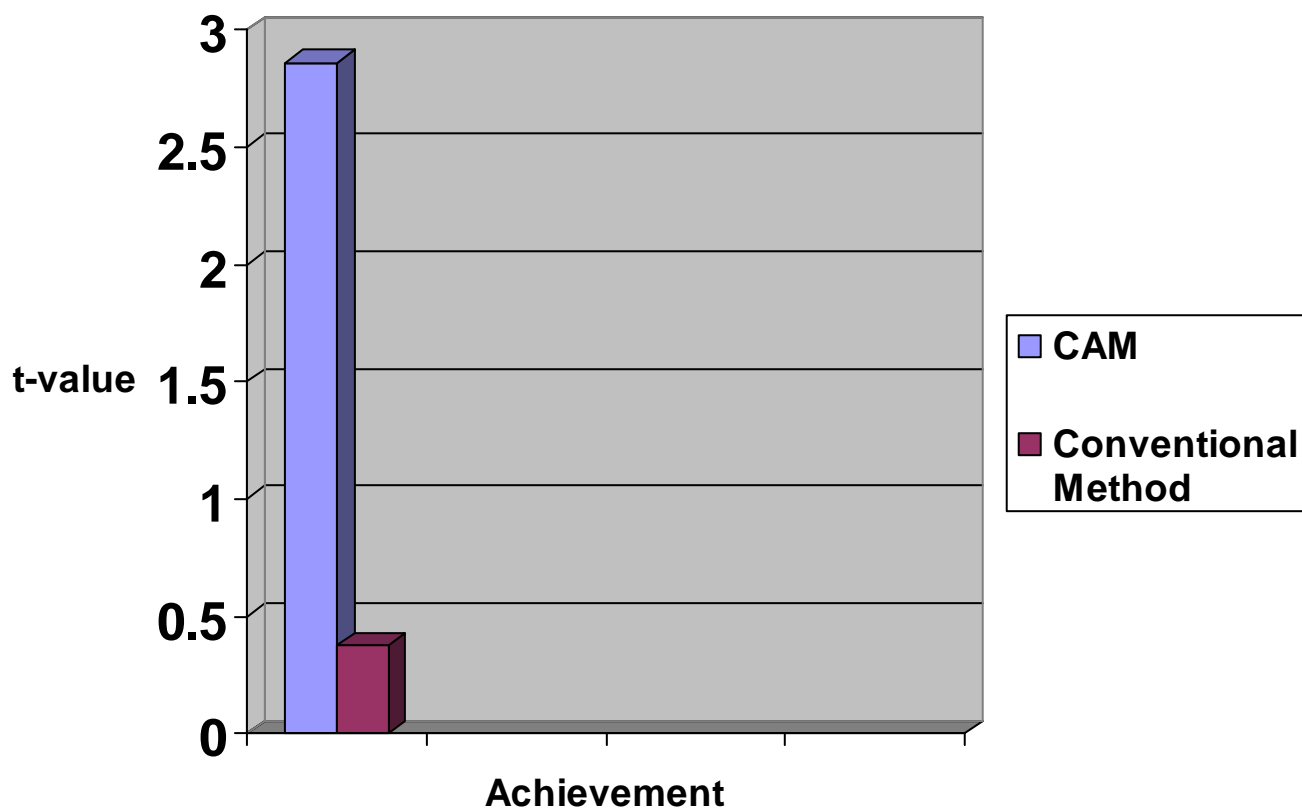
Variable	N	Mean	S.D.	t-value	Remarks
Pre-test scores	25	26.4	7.92	0.376	Insignificant at 0.01 and 0.05 levels of significance
Post-test scores	25	25.68	5.04		



GRAPH 6

Table7 COMPARISON OF t-VALUE OF CAM AND CONVENTIONAL METHOD

Variable	CONCEPT ATTAINMENT MODEL	CONVENTIONAL METHOD
t-value	2.86	0.376



GRAPH 7

CONCLUSION

In the present study an attempt was made to explore the effectiveness of Concept Attainment Model on academic achievement in mathematics. Concept Attainment Model was found to be effective in influencing the achievement level of class VIII students in Mathematics. It helps to clarify the ideas and various aspects of concepts. Concept Attainment Model was found to be more effective on achievement level of students as compared to that of conventional method.

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A STUDY ON DIFFERENT TYPES OF SPEED DEVELOPMENT AMONG DIFFERENT AGE GROUP OF SCHOOL GOING GIRLS STUDENT

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Abstract

Objectives:

The aim of this study was to find out different phases of speed development of adolescent school going girls such as acceleration phase, maintenance phase, retardation phase, maximum speed and average speed. **Materials and Methods:** In this study 60 girls subject 10-15 years were selected as subject. The data was collected from 100m performance of the subject and the distance was divided into 10 equal zones. **Results:** Acceleration phase extended 0-40m for 10-11 yrs., 0-35m for 12-13 yrs & 0-25m for 14-15 yrs. girls. Maintenance zone was extended 40-50 m for 10-11 yrs., 35-40m for 12-13 yrs. and had no maintenance zone for 14-15 yrs. girls. The maximum speed of three group were 6.02, 5.62 & 6.33m/sec. and average speed 5.39, 5.20 & 5.47 m/sec. respectively. **Conclusions:** The adolescent girls i.e. school going untrained girls have smaller acceleration zone and the length of acceleration zone decrease with the increase of age. The length of maintenance zone for all girls group were very small. The length of maintenance zone decrease with in crease of age and in some case it was absolutely zero.

Keywords: Untrained girls, acceleration zone, maintenance zone, retardation zone, maximum speed, average speed.

Introduction

In games and sports motion is the core element. Modern sports have become highly competitive in sprint running mainly 100m run. The fraction of a second is vital and it can change the fate of an athlete. As professionalism enters into the field of games and sports, it has reached as razors edge competition.

Speed is one of the component of conditional ability. It has a complex nature as it depends upto a considerable extent on the central nervous system. Due to this fact the extent nature of speed abilities is difficult to discover and understand. Moreover, because we can influence the functioning of central nervous system only to a very limited extent, therefore, speed performance can not be improved to a considerable extent as in the case of the other conditional abilities. The speed performance can be improved with specific means where co-ordinative process plays a very high role.

Speed abilities should not be equated with the mechanical speed which is equal to distance covered per unit of time. In several sports actions no distance is covered at all. Seed ability primarily signifies the ability to execute motor movements with high speed. These movement may be cyclic or acyclic in nature. Thesis and Schnabel (1987) give the following definition of speed.

“It is the performance prerequisite to do motor action under given conditions (movement task, external factors, individual prerequisites) in minimum time.”

For the direct improvement of acceleration ability short sprint are best means. The distance or duration of these sprints is based on practical experience as well as on some research findings. Henry (1952) found that sprinters achieve their maximum speed in about 6 seconds after start. Farfel (1952), Zdanov (1956) and Furnadziev & Petkova (1977) also found that irrespective of the performance level and age the maximum speed is achieved in 5-6 sec. after start. They also found that during a sprint the increase in speed is as follows:-

At the end of –

1 st Seconds	-	55%
2 nd Seconds	-	76%
3 rd Seconds	-	91%
4 th Seconds	-	95%
5 th Seconds	-	99%

Locomotor ability to maintain maximum speed of locomotion for maximum duration possible. According to Gundlach (1969) the speed ranges from 99-100% of maximum during the phase of maximum locomotion speed. He found that in track & field sprints it can last from 20-45 m. But this phase of maintenance of maximum speed is different for different person depending on their age and performance level. Gundlach (1969), Furnadziev & Petkova (1977) and Letzelter (1975 & 1978) found the distance over which maximum speed can be maintained as follows:-

12-13 year old children	-	15-20 m
14-16 year old children	-	20-30 m
12-13 year old trained children	-	20-30 m
Well trains adults	-	30 m longer

Purpose of the Study

- 1) To find out the average acceleration phase of the subject according to their age group.
- 2) To find out the speed maintenance phase and deceleration phase i.e. retardation zone of each group according to their age.

Methodology

Subject: Total 60 girls from 10 to 15 years were selected as the subject of this study. All the students were divided into three equal age group 20 students in each group. The groups were 10 & 11 yrs., 12 & 13 yrs. and 14 & 15 yrs. All the subjects were from same locality.

Sources of data

The data was collected from 100 m performance of the subject and the distance was divided into 10 equal zones. In every 10 m one timekeeper was placed. During 100 m run all the time keeper recorded the time from starting to her won marked zone such as start to 10m, start - 20, start-30m and so on. The method shown in fig. 1

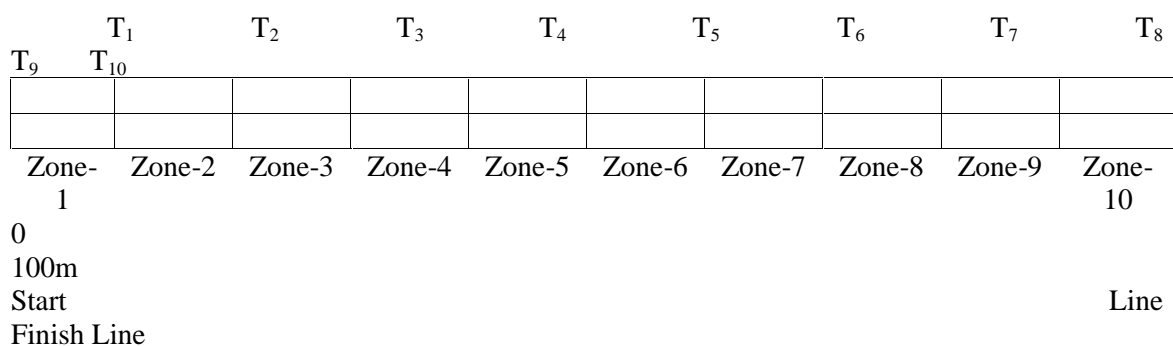


Fig. 1: Shows the method of collecting data

Analysis and Discussion:-

Personal Data:- 60 (sixty) girls were as the subject for the present study. Their personal data on age, height and weight were recorded. The 60 subject were taken from different classes accordingly to their age, i.e. 10-11 Yrs., 12-13 yrs & 14-15 yrs. The mean and SD of age, height and weight of the subject were presented in table -1

Table 1: Mean and SD of age, height & weight of three group.

Group (Girls)	Age (Years)		Height (C.M.)		Weight (Kg.)	
	Mean	SD	Mean	SD	Mean	SD
10-11 Yrs.	10.94	0.56	140.35	6.91	27.35	3.52
12-13 Yrs.	12.95	0.57	147.00	6.12	35.45	4.59
14-15 Yrs.	14.98	0.54	151.70	7.73	38.65	6.58

Mean of age of three group i.e. 10-11 yrs., 12-13 yrs and 14-15 yrs girls were 10.94, 12.95 & 14.98 and the SD were 0.56, 0.57 & 0.54 respectively. The mean of height of three group were 140.35, 147.00 & 151.70 and SD were 6.91, 6.12 & 7.73 respectively. The mean of weight of three groups were 27.35, 35.45 & 38.65 and SD were 3.52, 4.59 & 6.58 respectively.

The Data: The time of 100 m sprint zone wise of the particular subject of three group were considered as the data of this study. At the same time the data of Acceleration zone, Maintenance zone, Retardation zone and Maximum speed obtained by the subject and average speed of the subject during 100m sprint was recorded.

Presentation of Data: From the obtained time and distance of each zone for each candidate the zonal velocity was calculated. From this mean velocities for different zone of 100 m sprint were find out.

The mean velocities for different zone of 100m sprint for the three age group 10-11 Yrs., 12-13Yrs. and 14-15 Yrs. were presented in table 2

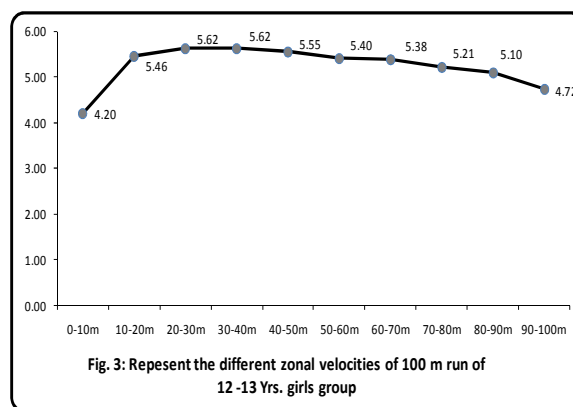
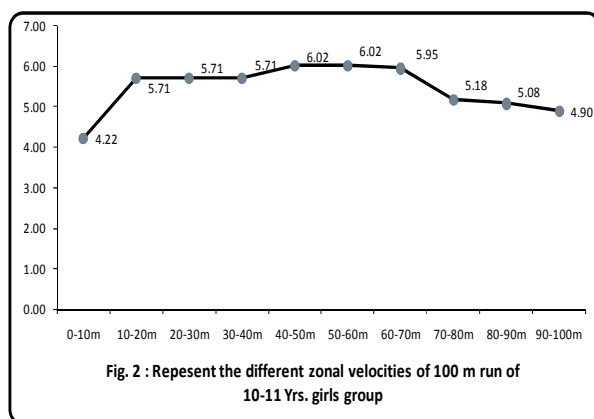
Table no.2, Represent the mean score of zonal velocities for 100 m run for girls subjects of three group

Table-2: Mean scores of zonal velocities for 100 m run for girls

Group (Girls)	Velocity									
	0-10 m Zone-1	10-20m Zone-2	20-30m Zone-3	30-40m Zone-4	40-50m Zone-5	50-60m Zone-6	60-70m Zone-7	70-80m Zone-8	80-90m Zone-9	90-100m Zone-10
10-11 Yrs.	4.22	5.71	5.71	5.71	6.02	6.02	5.95	5.18	5.08	4.90
12-13 Yrs.	4.20	5.46	5.62	5.62	5.55	5.40	5.38	5.21	5.10	4.72
14-15 Yrs.	4.22	5.81	6.33	6.17	5.99	5.81	5.78	5.68	5.43	4.42

The zonal velocity of 10-11 yrs girls, 12-13 yrs girls and 14-15 yrs girls in zone 1 were 4.22, 4.20, 4.22, in zone 2- 5.71,5.46,5.81, in zone 3- 5.71,5.62,6.33; in zone 4- 5.71,5.62,6.17, in zone 5 - 6.02,5.55,5.99, in zone 6- 6.02,5.40,5.81; in zone 7- 5.95,5.38,5.78; in zone 8 - 5.18,5.21,5.68; in zone 9- 5.08,5.10,5.43 and in zone 10- 4.90,4.72,4.42 m/sec. respectively.

Discussion: From table no.2: It was observed that acceleration zone was extended from 0-40m for 10-11yrs girls subject 0-35m for 12-13 yrs girls subject and 0-25 m14-15 yrs girls subject. It was also observed that maintenance zone was extended from 40-50m for 10-11 yrs girls, 35-40 m for 12-13 yrs girls subject and had no maintenance zone for 14-15 yrs girls subject . With this information distance velocity curve for different age group of girls drawn in Fig.2, Fig.3 and Fig.4 indicated the curves.

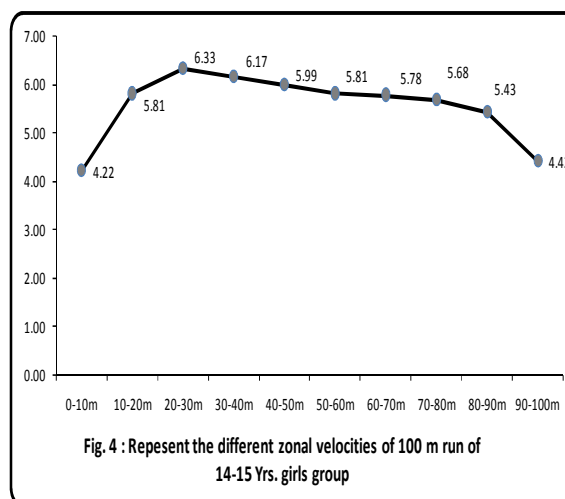


From the fig.2 It was observed that acceleration zone was extended from 0-40 m. had near about 10m maintenance zone i.e 40-50m and also with long retardation zone. It was also observed that the maximum speed of the subject was 6.02 m/sec and the average speed of the subject were 5.39m/sec

From the fig.3 it was observed that acceleration zone was extended from 0-35 m had near about 15m maintenance zone (35-40 m) and also with long retardation zone. It was also observed that the maximum speed of the subject were 5.62m/sec and average speed of the subject were 5.20m/sec.

From the fig.4 it was observed that acceleration zone was extended from 0-25 m had no maintenance zone and also with long retardation zone. It was also observed that the maximum speed of the subject were 6.33m/sec and average speed of the subject were 5.47m/sec. From these curves length of acceleration zone, maintenance zone, retardation zone, maximum speed were found out. Table no.3 indicated the result.

Table no.3 Length of acceleration zone, maintenance zone, retardation zone, maximum speed and average speed for different age group of girls



Group (Girls)	Acceleration zone(m)	maintenance zone (m)	retardation zone (m)	maximum speed (m/sec)	average speed (m/sec)
10-11 yrs	0-40	40-50	50-100	6.02	5.39
12-13 yrs	0-35	35-40	40-100	5.62	5.20
14-15 yrs	0-25	-	25-100	6.33	5.47

From table 3, it was observed that the acceleration zone was extended 0-40m for 10-11 yrs girls , 0-35 for 12-13 yrs girls and 0-25m for 14-15 yrs girls subject. The length of maintenance zone of 10-11 yrs girls was 40-50m; for 12-13 yrs girls it was 35-40m but 14-15 yrs girls group had no maintenance zone. The retardation zone of 10-11 yrs girls was extended 50-100m, 12-13 yrs girls was extended 40-100m and the 14-15 yrs girls was extended 25-100m. The maximum speed obtained by 10-11 yrs girls, 12-13 yrs girls and 14-15 yrs girls were 6.02m/sec, 5.62m/sec and 6.33 m/sec and the average speed of all three groups were 5.39m/sec, 5.20m/sec and 5.47m/sec. respectively.

From the table it was observed that mean of maximum speed of different groups of girls decreased with increase of age 10-11yrs. to 12-13 yrs. Thus the value for 10-11yrs girls group was 6.02m/sec. but it decreased for the girls of the 12-13 yrs girls group to 5.62m/sec (decreasing rate 6.64%). Again the value was observed that mean score of maximum speed of different age group of girls increase with increase of age 12-13 yrs.to 14-15 yrs girls. Thus the vale of 12-13 yrs girls was 5.62m/sec., but it increase for 14-15 yrs. girls group 6.33m/sec (increasing rate 11.21%) for 14-15 yrs girls group.

Conclusion:

On the basis of the result of this investigation with subject of 10-15 yrs untrained school going girls and with the existing limitations of the study following conclusions were drawn

- 1) The untrained adolescent i.e. school going girls have smaller acceleration zone in comparison with higher level or international performers. The length of acceleration zone reduce with increase of age.
- 2) The Length of maintenance phase for all girls subject were very small. The length of maintenance zone decrease with increase of age 10-11 yrs. to 12-13 yrs. and in some case it was absolutely zero.
- 3) The maximum speed and average speed of subject decrease with increase of age 10-11 yrs. to 12-13 yrs. and increase with increase of age 12-13 yrs. to 14-15 yrs.

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PUBLIC HEALTH IN BIRBHUM, 1947-70

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ABSTRACT :

Health is the key concept of human happiness and it has a great impact on our development. So, for our own purpose public health care facilities is very essential. But public health care system in the district of Birbhum of West Bengal is very far from the level of satisfaction, especially from the infrastructural point of view. As a result many disease occurred in pre independence and post independence Birbhum. Hence I have tried to depict a picture about the overall public health condition of Birbhum .

KEY WORDS : Public Health, Different Diseases, Vaccination etc.

INTRODUCTION

Health is the key concept of human happiness. Health makes an important contribution to human development process and because of this, health was identified as a component of human development in the Human Development Report 1990 (UNDP 1991). Even assessing the situation, World Bank has shifted from an emphasis on promoting economic growth (i.e. commission on International Development, 1969) to include a focus on health, education and social exclusion (World Development Report, 2001).¹ But in general, how to define health? According to W.H.O (1948), "it is a complete state of physical, mental and social well being including the absence of illness"². It reflects through a better life expectancy, low mortality and morbidity rate with an intense health care facility. Several attempts have been made throughout the world for the development of health care facilities in search of healthy prosperous life and India is not an exception. Along with various development processes, health standards in India have improved considerably since independence. With the concerted efforts of the government and other public-private agencies, some of the health indicators in India experience impressive growth. Longevity has more than double since independence, Infant Mortality Rate has fallen, malaria has been contained, small pox and guinea worm have been completely eradicated and leprosy and polio are nearing elimination. Despite these achievements, the health care facilities provided by India to her people are not adequate. Even it is amongst the lowest comparing to other countries. Even the regional disparity regarding the medical and public health service within India is remarkable. Some of her states enjoyed a progressive health care facility with healthy people whereas others are heavily over burdened by ill-fed, ill-sheltered unhealthy population.³

Hence I have tried to depict a picture about the major diseases of Birbhum, West Bengal. Health care system and public health in the district of Birbhum of West Bengal is very far from the level of satisfaction, especially from the infrastructural point of view. Lacking of this facility leads to inconsistency in the development of basic health care system as well as in overall development of the society. Discrepancies existed both in spatial and temporal scale. As a result many disease occurred in pre independence and post independence Birbhum. Among the many diseases in that time mostly notable diseases were Tuberculosis, Malaria, Leprosy, Enteric diseases, Cholera etc.⁴

TUBERCULOSIS

Tuberculosis, especially of the pulmonary type, has been taking place in the rural areas in an alarming form in recent years, and this district has been quite endemic to it. The only redeeming feature in this connexion is that the challenge of the disease is being met through anti-T.B measures in a large scale in both the private and the public sectors of the district. The following quinquennial figures would reveal the deaths from the disease in the years preceding 1960.5

Quinquennial Table of Deaths from pulmonary T.B in Birbhum District:
1945 -60

	Actual deaths		Death rate per Thousands	
	Male	Female	Male	Female
1945	159	38	0.3	0.1
1950	116	33	0.2	0.1
1955	130	29	0.2	0.05
1960	66	24	0.09	0.03

SOURCE- WEST BENGAL DISTRICT GAZEETEERS 1975,P- 496

The following table would reveal the urban and rural distribution of tuberculosis of different type in the district in recent years.

Death From Tuberculosis In Birbhum District: 1961-65

		1961	1962	1963	1964	1965
Pulmonary T.B without Mention of occupational Diseases of lung	Urban	1	---	---	7	4
	Rural	86	60	66	54	37
T.B of respiratory system Other than pulmonary Without mentions of Occupational diseases of lung.	Urban	5	---	4	1	2
	Rural	93	126	150	121	112

SOURCE – WEST BENGAL DISTRICT GAZETEERS,1975, P-497

It appears from the above figures that T.B occurs more in the rural areas than in the urban, the reasons being malnutrition and unsound economic condition of the rural folk.6

The B.C.G vaccination team of workers work directly under the assistant C.M.O.H. of the district headquarters who is helped by a medical Officer in this behalf and number of tuberculosis tests and B.C.G. vaccination done in the district between 1961 and 1968. 7

MALARIA

Malaria was very common in this district in colonial and post colonial time. O'MALLEY wrote in his gazetteers(1910) that the majority of the deaths returned as caused by fever are due to malarial fevers, of which the most common is the intermittent type and especially the quotidian variety. Chronic malarial fevers with hypertrophied spleen and cachexia , as an effect of the above , are seen in many parts.8

That the death rate from Malaria has further gone down can be seen from the following figures. Still rural in character , reasons being poor consciousness, lack of literacy, unhealthy environment, poor economic condition etc, the incidence of the disease has become very meagre.9

DEATH RATE FROM MALARIA IN BIRBHUM DISTRICTS:1962-65

Year	NO .OF Death urban	Death rate per 1,000 urban	No of deaths rural	Death rate per 1,000 rural
1962	1	0.01	19	0.01
1963	1	0.01	33	0.02
1964	----	-----	7	-----
1965	----	-----	8	-----

Source ---- WEST BENGAL DISTRICT GAZETTEERS – BIRBHUM, 1975. Page – 502& 506. In 1953-54, the State Government adopted the National Malaria Control Programmed in collaboration with the government of India and the United states Technical Co-operation mission. The disease being no longer of any consequence in the district, the anti –malaria programmed started working under a “maintenance phase” since 1965 on the recommendation of an independent appraisal team of the Government of India.¹⁰

LEPROSY

Apart from Malaria ,Leprosy has been a scourge of the district for a long time. According to the census of 1901 among males 3.2 per mille and among females 1 per mille were affected with leprosy. O'Malley also wrote :”...this district Birbhum and Bankura enjoy the unenviable notoriety of harbouring a greater number of lepers in proportion to the population than any other tract in India.¹¹ The prevalence rate in west Bengal was 3.6 per cent in 1962-65,while it was non –infectious by 75 per cent.

Before independence the leprosy relief work was undertaken mostly by missionaries and non-official organizations, but after independence it has also been taken over by Government.¹²

ENTERIC DISEASES

Enteric diseases were wide spread for want of pure drinking water. Although the water supply position has improved a lot in general , the arid regions still face difficulties in this regard. The following table would , however, reveal the rural character of the disease in the district.¹³

DEATHS FROM DYSENTERY IN ALL FORMS IN BIRBHUM DISTRICT : 1961-65

	1961	1962	1963	1964	1965
Urban	2	5	3	4	7
Rural	266	178	261	315	337

Source ---- WEST BENGAL DISTRICT GAZETTEERS – BIRBHUM, 1975. Page – 510

CHOLERA

Among other diseases Cholera was very common in occurrence which used to appear every year. O'Malley also wrote: “Cholera appears in sporadic form practically every year and sometimes becomes epidemic”.

QUINQUENNIAL TABLE OF DEATHS FROM CHOLERA IN BIRBHUM DISTRICT : 1945-60

Death rate

	Actual deaths		per thousands	
	Male	Female	Male	Female
1945	39	49	0.1	0.1
1950	123	124	0.2	0.2
1955	25	36	0.04	0.06
1960	4	8	0.006	0.01

SOURCE : WEST BENGAL DISTRICT GAZEETEERS – BIRBHUM,1975. P-510.

DEATH FROM CHOLERA IN BIRBHUM DISTRICT : 1961-65

	1961	1962	1963	1964	1965
Urban	2	----	-----	----	----
Rural	7	4	104	28	28

That the disease is still rural character, and that for want of proper hygienic sense and prompt medical attendance, the disease takes its toll there, in whatever little extent it may be will be clear from the above table.14

CONCLUSION

Above this discussion we told that the Birbhum was a land of diseases though it has long been noted for its pleasant and healthy place. Many disease predominant here like as Malaria, Cholera, Tuberculosis, Leprosy, Enteric etc .Hence another things which is mostly notable that almost all major diseases and epidemics was in form of rural character. The causes responsible were unsound economic condition, malnutrition, non-availability of pure drinking water, lack of proper hygienic sense and prompt medical attendance.

Notes and References:-

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A LONGITUDINAL STUDY ON BALANCE OF ADOLESCENT SCHOOL GOING GIRLS

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ABSTRACT

Balance is involved to some degree with all motor performance and some performances depend highly balance. Balance is a multi dimensional subdomain. Balance can be classified as either static or dyanamic. Balance depends on three sets of sensors in the body they are Brain, Eye and Vestibular apparatus of the human body. (i) Purpose of the study is to observe whether the balances is improves with the increment of age for girls (ii) To observe the influence of weight on balance (iii) to observe the influence of height, weight on balance on adolescent girls.

One hundred and eighty 10 to 14 yrs school going girls students from different three age groups 10 yrs., 12 yrs and 14 yrs. were selected as the subject of the present study. The subject were go through 5 tests in two yrs period for each group. The test were taken in every six months. For this study age, height, weight and balance of the subjects were measured. The test were taken through standard procedure. After collecting the data the following conclusion were drawn with the help of standard statistical procedure.

1. For 10 yrs girls group, the balance was not improve from 10 to 11 yrs age but from 11 to 12 yrs balance improve significantly.
2. For 12 yrs girls group the balance was remain same up to 13 yrs 6 months . In the last 6 month the balance improve remarkably.
3. For 14yrs girls group the balance was not improve for two year of time period.

Introduction

Balance is involved to some degree with all motor performance and some performances depend highly balance. Among different games & sports creation gymnastics event such as balance beam, floor exercise and dismounts from various apparatus are mostly depend upon balance. Diving rebound tumbling and some forms of balancing also require unusual amount of balance. Stability (fitness of balance) is of special importance in all body contact sports such as wrestling, football, rugby and soccer and in some after sports such as basket ball and hockey. In an off balance stance a performer is in poor position in respond to the act of an opponent, in perform in act are requiring accuracy and to resist force or apply force in any direction exist the direction in which he or she is off balance. In many cases increased balance will result in improved performances.

Balance is a multi dimensional subdomain. Balance can be classified as either static or dyanamic. Static balance is the ability to maintain total body equilibrium with standing in one spot, whereas dynamic balance involves the ability to maintain equilibrium while moving from

one point to another. The types of static balance can be influenced by the restrictions of the balancing task as usual as by whether the balance is performed with the eyes open or closed.

Dynamic balance can be divided into simple or complex tasks based on the planes of balance involved. An example of a simple balance task involves balance on a platform stabilometer. The person has to balance in only one plane of movement. If a ball and socket stabilometer is used complex balance is required in more than one plane.

Balance is an important factor in our daily life. Balance is of primary importance for activities like dance which is considered as the highest form of movement. For all persons' balance makes movement graceful. Balance depends on huge number of factors. They can be categorized into different groups.

Balance depends on three sets of sensors in the body. There are sensory in the muscles and joints of the foot and leg that sent message to the brain when the muscles are stretched by learning in any direction. The eyes act as sensors telling the brain where the body is with respect to objects in space. Finally the vestibular apparatus a set of fluid filled sacs locked in the brain about where the head is, how fast it is moving and it helps to keep the eyes on target and body parts correctly aligned. Balance is one of the physical fitness components. According to modern approach it has been included as a coordinative components of fitness. This indicated that balance helps as individual component namely speed strength and endurance more effectively.

Purpose of the Study

In the present study the researcher has worked on balance over two years of period on school going adolescent girls for the following purpose.

1. To observe whether balance is improves with the increment of age for girls
2. To observed the influence of weight on balance
3. To observe the influence of Height weight on balance on adolescent girls.

Methods

One eighty 10 to 14 yrs school going girls students from different three age groups 10 yrs. 12 yrs. and 14 yrs where selected as the subject of the present study. The subjects were go through 5 tests in two years period for each group. The test were taken in every six months . For this study age, height, weight and balance of the subject were measured.

The balance of the subject were measured through stork stand test. For the test the subjects were asked to stand on the floor on dominating foot and placed the other foot on the inside of the supporting and the hands were placed on the hip of the subject. On signal she raised the heel from the floor and maintained the balance as long as possible without moving the ball of the foot from the initial posture keeping the correct body position. Three trials were given to the subjects. Among three trials best time was recorded as the score of the balance test.

Results and Discussions

Table -1 represents the mean height (cm) and weight (kg) of different Age groups girls students

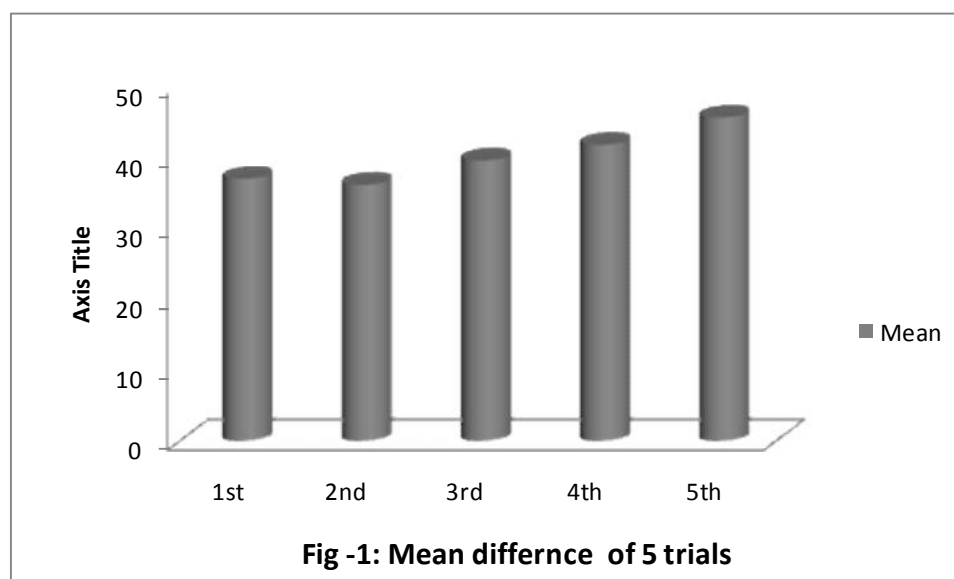
	10Yrs		12 yrs		14 yrs	
	Mean	SD	Mean	SD	Mean	SD
Height (Cm)	108.3	2.15	114.4	3.15	126.0	3.15
Weight (kg)	21.8	2.42	24.65	2.74	27.23	3.42

From the table it appears that the mean height of 10 yrs. 12 yrs. and 14 yrs girls were 108.3,114.4 and 126.0 respectively and the SD were 2.15,3.15 and 3.15 respectively. The mean weight of three groups were 21.8,24.65 and 27.23 respectively and with a SD of 2.42,2.74 and 3.42 respectively.

Table -2 represents the mean, SD and F value of 10 yrs girls of different five trials.

		T1	T2	T3	T4	T5	F
10 yrs.	Mean	36.9	36.06	39.46	41.66	45.5	6.07
	SD	8.8	12.4	10.0	8.45	8.9	

From the table-2 it appears that the mean values of different five trials in balance of 6 yrs. girls was not equal. The values of 1st,2nd,3rd, 4th and 5th trials were 36.9,36.06,39.46,41.66 and 45.5 respectively. As all the values were not equal so to observe difference among the mean values 'f' values was calculated and found significantly. So the difference between trials were exist. The difference among the groups were also presented in fig.1 which represents the difference among group s graphically.



The difference between trials were also presented in table-3

Trial	T ₁	T ₂	T ₃	T ₄	T ₅
T ₁		.84	2.56	4.76	8.6
T ₂			3.40	5.60	9.44
T ₃				2.20	6.04
T ₄					3.84
T ₅					

Significant CD value at 0.05 level=5.0

From the table 3 the difference between two trials T₁ VS T₂, T₁ VS T₃, T₁ VS T₄ found not significant but only the difference between T₁ VS T₅ was significant.

The difference between T₂ VS T₄ and T₂ VS T₅ were also sound significant.

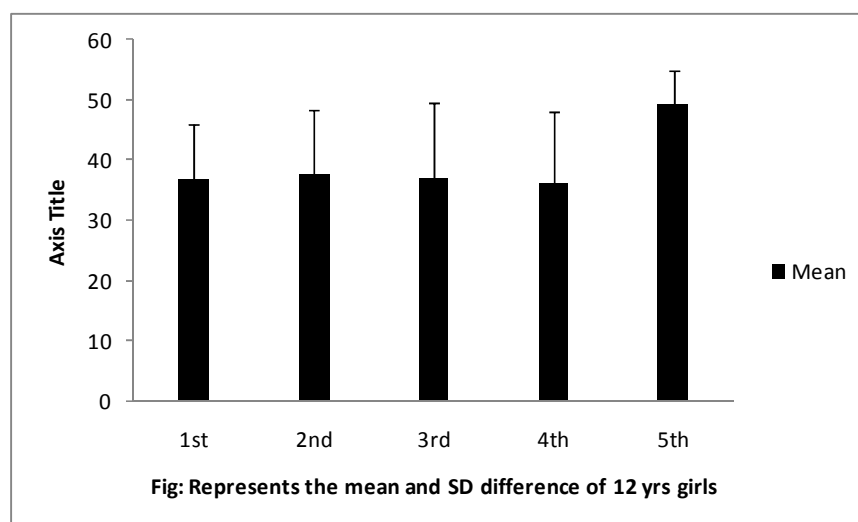
The difference between T₃ VS T₄ was not significant the difference between T₃ VS T₅ was found significant and the difference between T₄ and T₅ was found not significant.

Table -4 represents the mean, SD and F value of 12 yrs girls of different five trials.

		T1	T2	T3	T4	T5	F
12 yrs.	Mean	36.83	37.66	37.16	36.23	49.33	12.63
	SD	9.16	10.80	12.29	11.79	5.52	

The mean and SD value of balance of 12 yrs. girls of different trials were presented in table -4. The mean of the five trials i.e. Trial-1, Trial-2, Trial-3, Trial-4 and Trial-5 were 36.83,37.66,37.16,36.23 and 49.33 respectively and SD value were 9.16,10.80,12.29,11.79 and 5.52 respectively. Comparing the mean value it was found the there were difference exist among the means of five trials. To observe the difference among means 'F' value was calculated and found 12.63 which was significant.

The mean difference were also presented in Fig. 2



The difference between trials were also presented in table-5

Trial	T ₁	T ₂	T ₃	T ₄	T ₅
T ₁		.83	.33	.60	12.5
T ₂			.50	1.43	11.67
T ₃				0.93	12.17
T ₄					13.10
T ₅					

Significant CD value at 0.05 level=5.21

From the table 5 it appears that the mean difference value between 1st trial VS 5 trial, 2nd trial VS 5 trial, 3rd Trial VS 5 trial and 4th trial VS 5th trial were 12.5,11.67,12.17 and 13.10 respectively. All the mean difference were significant. All the other differences between 1st trial VS 2nd trial, 2nd Trial VS 3rd & 4th trial and 3rd trial VS 4th trial were very low and not significant.

From the above discussion it is observed that the balance of 12 yrs to 14 yrs. girls were very slow or not improving in first 4 trial but in last 6 months of age it improves rapidly.

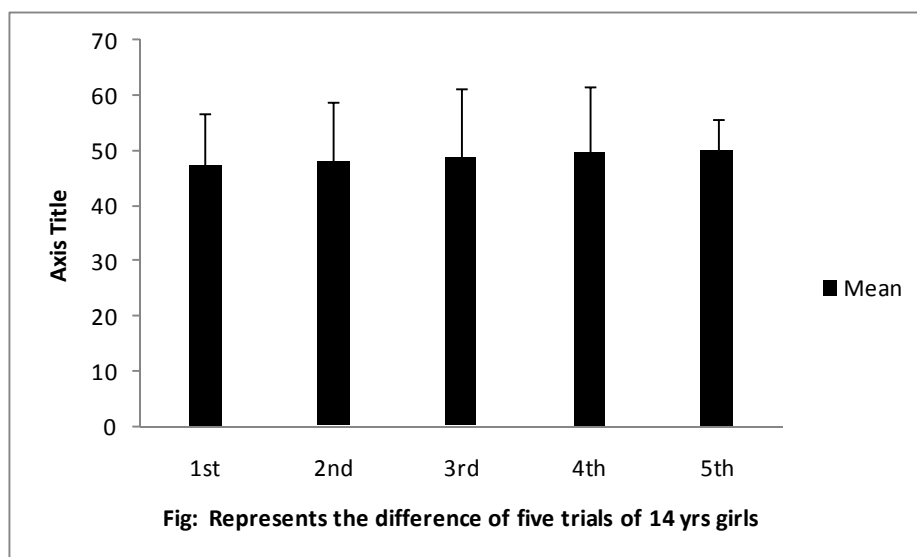
The mean, SD and F values of balance of 14 yrs girls group for five trials were presented in table-6.

		T1	T2	T3	T4	T5	F
14 yrs.	Mean	47.5	48.13	48.86	49.95	50.21	1.94 (NS)
	SD	4.81	5.32	5.56	4.22	4.83	

The mean value of five trials i.e. T1,T2, T3, T4 and T5 were 47.5,48.13,48.86,49.95 and 50.21 respectively as the SD values were 4.81,5.32,5.56,4.22 and 4.83 respectively.

Comparison the mean value the difference were found and F value was calculated and found 1.94 which was not significant.

The differences were also presented in fig.



to 16 yrs. girls balance was not improved.

Conclusion:

On the basis of the result and discussion the following conclusion were drawn:

4. For 10 yrs girls group the balance from 10 to 11 yrs age was not improve but from 11 to 12 yrs balance improve significantly.
5. For 12 yrs girls group the balance was remain same up to 13 yrs 6 months . In the last 6 month the balance improve remarkably.
6. For 14yrs girls group the balance was not improve for two year of time period.

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SOCIO-ECONOMIC CONDITIONS (SEC) OF TRIBAL PEOPLE: A CASE STUDY

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Abstract:

The present study has attempted to highlight the factors that affect Socio-Economic Conditions (SEC) of the scheduled tribes. The study represents that extension of education and creation of employment opportunities play a pivotal role to thrive Socio-Economic Conditions of scheduled tribes largely.

Introduction:

Between 1951 to 2011 the literacy rate in India enhanced from 16.67 percent (male-24.95 % and female- 9.45 %) to 74.04 percent (male- 82.14 % and female- 65.46 % : Source Census of India 2011) . In spite of being increased literacy in general, educational status of the depressed society, particularly scheduled tribes remains very miserable conditions. In India tribal population estimates 84 million (8.23%) in 2001. percentage of scheduled tribes to total population in India accounts for 8.6 % having 11.3 % in rural and 2.8 % in urban population. In India , literacy rate is found to 64.83 % having 75.26 percent for male and 53.67 percent for female while corresponding figures for tribes estimate 47 % taking into account for 59.2 percent for male and 34.8 percent for female(source: Census of India 2001). Literacy rate among persons of age 5 years and above for STs (all India) estimates 61.5 % taking into consideration of 70.1 % male and 52.6 % female(Source: Report no. 543 of NSS 66th round 2009-10). The literacy gap between scheduled tribes and all social groups reduced from 17.83 % in 2001 to 12.54 % in 2009-10. So we must conceive the extension of education as one of the important socio-economic conditions that does have a pivotal role for development of scheduled tribes. Sex ratio among scheduled tribes has improved from 978 female per 1000 male in 2001 to 990 female per 1000 male in 2011 which is higher as compared to all social group in India between 2001 to 2011. The picture indicates improvement of social awareness among tribes. Diez(2001) correlated individual health status to socio-economic status of the community and community health infrastructure. In this backdrop, the present paper has attempted to undertake an investigation about socio-economic conditions of tribes at Morgadanga, a tribal village of Birbhum.

Objectives of the study:

1. To find out socio-economic conditions of tribes w.r.t income, employment and literacy rate.
2. To investigate relationship among income, employment, education and socio-economic conditions.

Methodology:

In order to carry out the study a tribal village, namely Morgadanga has been selected from the district of Birbhum. 26 tribal households have been chosen randomly from both Above Poverty Line (APL) and below Poverty Line (BPL) households. Primary data have been collected on the basis of Socio-Economic Conditions related questionnaire. Various statistical tools i.e correlation matrix, simple regression, multiple regression, Dummy variable regression model and “t” test have been deployed to analyse the data.

Discussion and Results:**Table 1:** An Estimation of Birth Place of STs Children

Caste	No. Of Households under Care of			Hospital	Nursing Home	Total
	Untrained Class	Trained Elderly class	Relative			
ST	21 (80.76)	_____	_____	4 (15.38)	1 (3.84)	26

Figures in parenthesis indicate percentage (%)

Table -1 exhibits an interesting feature that most of the tribal women give birth at home(80.76 %),followed by 15.38 % in hospital and 3.84 % in nursing home respectively. They are presently facilitating by ICDS (Integrated Child Development Scheme) and DFID (The Department for International Development), e.g maternity benefit (Rs 500-700, JSY)

Table 2: An Estimation of Immunization of Children and Haria Drinking

Caste	Immunization Done (No.of Households)	Immunization Running(HH)	Immunization not Done (HH)	% of Haria Drinking(HH)
ST	5 (19.23)	10 (38.46)	11 (42.30)	24 (92.30)

Figures in parenthesis indicate percentage (%)

Table-2 brings out that 19.23 percent households have done immunisation, 38.46 percent are continuing immunisation. 42.30 per cent of household neglect immunization due to lack of knowledge about good health Haria drinking is common picture among the tribal population and here is also no expectation and haria drinking has direct bearing on ill health and they are not aware of bad habit.

Table 3: Correlation among F.M, F.S, TAY and TAEG

	F.M	F.S	TAY	TAEG
F.M	1	.151	.803**	.886**
Sig.(2-tailed)		.463	.000	.000
N	26	26	26	26
F.S	.151	1	.503**	.376
Sig.(2-tailed)	.463		.005	.058
N	26	26	26	26
TAY	.803**	.530**	1	.976**
Sig(2-tailed)	.000	.005		.000
N	26	26	26	26
TAEG	.886**	.376	.976**	1
Sig.(2-tailed)	.000	.058	.000	
		26	26	26

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

*Correlation is significant at the 0.05 level(2-tailed)

Table -3 estimates correlation among family member (F.M), farm size (F.S), total annual income (TAY) and total annual employment generation (TAEG). Annual income of household(TAY) is positively and significantly related with F.M which indicates higher is F.M subject to constraint able working member, higher is AY of households. F.S and TAEG also follow the same result with AY. So, AY of tribal household depends on the F.S, availability of farm and non-farm and forest related activities largely.

Regression Equation: $TAY_i = a_1 + b_1 F.M_i$ (1), TAY= Total Annual Income of Household, F.M = Family Member

Table-4: Regression Results

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
(Constant)	7389.897	4363.340		1.694	.103
F.M	5035.389	762.230	.803	6.606	.000

Dependent Variable: TAY

Regression Results show that annual income depends on family member subject to constraint able working family member as they are involved in various farm and non-farm activities which may have direct bearing on higher level of income of households.

Regression Equation: $TAEG_i = a_2 + b_2 TAY_i$ (2) TAY= Total Annual Income of Household, TAEG= Total Annual Employment Generation

Table-5: Regression Results

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
(Constant)	130.223	45.381		2.870	.008
TAEG	0.027	.001	.976	22.165	.00

Dependent Variable: TA

Regression results focus that TAEG is influenced and induced by annual income significantly. The tribal households may have higher level of income with the greater opportunities of employment security which in turn may lead the promotion of socio-economic conditions of tribals

Multiple Regression Equation: $L.R_i = a + \beta_1 PCY_i + \beta_2 TAEG_i + u_i$ (2), PCY=Per Capita Income, L.R= Literacy Rate, TAEG= Total Annual Employment Generation.

Table-6: Regression Results

Variable	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
(Constant)	-2.149	9.508		-.226	.823
PCY	.091	.014	.805	6.504	.000
TAEG	.0004	.005	-0.10	-.080	.937

Dependent Variable: L.R

The multiple regression result focuses that literacy rate of tribals depend positively and significantly on PCY as low p-value but negatively and insignificantly related with TAEG as high p-value.

Dummy Variable Regression Model: $ALR_i = a + \beta_1 D_{1i} + U_i$ (1),

ALR_i = average literacy rate of i th group.

$D_1 = 1$, if the tribal households belong to Below Poverty Line (BPL) group
 $= 0$, otherwise.

Table-7: Regression Results: $ALR_i = 50.034 - 2.419D_{1i} + U_i$

	Unstandardized Co-efficients		Standardized Co-efficients	t	Sig
	B	Std. Error	Beta		
Constant	50.034	6.099		8.204	.000
D ₁	-2.419	8.625	-.071	-.280	.782

Dependent Variable: ALR

From the above regression results indicate that average literacy rate of above poverty line (APL) group is found to be 50.03 % as compared to 47.62 % average literacy rate of below poverty line (BPL) group. The average literacy rate estimates higher for APL group which is positively and statistically significant as quite low p-value but ALR of BPL group accounts for lower as compared to APL group which is positively and non-statistically significant as high p-value.

Conclusion:

Extension of education and creation of employment opportunities play a pivotal role in order to promote socio-economic conditions of the scheduled tribes. So, the maximum efforts should be given on promotion of their educational status and food and job security. The following findings may be stated as:

- ✚ Most of the tribal women give birth at home (80.76 %)
- ✚ 42.30 per cent of household neglect immunization due to lack of knowledge about good health
- ✚ Haria drinking is common picture among the tribal population m fertility rate (3 per women) is found in the study area. ,
- ✚ Annual income of tribal household depends on the family size (F.S) subject to constraint able working man or women, availability of farm and non-farm and forest related activities largely.
- ✚ The tribal households may have higher level of income with the greater opportunities of employment security. Literacy rate of tribals depend positively and significantly on per capita income (PCY).
- ✚ Average literacy rate of Above Poverty Line (APL) group is higher as compared to Below Poverty Line (BPL).
- ✚ Average literacy rates of both APL group(50.03 %) and BPL group (47.62 %) in the study area estimate lower as compared to the 61.5 % literacy rate among scheduled tribes of age 5 years and above for all India (Source: Report no. 543 of NSS 66th round 2009-10)
- ✚ Major Socio-Economic Conditions (SEC) for tribal Development may be focussed as: Extension of education, growth of literacy rate, income and employment, farm-size, opportunities of occupation, health status and Socio-economic Awareness (SEA)

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Different Dimensions of Gender Disparity: A Study of Haringhata - II Gram Panchayat of Haringhata Community Development Block in Nadia District, West Bengal

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Abstract:

The present paper aims at identifying the different dimensions of gender disparity in terms of population distinctiveness in Haringhata-II Gram Panchayat in Haringhata C.D. Block of Nadia District, West Bengal. The diverse modes of gender disparity are examined for the period of 1991 to 2001. This paper is an attempt to review the standing of gender disproportion on the basis of the population sex ratio, Scheduled Caste sex ratio and Scheduled Tribe sex ratio in the study area. An attentive effort has also been made to focus on the parity in the number of male and female literates in the study area following Gender Parity Index (Millennium Development Goals: India Country Report 2011). A spatio temporal analysis of gender inequality in terms of occupational sex ratio in the study area has also done to get a hold of its tangible scenario within the Panchayat.

Key Words:

Gender disparity, Gender Parity Index for literacy, Occupational sex ratio, Sex ratio

Introduction:

The production, reproduction and the different dimensions of gender stratification has a wide extension and base which affects social, economic and class relations simultaneously. Report of Expert Committee on Gender and Education (2012) depicts that “Gender is a socially constructed and intersectional identity: it always intersects with social class, ethnicity and religion, culture, disability, sexuality, age etc”. There are hefty provincial differences in the sex ratio in India, chiefly between Northern and Southern States, where the earlier conventionally having elevated ratios than the later (Guillot, 2002). Tenure “Discrimination against females”, generally used in the Indian demographic text to portray the unfavourable access of food and health care facilities which ultimately leads to higher female mortality (Guillot, 2002). The happening of sex selection is robustly predisposed by the gender of the foregoing child (Hesketh and Xing, 2006). Education itself acts as a factual stimulus towards the challenge of gender stereotype. “.. investments in girls’ education may lead to even more dramatic reductions in the size of the labour force if the benefits of education accrue mostly in the home. It is still unclear how households and labour markets respond to girls’ education” (Lincove, 2008). Real economic escalation seems to have an intricate relationship with the extended educational conveniences for girls, in spite of of female labor force participation” (Lincove, 2008). “In poor, agricultural economies, where most households live in rural areas, female participation is high. In rural areas family responsibilities and agricultural work can be combined; the household is both a consumption unit and a production unit” (Bloom *et al.*, 2009). The base level of stratification hierarchy especially in Indian society the female work participation is mainly associated with the inadequate family prop up. It is very common in the Scheduled group to depart women from work participation after receiving a higher socio-economic status (Dunn, 1993). According to Reddy,(1979) “The greater the intensity of social sentiment against female economic activity, the greater will be the inhibition towards female entry into economic activity, resulting in a low ratio of female cultivators to male cultivators ratio and vice – versa”. Rural Indian women are mostly “over employed” than “under employed”. They often appeared as “unproductive” part just because of a lack in direct income from production process (Reddy, 1979). Mukhopadhyay, (2005) opined that “It is around work participation and employment opportunities that the process of social empowerment and bridging of gender inequality

can be understood”. Moreover she added “Marginalization of female labour force is an old trend of the nineties, which is still continuing.”

Study Area:

Haringhata-II Gram Panchayat in Haringhata C.D. Block of Nadia District, West Bengal has been chosen as the study area (Fig. No. 1). The study area is entirely rural in nature and comprises 9 villages (Census of India, 2001). As an agriculture predominant area it has a total area of 14.96 KM². It constitutes a total population of 20166 persons. The sex ratio is 793 female /1000 male. Moreover, the Scheduled Caste sex ratio is 888 female /1000 male and the Scheduled Tribe sex ratio is 942 female /1000 male respectively (Census of India, 2001). The literacy rate in the study area is 78.64%, where female literacy rate is 69.25% and male literacy rate is 85.93% (Census of India, 2001). The male and female work participation rates have been recorded as 55.83% and 13.63% respectively (Census of India, 2001).

Objectives:

The main objectives of the study are as follow:

- i) To identify the different dimensions of gender disparity in terms of population sex ratio, Scheduled Caste sex ratio and Scheduled Tribe sex ratio, number of literates and occupational sex ratio.
- ii) To spot the declining trend in sex ratio from 1991 to 2001 in the diversified segments of population.
- iii) To analyze the inclination of gender parity in the number of literates.
- iv) To investigate the actual spatio-temporal drift of occupational sex ratio in the arena of various occupational fields.

Data Base and Methodology:

This study is based on secondary data which have been collected from Census of India (1991 and 2001), published reports from SIPRD, Kalyani, Nadia District, Government of West Bengal and Haringhata Block Development Office, Nadia District, West Bengal.

$$\text{Sex Ratio (SR)} = (F_{Pi}/M_{Pi}) \times k \dots\dots\dots (i)$$

Where, F_{Pi} = Female population (Total female population /Scheduled Caste female Population /Scheduled Tribe female population) of each village, M_{Pi} = Male population (Total male population /Scheduled Caste male Population /Scheduled Tribe male population) of each village, k = Constant (1000).

The gender parity in literacy in terms of number of male and female literates has been measured through Gender Parity Index for Literacy (Millennium Development Goals: India country Report 2011),

$$GPIL_i = (FL_i)/(ML_i) \dots\dots\dots (i)$$

Where, $GPIL_i$ = Gender Parity Index for Literacy of each village, FL_i = No. of Female literates, ML_i = No. of Male literates,

A GPI of 1 indicates complete gender parity between literates. A GPI that ranges between 0 and 1 usually means a male favoured disparity whereas a GPI greater than 1 indicates a female favoured disparity.

Gender Disparity in work participation in the study area has been calculated through the method of Occupational Sex Ratio (Mukhopadhyay, 2005),

$$\text{Occupational Sex Ratio (OSR)} = (FO_i/MO_i) \dots\dots\dots (i)$$

Where, FO_i = No. of Female workers in a particular field of occupation (cultivators/agricultural labourers /household industry workers/other services) of each village, MO_i = No. of Male workers in a particular field of occupation

Results and Discussion:

Following are the illustrations of results and discussions –

Population sex ratio (1991 to 2001):

Population sex ratio shows a waning trend from 1991 to 2001 for all the nine villages except Jaguli, Kapileshwar and Dakshin Brahmapur. In 1991 a positive sex ratio has been seen in the village Sirajanpara. The highest population sex ratio for the year 1991 is originated in the village Sirajanpara (1045 females/thousand of males) where as the lowest one is detected in the villages Hatikanda and Dakshin Brahmapur (928 females/thousand of males). In 2001 the village Khodra Manpur with a sex ratio of 982 females / thousand of males holds the highest position. The lowest sex ratio in 2001 is found in the village Haringhata Farm (653 females /thousand of males). [Table No. 1 and Fig. No. 2] The highest decline in population sex ratio from 1991 to 2001 is evidenced in the village Khodra Manpur (255 females / thousand of males). Infanticide, disregard of female children, trafficking, sex selective abortion, etc. may be the probable responsible factors for the present scenario of population sex ratio in the study area.

Scheduled Caste Sex Ratio: (1991 to 2001)

Scheduled Caste sex ratio also viewed a moribund trend from 1991 to 2001 except for the village Haringhata Farm (774 females / thousand of males in 1991 to 803 females / thousand of males in 2001). In 1991 a positive sex ratio has been seen in the villages Sirajanpara, Khodra Manpur and Kapileshwar. The highest population sex ratio for the year 1991 is found in the village Kapileshwar (1152 females/thousand of males) where as the buck one is detected in the villages Dakshin Brahmapur (692 females/ thousand of males). In 2001 the village Kapileshwar with a sex ratio of 1148 females / thousand of males holds the highest position. The lowest sex ratio in 2001 is found in the village Dakshin Brahmapur (600 females /thousand of males). The highest decline in Scheduled

Caste sex ratio from 1991 to 2001 is identified in the village Manpur (168 females / thousand of males). [Table No. 2 and Fig. No. 3]

Scheduled Tribe Sex Ratio: (1991 to 2001)

The most notable point for Scheduled Tribe sex ratio is that it also dilapidated but positive for all villages except the villages Khodra Manpur ((878 females / thousand of males in 1991 to 892 females / thousand of males in 2001), Santoshpur (1235 females / thousand of males in 1991 to 1286 females / thousand of males in 2001) (833 females / thousand of males in 1991 to 1043 females / thousand of males in 2001) and Dakshin Brahmapur. A key decline in Scheduled Tribe sex ratio is evidenced in the villages Hatikanda (221 females / thousand of males), Jaguli (194 females / thousand of males) and Kapileshwar (175 females / thousand of males). In 1991 the lowest sex ratio for Scheduled Tribe is seen in the village Dakshin Brahmapur (833 females / thousand of males) where as for the year 2001 the position is taken by the village Jaguli (864 females / thousand of males). [Table No. 3 and Fig. no. 4]

Gender Parity Index for literacy (GPILi): (1991 to 2001)

From 1991 to 2001 there is a rise is observed in the number of female literates except in the village Santoshpur (299 female literates in 1991 to 297 female literates in 2001). In the year 1991 a much squat GPI is seen for literacy in the villages Manpur (GPILi=0.657), Sirajanpara (GPILi=0.549), Khodra Manpur (GPILi=0.670), Dakshin Brahmapur (GPILi=0.473) and Haringhata Farm (GPILi=0.559) respectively. A look to Table No. 4 and Fig. No. 5 depicts that the highest GPI for literacy is evidenced at the village Santoshpur (GPILi=0.806) and the lowest one is found in the village Dakshin Brahmapur (GPILi=0.473). Contrarily the villages Hatikanda, Kapileshwar, Jaguli and Santoshpur (GPILi= 0.717, 0.797, 0.784 and 0.806 respectively) showing an advancement towards gender parity in literacy.

Conversely, in 2001, a bending GPI for literacy is seen in the villages Manpur (GPILi=0.529), Sirajanpara (GPILi=0.636), Santoshpur (GPILi=0.688), and Haringhata Farm (GPILi=0.476) respectively. Table No. 4 and Fig. No. 5 again, describes that the

highest GPI for literacy is evidenced at the village Jaguli (GPILi=0.867) and the lowest one is found in the village Haringhata Farm (GPILi=0.476). The villages Hatikanda, Khodra Manpur, Jaguli, Kapileshwar, and Dakshin Brahmapur (GPILi= 0.723, 0.795, 0.867, 0.836 and 0.776 respectively) showing a progress towards gender parity in literacy. The highest increase in the number of female literates is observed in the village Dakshin Brahmapur and the much less number is seen in the village Hatikanda.

Occupational sex ratio (OSR): (1991 to 2001):

The rigorousness of gender disparity in the study area can be best viewed in terms of occupational sex ratio (main workers) for different occupational fields where the female work participation is awfully near to the ground. In 1991, the highest occupational sex ratio for cultivators has been seen in the village Khodra Manpur (0.02). At the same time in seven villages there is no female work participation at all. In 2001, the highest OSR for cultivators viewed in Kapileshwar (0.286). Dakshin Brahmapur shows the highest OSR for agricultural labourers (0.414) in 1991 whereas Sirajanpara holds the position in 2001(0.614). The 2001 records show that there are no female agricultural labourers in Hatikanda. Both in 1991 and in 2001 Haringhata Farm shows the highest OSR for Industrial workers (0.615 and 0.571 respectively). The most significant information is that in 1991 the village Sirajanpara shows exact gender parity in the field of other services (1.00) which become only 0.212 in 2001. Looking at the total occupational sex ratio Sirajanpara ranks highest both in 1991 and in 2001 (0.315 and 0.318 respectively). Conversely the 1991 and 2001 scenario in terms of lowest total OSR again shows a decline (Santoshpur, 0.088 and Dakshin Brahmapur, 0.032 respectively). Even in the Haringhata Farm there is a prominent decline in sex ratio for Household Industry Workers from 1991 to 2001 (0.615 to 0.571 respectively). Within a decade, the total occupational sex ratio shows increase for three villages only, i.e. Hatikanda, Sirajanpara and Khodra Manpur. [Table No.5, 6 and Fig. No. 6, 7]

Major Findings:

From the above discussion the major findings derived are-

1. The population sex ratio shows a more declining trend than the individual Scheduled caste and Scheduled Tribe sex ratio.

2. The village Khodra Manpur shows the highest decline in population sex ratio but have a positive Scheduled caste and Scheduled Tribe sex ratio. It indicates a decline in sex ratio within a specific segment of population.
3. In the village Santoshpur a decrease in the number of female literates is evidenced with a low GPI for literacy. Further more a quite high decrease in GPI for literacy also observed for the time period 1991 to 2001. It points towards a positive relationship between no. of female literates and GPI for literacy for the study area.
4. More interestingly, Haringhata Farm shows a notable decline both in population sex ratio and in GPI for literacy. It means required process for advancement in both the fields must not be carried individually.
5. For the study area, the occupational sex ratio shows a massive decline among all the fields of occupation except cultivators with a very trivial increase.

Conclusion:

Gender disparity is a parallel process which affects both the population structures and the functions performed by it. Further, the functions affect each other. The overall picture of gender scenario in the study area that emerges is not different with respect to different sectors of gender disparity. The disarticulation of female labour in agriculture is very noteworthy which needs other agricultural employment opportunities for them also. Self employment may act as defend for breaking gender stereotypes both in social segment and in occupational diversification. Identical social and economic rights for men and women, basic health care for women, rights to inheritance for women etc. will decrease the relentlessness of the problem for women in the study area.

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EXPLORATION OF INLAND WETLANDS-A CASE STUDY IN NADIA DISTRICT, WEST BENGAL

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ABSTRACT:

A wetland is a land area that is saturated with water, either permanently seasonally, such that it takes on the characteristics of a distinct ecosystem. Wetlands are areas of marsh, fen, peat land or water, whether natural or artificial, permanent or temporary, with water that is static or flowing, fresh, brackish or salt, including areas of marine water the depth of which at low tide does not exceed six metres[Ramsar International Wetland Conservation Treaty (Article 1.1)]. The wetlands are of multipurpose usage, and have significant role in the livelihoods of the local people. Economic and ecological functions of multiple use systems change over time and space. Hence an inventory of wetlands in any area is a prerequisite for their conservation and effective management. In this paper study has been carried out to delineate the characteristic economic importance of inland wetlands of Nabadwip, Santipur, Krishnanagar block-1 and Krishnanagar block-2 in Nadia district, West Bengal.

Based on available primary and secondary information, selected wetlands in Nadia district of West Bengal were studied and their economic benefits gained from their multipurpose uses namely, wetland cultivation, irrigation, fisheries, jute retting, domestic purposes and collection of Amaranthus from wetlands and surroundings, are to be evaluated.

1. INTRODUCTION:

Wetlands being as valuable as a distinct natural resource deserve consideration in such a works. A wetland inventory which includes the gathering of data on the location, size and quality of these resources, is a prerequisite for effective management and monitoring. An inventory should constitute an information system that provides a geographically comprehensive picture of acquired information and should give insights into the wetlands temporal dynamics (Zalidas et al. 1997).

Hollis (1992) indentified a range of causes of loss degradation of wetlands, which include agriculture, pollution, urbanization, water resource use, fisheries, tourism and recreation. Here, the characteristics and multipurpose use of 12 wetlands of Nabadwip, Santipur, Krishnanagar block-1 and, Krishnanagar block-2 in Nadia district of West Bengal have been discussed.

On International Summit on Wetland was held in Ramsar, Iran in 1971. The main concern of that Summit was how to protect and preserve wetland. On International Agency was formed in that Summit called "Ramsar Convention Bureau". This Agency calls for a conference and every 3 years in different part of the World with a view of formulating and reviewing the plan for protection and conservation of wetland World over, and to recommend necessary step in this

figure. The term “Ramsar Site” uses for the wetland in different countries has been coined from this Site. Every year 2nd February, is observed as the “International Wetland Day” and in West Bengal, every year 1st Ashar is observed as Jalabhumi Dibas or Wetland Day.

In the present study the inland wetlands are Gangetic floodplain of Nadia district changed their characteristics and multipurpose uses by the unscientific activities of local communities and the inland wetland uses also changed across years depending on the interest of the dominant stakeholders and social pressures.

2. OBJECTIVES OF THE STUDY:

The main objectives of the paper are:

(A). to explore the Wetlands at Nabadwip, Santipur, Krishnanagar block-1 and, Krishnanagar block-2 in Nadia district of West Bengal.

(B). To describes the characteristics of selected wetlands of Nadia district of West Bengal.

(C) To realize the multipurpose uses of wetlands of Nadia district of West Bengal.

3. STUDY AREA:

The Nadia district is situated in the heart of the Bengal delta, bound by Ganga, viz. the Bhagirathi on the west and the east by Padma. The entire district lies in the alluvial plain

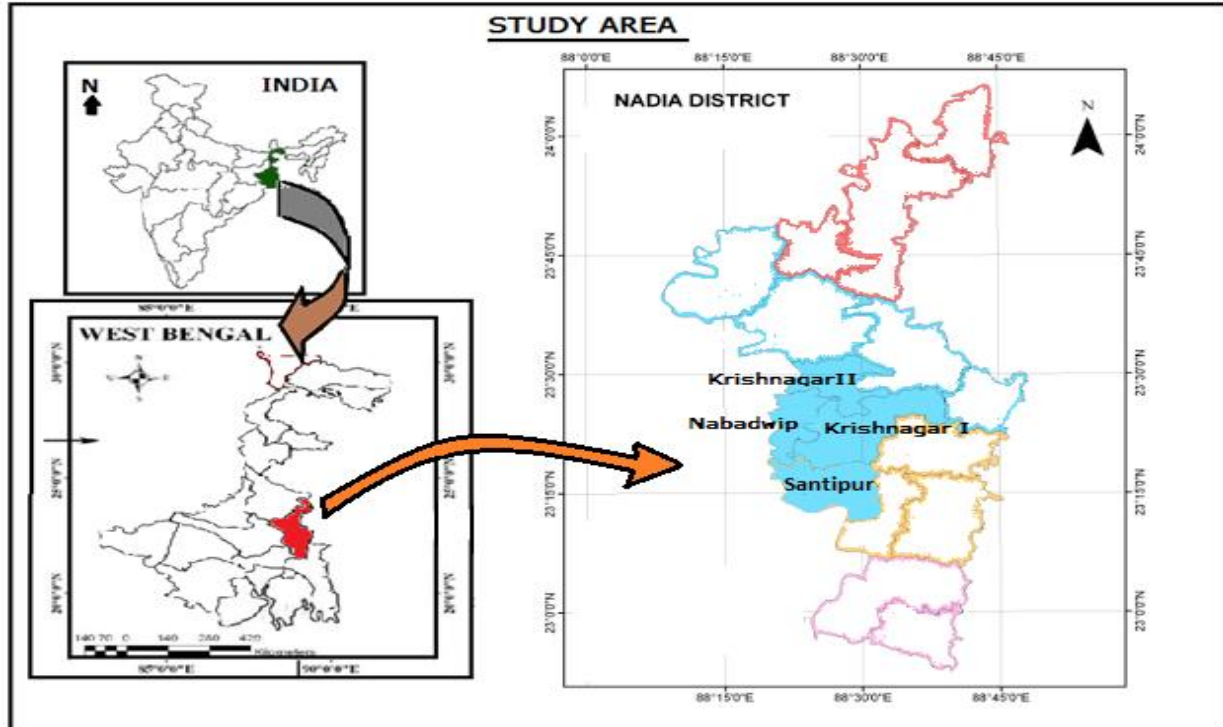


Fig.1: Location of the Study Area

of Ganga and its tributaries. The district lies between $22^{\circ} 52' 30''$ N to $24^{\circ} 54' 0''$ N latitudes and $88^{\circ} 08' 10''$ E to $88^{\circ} 48' 15''$ E longitudes. Its area is 3927 sq km. According to the 2011 Census Nadia district has a population of 5168488 and a population density of 1300/Km². This district is linear in shape with orientation of North to South. Its extension from North to South is 135 Km and from East to West is 45 Km. The geographical boundary of Nadia district comprises Bangladesh in the East, Burdwan and Hugli district on the West, Murshidabad district on the North and North-West and North 24 Parganas towards South and South-East.

We have taken Nabadwip, Santipur, Krishnanagar block-1 and Krishnanagar block-2 as our study area in Nadia district of West Bengal and taken 12 Bils of that selected blocks

4. WETLADS-RESULT AND DISCUSSION:

There are 17 wetlands, whose individual area are greater than or equals to 2.25 hector or 5 acre, in the vast flood-plain area of the study area in Nadia district. These wetlands occur in 4 blocks of the district. Total area covered by these 17 wetlands is 888 acre which is about 0.6 % of the total geographic area of the 4 blocks: Nabadwip, Santipur, Krishnagar-I, and Krishnagar-II in Nadia district of West Bengal. We have selected three wetlands in Nabadwip Block namely Bachhamari Bil, Khayrar Bil and Nabadwip Municipal Lakes; six wetlands in Santipur Block namely Chariganga Bil, Haripur Bil, Baliadanga Bil, Kishorpur Bil, Maniknagar Bil and Charshimulia Bil; five wetlands in Krishnanagar Block-1 namely Alakananda Bil, Hansadanga Bil, Tangra Bil, Bhaluka Bil, and Malipota Bil; and three wetlands in Krishnanagar Block-2 namely Bahadurpur Bil, Noapara Bil and Barabil. All of these wetlands are originated naturally. The depth of these wetlands varies depending on the monsoon seasons and the amount of rainfall. Most of these wetlands are used in Agricultural purposes to be specific in irrigation, cultivation etc. and in domestic purposes. The features and characteristics of these wetlands are given below:

Block	Area of Block in acres	Name of Wetlands	Area in acres	Water Regime	Origin	Source of Water	Mean Depth (ft)	Use Pattern
Nabadwip	9739	Bachhamari Bil	2.0	Perennial	Natural	Rain Water, River Water	1.8	Irrigation, Paddy and Jute cultivation
		Khayrar Bil	16.6	Perennial	Natural	Rain Water, River Water	2.1	Irrigation, Paddy and Jute cultivation
		Nabadwip Municipal Lakes	5.3	Perennial	Natural	Rain Water	1.5	Paddy cultivation and Domestic purposes
Santipur	17141	Chariganga Bil	53	Perennial	Natural	Rain Water, River Water	3.6	Irrigation, Paddy, Jute cultivation and Domestic purposes
		Haripur Bil	50.6	Perennial	Natural	Rain Water	4.9	Irrigation, Paddy, Jute cultivation and Domestic purposes

		Baliadanga Bil	50.6	Perennial	Natural	Rain Water	4.3	Irrigation, Paddy, Jute cultivation and Domestic purposes
		Kishorpur Bil	5.7	Non- Perennial	Natural	Rain Water	1.2	Irrigation, Paddy and Jute cultivation
		Maniknagar Bil	4.0	Non- Perennial	Natural	Rain Water	1.5	Irrigation, Paddy and Jute cultivation
		Charshimulia Bil	12.0	Perennial	Natural	Rain Water	1.22	Irrigation, Paddy and Jute cultivation
Krishnagar-I	27319	Alakananda Bil	2.5	Perennial	Natural	Rain Water, River Water	1.8	Irrigation, Paddy and Jute cultivation
		Hansadanga Bil	160.0	Perennial	Natural	Rain Water	1.5	Irrigation, Paddy and Jute cultivation
		Tangra Bil	2.0	Perennial	Natural	Rain Water	1.5	Irrigation, Paddy and Jute cultivation
		Bhaluka Bil	50.0	Perennial	Natural	Rain Water	3.1	Irrigation, Paddy, Jute cultivation and Domestic purposes
		Malipota Bil	3.2	Non- Perennial	Natural	Rain Water	0.6	Irrigation, Paddy and Jute cultivation
Krishnagar-II	12437	Bahadurpur Bil	16.6	Perennial	Natural	Rain Water	2.2	Irrigation, Paddy and Jute cultivation
		Noapara Bil	61	Perennial	Natural	Rain Water	2.4	Irrigation, Paddy, Jute cultivation and Domestic purposes
		Barabil	31	Non- Perennial	Natural	Rain Water	1.2	Irrigation, Paddy and Jute cultivation

Table: 1, Data Source: J. Environ. &Sociobiol: 7(2):93106, 2010, SubarnajayantiSmarakgrantha (2010): pp-117-132 and Primary Survey.

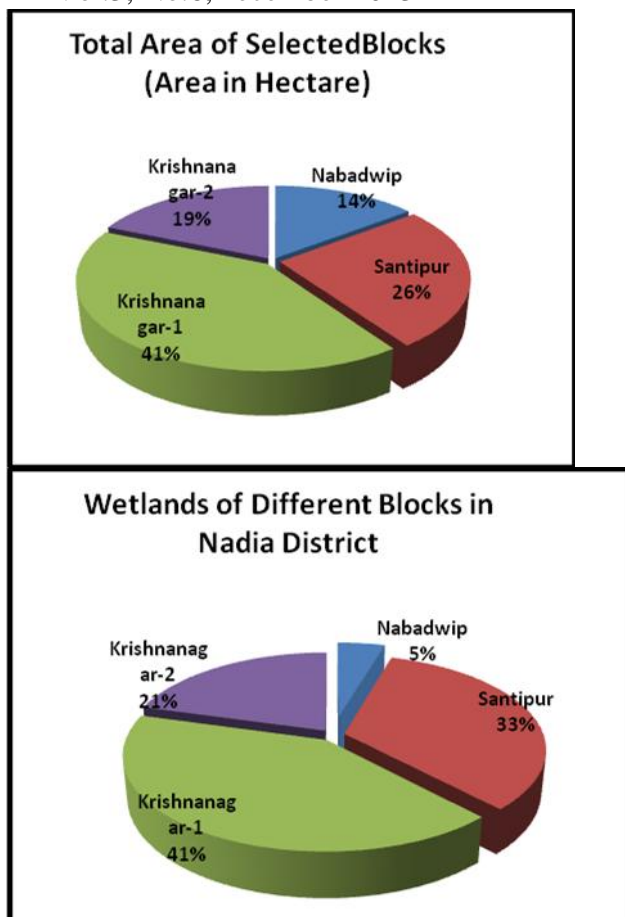


Fig2: Compared between areas and Wetlands of selected block in Nadia district of West Bengal.

5. ECONOMIC IMPORTANCES OF WETLANDS:

Seventeen wetlands from different blocks of Nadia district have been selected to study their economic importance, e.g. Nabadwip (3), Santipur (6), Krishnanagar-1(5), and Krishnanagar-2(3).

5.1 Wetland Cultivation:

During monsoon season, the area surrounding these bils gets water logged and except jute it is difficult for farmers to cultivate other crops. Jute is cultivated both in upland surrounding the wetland and wetland bed. As water recedes from the land surrounding the bil, farmers start cultivation by spreading the deposited silt uniformly through ploughing and taking out extra water from the land. Farmers of the upland surrounding the bil generally get two crops per year and those who are having land in the water spread area of the bil get single crop a year. Boro paddy is the major crop cultivated in the water spread area of the bil where the process of cultivation starts at the end of November every year. During summer season when wetland bed dries up, wetland cultivation is a common practice, which is carried out by the farmers having land in wetland bed or in the low lying area.

5.2 Using wetland as a source of Irrigation:

Wetland is an important source of irrigation. Cost of irrigation from wetland is cheaper as compared to irrigation in upland for paddy cultivation. Cost of irrigation from wetland mostly depends on the distance between wetland and farmland, which varies from minimum 61 metres to maximum 2000 metres with an average distance of 742 metres. Cost of irrigation for farmers using both ground water and wetland water is comparatively lower.

In Gangetic flood plain groundwater depth is low and it varies from 15 metres to 61 metres. Mean depth of these wetland varies 0.6 metre to 4.9 metres where mean depth of Bhaluka bil, Baliadanga bil and Haripur bil are 3.1, 4.3, and 4.9 metres. Water of these wetlands is mostly used for upland paddy and jute cultivation.

5.3 Using Wetland for Fisheries:

Most of these wetlands are used for fisheries for the period of Jun-July to October-November each year. Most of the local people individually and collectively bid for the wetland. Bacchamary bil, Khayrar bil, Nabadwip Municipal Lakes, Hansadanga bil, Alakananda bil, and Bhaluka bil, etc. are used for Pisciculture. Pisciculture in the wetland are operated and managed in two ways. They are: (a) Owners operated and (b) Lease holders operated. Under Owners operated system, wetland fisheries are managed by the formation of a committee. Hansadanga bil, for example, is operated by Malopara Fisherman co-operative Limited and Bhaluka bil is operated by Bhaluka Fisherman co-operative Limited.



Fig.4: Fishing in Wetland in Bhaluka Bil in Krishnanagar Block-1.

5.4Jute Retting:

Jute is the major commercial crop in the Gangetic flood plain of Nadia district in West Bengal. Availability of water bodies is an added advantage, which helps farmers in jute retting. During monsoon season, selected wetlands of Nabadwip (except Nabadwip Municipal Lakes), Santipur, and Krishnanagar-1, and Krishnanagar-2 blocks are used for jute retting by large

number of farmers from surrounding habitations. Jute is the commercial crop and jute sticks (locally known as Patkathi) are mostly used for house walling, as bio-fuel, and for various religious purposes.



Fig.5: Jute Retting in Bachhamari Bil in Nabadwip Block

5.5 Using Wetland for Domestic Purposes:

Among the various benefits of using wetland for various domestic uses, bathing and washing etc. are common, which, if we take in to consideration lowers the need of installing tube well either individually or collectively. Nabadwip Municipal Lakes, Bhaluka bil, Haripur bil and Baliadanga bil are used for domestic purposes. But nowadays the use of wetlands for domestic purposes is getting lower because the local communities do not depend on these wetlands alone for domestic water needs; instead they try to have their own private hand pumps, or common hand pumps provided by the local Panchayat and Municipality.

5.6 Using Wetland for Collection of Amaranthus:

Wetland is also important for Amaranthus. Because local people collect various Amaranthus (Kalmi-Ipomoea aquatic; Hinch, Sushni, Lotus, Shaluk, Water-chestnut etc.) from wetlands and they receive money by selling collected Amaranthus.

5.7 Using Wetland for Fodder Collection:

Wetland is a main source of fodder and many people, especially those who do not have agricultural land or who do not grow paddy or wheat depend mainly on these wetlands for fodder collection. Besides, farmers collect water hyacinth (*Echornia crassipes*) and various water borne vegetations and supplement fodder to reduce the cost of feeding the cattle population. It is found that on an average four months a year they collect fodder from the wetland.

6. Degradation of Wetlands:

The wetlands which are mainly used for jute retting gets polluted with the deposits of jute-butts, jute-fibers etc. when these things gets rotten on the water bed, it produces gases like methane and pollutes the water. These deposits also help in decreasing the volume of wetlands. Secondly bathing of domestic animals in this water also pollutes the water. As a result the water of these wetlands is becoming more and more problematic for fish and other creatures to live in water.

7. Recommendation of Wetlands:

Wetlands are vital ecosystems that provide livelihoods for millions of people who live in around them. So we can recommend protecting and conserving of wetlands following ways;

- Those wetlands which are used for jute retting should be cleaned properly after the job. Lime should be sprinkled in the water to clean it properly.
- Due to indiscriminate activities of human beings around the wetlands these are getting stagnant. As a result the capacity of wetlands to hold water is decreasing. So steps should be taken to bring back the natural depth of the wetlands.
- The depth of the wetlands around big rivers also decreases due to deposition of alluvium in its bed during flood. So concrete bund should be built up through the river-bank.
- The area of wetlands is shrinking day by day due to eutrophication process. So steps need to be taken to restrict it, by cleaning the wetlands in regular intervals.
- Wetlands should be protected and preserved by law.

8.CONCLUSION:

In the present study, delineation of wetland and important characteristics are available that are significant in the preparation of inventory to reflect the present status of wetlands. The studies of wetlands in lower Gangetic plain of Nadia district in West Bengal are used as multiple systems and have significant impacts on livelihood of the local people living in the surrounding area of wetlands from wetland cultivation, irrigation, jute retting and fisheries.

Apart from these, there are many ecological functions that a wetland performs. They are nutrient trapping and recycling; spawning and breeding ground for indigenous fish species; groundwater recharge and impacts on hydrology; run-off and soil erosion control and flood mitigation; regulating micro-climate; recreation and tourism on the area surrounding the wetland. They also have affected on livelihood of local communities living in the surrounding area of wetlands.

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STATUS OF WOMAN EMPOWERMENT AND GENDER-BIAS IN INDIA: A GEOGRAPHICAL STUDY

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Abstract

The status of women in India is developing over the period of time though there are many incidences of crimes against women have been reported now and then. Hence transforming the prevailing social discrimination against women must become the top priority in our policy and it must happen concurrently with increased direct action to rapidly improve the social and economic status of women in India.

In this present paper an attempt has been made to figure out the overall scenario of gender-bias and women empowerment in Indian perspective. Development in education and health sector as well as women empowerment through micro-financing have been analysed, where on the other hand, the darker sides of women's life like sexual harassment and different crimes against women have also been studied. It has been observed that the onset of liberalisation has not helped the larger cause of gender sensitivity in any way. Different schemes and women empowerment through five-year plans have been discussed so far as the proper understanding of the developmental progress in gender equality is concerned.

Introduction:

Indian society is no doubt changing, but if there is progress on certain fronts it is accompanied by regression on others. The aspirations for equality and freedom and for improvement in their status are undoubtedly increasing among Indian women, irrespective of the social and economic group they may belong to. Their presence in public spaces, particularly in urban India, is becoming more and more visible. However, alongside the structural constraints that are holding women back is the fact they have to confront not only the legacy of conservative values in relation to women that still have deep roots in Indian society but also current processes that are reinforcing these values and giving them new forms and expressions. The near abject lack of security for women and the absence of institutional mechanisms to democratise the participation of one half of India society expose the underbelly of India's warped development process.

Selected Indicators Expressing The Status of Women in India		
Indicators	Male	Female
Percentage Rate of Literacy (2011)	82.14	65.46
Maternal Death Rate/'100000 birth (2009-10)		212
Sex ratio (2011)	1000	940
Ratio of Female Baby(0-6 years), 2011	1000	914
Employment Ratio in Population/'000	819	336
Percentage of M.P	89.18	10.82

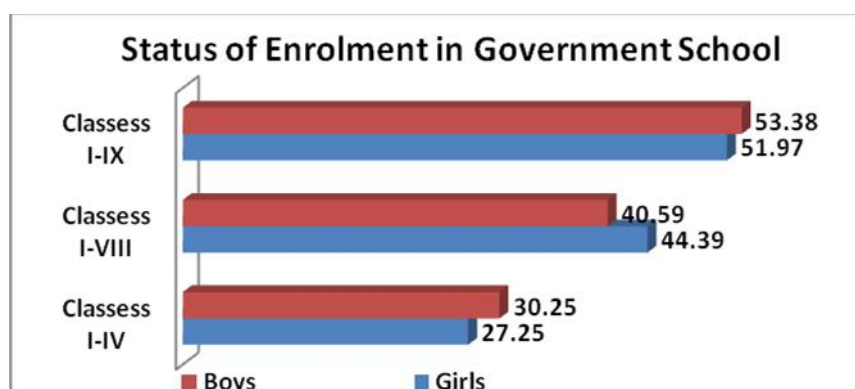
Source: Census of India 2011 and Sample Registration System, 2009-10

Education: The educational status of women is gradually rising in India. By March 2003, more than 108.42 million persons were made literate, of whom 60 per cent was women. According to the National Sample Survey as on 2000, about 0.3 million Non Formal Education centers were catering to about 7.42 million children, out of which about 0.12 million were exclusively for girls. Currently, in engineering, medical and other colleges, 30% of the seats have been reserved for females. In 2002-03, the number of female teachers per 100 male teachers is 64 at the primary level, 69 at the middle school/senior basic level, 62 at the secondary level and 71 at the higher secondary level.

Male Female Literacy Gap in India (in Percent)			
Year	Male	Female	Literacy Gap
1951	27.16	8.86	18.3
1961	40.4	15.35	25.05
1971	45.96	21.97	23.98
1981	56.38	29.76	26.62
1991	64.13	39.29	24.84
2001	75.85	54.16	21.7

Source: Census of India

There are 645 women in IAS/IPS service as on 2000, which is about 7.65 percent as compared to 5.4 percent in the year 1987. Even when there is relatively little difference in basic facilities including schooling, the opportunities of higher education may be far fewer for young women than for young men. Indeed, gender bias in higher education and professional training can be observed even in some of the richest countries in the world, in Europe and North America.

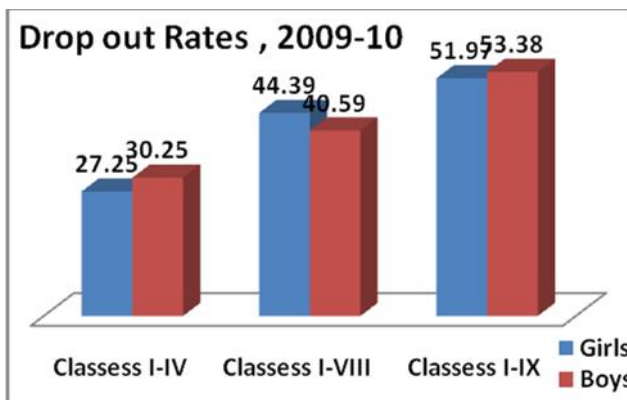


Source: NSS 64th Round, 2007-08

As revealed by the Sachar Committee Report (Social, Economic and Educational Status of the Muslim Community of India - A Report - November 2006), the educational status of Muslim and SC/ST women in particular is a major cause of concern. The literacy rate figures for Muslim, SC and ST women are 50%, 47.1% and 34.8% respectively.

Main Reasons for Girls never Attending School:

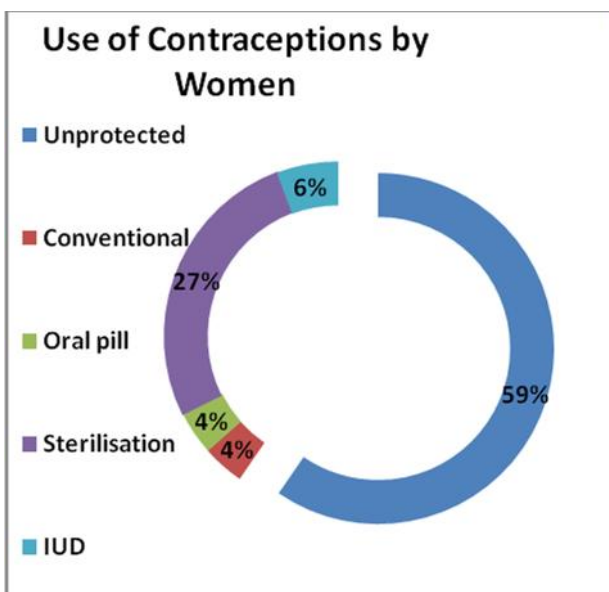
I. High cost of education, II. Lack of interest in study, III. Education not considered necessary, IV. They are needed for household work



At the bottom of the rung are Muslim and SC/ST women in rural areas whose literacy rates are 43% and 36% respectively. It should also be noted that disparities increase with the level of schooling. At the basic level of literacy, Muslim women were 11 % worse off than non-Muslims. However, the difference widened to 19% at the middle school level, 35% at Class- X, 45% at Class- 12, and 63% for graduates and above as per Census 2001.

Source: Census 2001

Health: The life expectancy of women has improved at a faster rate than that of men, so that by the mid-1990s, women in India had greater expectation of longevity than men, along the standard international lines and as predicted by biology. Overall life expectancy is 62.9 years, and projections for 2000-2005 suggest that life expectancy of males and females will be 63.6 years and 64.9 years respectively (United Nations Population Division, 2000). However, the life expectancy differential between women and men is still below the international norm.



Source: Central Statistics Office, 2012

Health and Well-being of Women in India

- The maternal mortality rate came down from 254 during 2004-06 to 212 during 2007-09
- 40.8% of deliveries were in hospitals, maternity or nursing home, health centre etc.
- 48.8% deliveries were assisted by doctors, trained 'dais', midwives or nurses
- 99% of married women know about any one of the methods of contraception. Rural women are found to be less aware about the traditional methods of contraception (55.5%) compared with urban women (62.4%)

Workforce participation: There are, often enough, basic inequalities in gender relations within the family or the household, which can take many different forms. Even in cases in which there are no overt signs of anti-female bias in, say, survival or son-preference or education, or even in promotion to higher executive positions, the family arrangements can be quite unequal in terms of

sharing the burden of housework and child care. It is, for example, quite common in many societies to take it for granted that while men will naturally work outside the home, women could do it if and only if they could combine it with various inescapable and unequally shared household duties. This is sometimes called "division of labour," though women could be forgiven for seeing it as "accumulation of labour." The reach of this inequality includes not only unequal relations within the family, but also derivative inequalities in employment and recognition in the outside world. Also, the established fixity of this type of "division" or "accumulation" of labour can also have far-reaching effects on the knowledge and understanding of different types of work in professional circles.

Terms and Conditions of Female Workers/'000						
Year	Self employed		Regular Wages Labourer		Irregular Wages Labourer	
	Rural	Urban	Rural	Urban	Rural	Urban
2004-05	637	477	37	356	326	167
2007-08	583	423	41	379	376	199
2009-10	557	411	44	393	399	196

Source: National Sample Survey, Round 61, 64 and 66

In terms of employment as well as promotion in work and occupation, women often face greater handicap than men. In rural India, agriculture and allied industrial sectors employ as much as 89.5% of the total female labour. In overall farm production, women's average contribution is estimated at 55% to 66% of the total labour. According to 1991 World Bank report, women accounted for 93% of total employment in dairy production in India. Women constitute 51% of the total employed in forest-based small-scale enterprises. In 2006, Kiran Mazumdar Shaw, who started Biocon one of India's first biotech companies was rated India's richest woman.

Different Sectors of Employment of Female Workers/'000								
Year	Agriculture		Industry		Construction		Other	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
2004-05	814	147	87	254	17	45	20	147
2007-08	816	129	76	252	23	48	28	150
2009-10	789	118	76	258	42	51	34	139

Source: National Sample Survey, Round 61, 64 and 66

According to the 14th issue of "Women and Men in India" (October 2010), compiled by Central Statistics Office of the Ministry of Statistics and Implementation, of the total job-seekers registered with employment exchanges, women constituted 32.5 per cent in 2009. While their share in Central government job was a low 10 per cent, some 20.4 per cent were employed in the organized sector in 2010, 17.9 per cent in the public sector, and 24.5 per cent in the private sector. Ironically, India ranked 134th among 187 countries in 2011 in terms of the UNDP- Human Development and Gender Inequality Index.

Economic Empowerment Through Micro-financing:

Many studies have shown that, having cash in hand and greater control over that cash led to empowerment of women. Indeed, studies from all parts of the world have consistently found that increasing self esteem of women is among the most striking impacts of micro finance. This

not only increased self - confidence but also their status at home. Indian women clients of Rashtriya Seva Samiti (RASS) found that their financial contribution helped them in earning

Work Participation of Women, 2011-12	
Sectors	%
Total Workforce	20.4
Public Sector	17.9
Private Sector	24.5
Commercial Banks	16.6
Central Government Job	10
Registered in Employment Exchange (2009)	32.5

Source: Central Statistics Office, 2012

greater respect from their husband and children. They even improved their negotiating powers with their husbands, avoiding family quarrel over money, and gaining respect from extended family and in-laws. Many NGOs and Self Help Groups provided better access to financial services for poor women. The different schemes provided were group savings, group guarantees by reducing the operating costs of banks and achieving high repayments rate. The experience of Self Help Groups revealed that rural poor are actually efficient managers of credit and finance, and overcame the perception that poor people need loan at subsidized rate of interest on soft terms, and that they are handicapped by lack of education, skills, capacity to save, credit worthiness and are not bankable. Women empowerment had been split into different components and measured separately in order to understand the underlying factors and their relationships with them. The micro finance helped poor women by providing independent sources of income outside the home, which reduces the dependency on the husband's income, by increasing the assertiveness of women and providing independent source of income with exposure to new sets of ideas, values and social support. NGO program in rural Bangladesh had brought rapid economic development in the situation of women by creating confidence, assertiveness, intelligence, self- reliance, and consciousness of their rights.

The microfinance industry has given more attention to women's long - expressed need for savings services and other financial services such as consumption, housing and educational loans. Poor women not only focused on investing but also looked for opportunities for income and growth while protecting against emergencies and children welfare. Micro finance also enabled women in household decision making processes. According to Women Empowerment Project (WEP) conducted by Opportunities, an NGO, 60 per cent of women had greater power over family planning, buying and selling property and sending their children to school.

At a macro level, 70 percent of the world's poor are women. Women have a higher unemployment rate than men in virtually every country and make up the majority of the informal sector of most economies. They constitute the bulk of those who need microfinance services. Targeting women has also proved to be a successful, efficient economic development tool. Research performed by the United Nations Development Program (UNDP) and the World Bank, among others, indicates that gender inequalities inhibit overall economic growth and development. A recent World Bank report confirms that societies that discriminate on the basis of gender pay the cost of greater poverty, slower economic growth, weaker governance, and a lower living standard for all people.

Another main reason for encouraging women in micro-financing is that women are usually the primary or sole family caretakers in many developing countries. Helping them gain additional daily income improves the condition of their entire household. Putting extra income in women's hands is often the most efficient way to affect an entire family, as women typically put their children's needs before their own. Children are more likely to complete their education and escape the poverty trap than their parents are. Giving women access to micro credit loans therefore generates a multiplier effect that increases the impact of a microfinance institution's activities, benefiting multiple generations.

Thus microfinance activities were developed to target the poor women and set up empowerment activities. Initially the empowerment of women was started for poverty alleviation. By the year 2006, majority of microfinance clients were women farmers, enterprise owners, workers and households' heads. Over a period of time micro finance made good for women, even it turn out that women are good in micro finance at repaying their loans at a higher rate than the men. A series of breakthroughs have shown that women especially poor women are credit worthy and can be excellent consumers of financial products. Appreciating its females clients, one institution has described them as displaying "sincerity, honesty, single-minded devotion, and selfless leadership and exemplary courage against all odds to pursue their business, make profits, save and build assets" - a laundry list, in fact, of the attributes of an ideal micro finance customer.

Land and Property Rights: In many societies the ownership of property can also be very unequal. Even basic assets such as homes and land may be very asymmetrically shared. The absence of claims to property can not only reduce the voice of women, but also make it harder for women to enter and flourish in commercial, economic and even some social activities.² This type of inequality has existed in most parts of the world, though there are also local variations. For example, even though traditional property rights have favoured men in the bulk of India, in what is now the State of Kerala, there has been, for a long time, matrilineal inheritance for an influential part of the community, namely the Nairs.

The Hindu personal laws of mid-1950s applied to Hindus, Buddhists, Sikhs and Jains gave women rights to inheritance. However, the sons had an independent share in the ancestral property, while the daughters' shares were based on the share received by their father. Additionally, married daughters had no residential rights in the ancestral home. After amendment of Hindu laws in 2005, now women have been provided the same status as that of men. Similarly the Government passed an act named Muslim Women's (Protection of Rights upon Divorce) Act in 1986 to protect the rights of Muslim women in India. Further in 1994, all the churches, jointly with women's organisations, drew up a draft law called the Christian Marriage and Matrimonial Causes Bill to protect the rights of the Christian women to have equal rights of divorce and succession.

Women in Politics: Women's representation and participation in various decision-making levels has been increasing in the services. Government run rural development projects, as practiced today, are unlikely to improve the social and economic status of women in the foreseeable future. The first step has been taken with the unprecedented 73rd amendment to India's constitution. As per the 73rd and 74th Constitutional Amendment Acts, all local elected bodies reserve one-third of their seats for women. These amendment mandate the transfer of decision-making power and resources in the rural areas to local democratic councils known as *panchayats*. Most revolutionary of all, one-third of all panchayat seats are to be reserved for women guaranteeing them a role in determining the future of their communities. Through the Panchayat Raj institutions, over a million of women have actively entered into political life in India. Further in 2005, the Women's Reservation Bill was passed and provides 33% of reservation for women in Parliament and State

Assembly. If fully implemented, women will, for the first time in India's history, have a voice in the decisions that affect their lives.

Status of Women in Government and Judiciary, 2010-11

I.8 in 74- member Union Council of Ministers, II.2 among 26 judges in the Supreme Court
III.54 among 634 judges in High Courts

The Darker Side of the Lesser Half:

Poor Health:

The average female life expectancy today in India is low compared to many countries, but it has shown gradual improvement over the years. In many families, especially in rural areas, the girls and women face nutritional discrimination which is anemic and malnourished. The maternal mortality in India is the second highest in the world due to complications in pregnancy because 42% of births in the country are supervised by health professionals. According to UNDP Human Development Report (1997), the proportion of pregnant women aged between 15 and 49 years old with anemia was round to be as high as 88%. Further in India, women in rural areas do not have access to safe and self-controlled methods of contraception.

Sexual Harassment:

Half of the total number of crimes against women related to molestation and harassment at the workplace. Eve teasing is a euphemism used for sexual harassment or molestation of women by men. Many activists blame the rising incidents of sexual harassment against women on the influence of "Western culture". Even in 1987, the Indecent Representation of Women (Prohibition) Act was passed to prohibit indecent representation of women through advertisements or in publications, writings, paintings, figures or in any other manner, still it continues. The Supreme Court also laid down detailed guidelines for prevention of grievances against women. The National Commission for Women subsequently elaborated these guidelines into a Code of Conduct for employers.

And it goes on (An account of a few months of last year):

September 2: A student on her way to buy groceries is lured to a godown and raped in Gohana, Sonapat district.

September 27: A married Dalit woman of Banwasa district is kidnapped by four men, taken to a field and raped.

September 29: A 15-year-old Dalit girl is kidnapped on her way to school and gang-raped in Karnal. The mother is murdered later to demanding justice.

October 1: A 16-year old girl from a minority community in Bijoli village, Yamunanagar district, is raped by her paternal uncle and his friend.

October 3: A 12 year old student of class 6 is raped in Rohtak by her middle-aged neighbor. Her mother is a daily wage worker and father an auto rickshaw driver.

October 3: A minor girl is raped in Kalwanwali town, Sirsa.

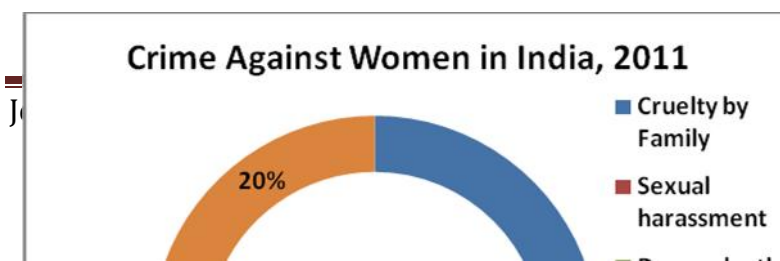
- October 3:** A 26 year-old Dalit woman, resident of Gurthali village, is raped in Narawana, Jind.
- October 9:** A Dalit woman is gang-raped in Kalayat, Kaithal
- October 16:** A woman is raped by her brother-in-law, abetted by her husband and mother-in-law.
- October 18:** An 11 member Standing Committee of Parliament for S.C and S.T Welfare visits Harana for and assessment.
- October 18:** A college girl in Jhajjar is strangled by her father who has suspicions about her sexual morality.
- October 18:** A 50 year-old woman is raped in Karnal. The police dismiss it as a case of molestation.
- October 18:** A Dalit family is forced to leave Amadapur village in Yamunanagar district after a dalit boy and a Rajput girl elope and marry. The panchayat forces the boy's father, a sweeper, to sell his plot of land at a price much below the market rate and makes his family to leave the village. The young couple is untraced.
- October 20:** A 13 year-old student of class 6 in Khai village is raped for over five months by a 60-year-old vendor. The father goes into depression and is treated for vertigo, hyper tension and anxiety. The panchayat forces the culprit to pay Rs. 35000 as compensation and urges the father to drop the case. The victims and her two siblings are forced to drop out the school.

Source: Frontline, January, 2013

In May 2012, Parliament passed the Protection of Children Against Sexual Offences Bill, raising the age of consent from 16 to 18, but many Bills, including the Women's Reservation Bill, are in cold storage. A major problem is that even those Bills pertaining to women and children that are passed by Parliament do not somehow comprehensively address all the issues raised by women's organisations.

The Protection of Women against Sexual Harassment at Workplace Bill, 2010, is awaiting parliamentary passage even though the Supreme Court had issued guidelines on stopping sexual harassment at the workplace 15 years ago. The Bill was introduced in the Lok Sabha last year and has remained there since. It had excluded domestic workers from its ambit and was referred to the Union Cabinet for amendments. Interestingly, a Parliamentary Standing Committee recommended the inclusion of male workers in the Bill, something which was not acceptable either to the Women and Child Ministry or to women's groups. Such attempts to constantly trivialize legislation meant to protect women have only worsened the situation.

As per the latest NCRB report, Delhi reported 17.6 per cent of the total number of rape cases in the country in 2011. Among 53 cities, Delhi accounted for 13.3 per cent of the total number of crimes against women, with 4,489 registered cases. Delhi also reported the highest crime rate of 12.4 per cent compared with the national average of 2.9 per cent. A pattern of violence in recent years has been attacks against women working late night shifts in BPOs and call centres. There has been a spate of incidents in Gurgaon, Noida, Saltlake and women working in call centres feel that the security arrangements could be improved.



However, the official record is hardly revealing of

the everyday acts of violence that women encounter in the city and the general atmosphere of insecurity and paranoia generated by them. Women still face harassment and hostility when they approach the police station to register a complaint. At present, women comprise only 7.8 percent of the police force. The Crimes Against Women cells of the Delhi Police have an FIR [first information report] registration rate of only 12 percent.

Source: Central Statistics Office, 2012

Increased gender sensitisation among the police is essential to encourage women to report incidents of violence. Also, an improved public transport system will make women feel more safe on the streets.

Dowry: In 1961, the Government of India passed the Dowry Prohibition Act, making the dowry demands in wedding arrangements illegal. However, many cases of dowry-related domestic violence, suicides and murders have been reported. Further in 1985, the Dowry Prohibition rules for maintenance of lists of presents to the bride and bridegroom were framed. However these rules are hardly enforced, a survey reported that at least 5,000 women die in every year because of dowry in India. Dowry, love affairs and sexual matters have been described as significant causes for murders. Odisha leads in dowry murders (26.4 per cent murders due to dowry were reported from here) and Karnataka reported 32.1 per cent of murders for reasons relating to witchcraft. The overall incidence of dowry deaths went up by 25.8 per cent over 2001, with Uttar Pradesh reporting the highest number of incidents as in previous years. Bihar came second. The crime rate for dowry-related deaths was the highest in Bihar. Overall, the share of women victims of murder constituted 26.7 percent (9,377 of 35,123 murder victims) of the total number of murder victims in 2011.

Female Infanticides and Sex Selective Abortions: Given a preference for boys over girls that many male-dominated societies have, gender inequality can manifest itself in the form of the parents wanting the newborn to be a boy rather than a girl. There was a time when this could be no more than a wish (a daydream or a nightmare, depending on one's perspective), but with the availability of modern techniques to determine the gender of the foetus, sex-selective abortion has become common in many countries.

India has a low sex ratio and which is sharply decline in many states because many women die before reaching adulthood. Amniocentesis and Sonography are often used to determine the sex of the unborn child and is misused to abort the female foetuses. Even though the Government has enacted The Pre-Conception and Pre-Natal Diagnostic Techniques (Prohibition of Sex selection) Act, 1994' (PNDT) which has been amended in 2003, to prevent misuse of scientific techniques

and to prohibit clinics from revealing the sex of the foetus. Female infanticide (killing of girl infants) is still prevalent in some rural areas of India. The abuse of the dowry tradition has been one of the main reasons for sex-selective abortions and female infanticides in India.

Domestic violence: The incidents of domestic violence are higher among the lower Socio-Economic Classes (SECs). There are various evidences disclose that an inebriated husband beating up the wife often leading to severe injuries has increased in India. Domestic violence is also seen in the form of physical abuse, though the Protection of Women from Domestic Violence Act, 2005 came into force on October 26, 2006.

Trafficking: However the Immoral Traffic (Prevention) Act was passed in 1956, many cases of trafficking of young girls and women have been reported now and then in India. These women are either forced into prostitution, domestic work or child labour. Kidnapping and abduction of women went up three times; marriage was one of the main causes cited for the crime. Whether kidnapping for marriage is for revenge or due to the shortage of girls is a matter for further research, but the connection between the skewed sex ratio and this phenomenon cannot be overruled. The sex ratio, especially child sex ratio, continues to worsen because of the tardy implementation of the Pre-Conception and Pre-Natal Diagnostic Techniques Act, 1994, which has made sex-determination tests illegal. Of the total of 1,165 such cases filed across the country, conviction has been secured only in 102 cases. The rate of disposal of crimes against women by courts and the police therefore speaks volumes on why things are the way they are. The NCRB data also demolish the myth of misuse of laws by women. Of the total cases investigated by the police, only in 11 per cent the charge of cruelty by husband and his relatives was found to be false.

Women are overworked: Women are working mostly in unorganized sector than men where they are invariably paid lower wages despite they work harder for longer hours in addition to the family usual work such as maintenance of kitchen gardens and poultry, grinding food grains, collecting water and firewood, etc. throughout day.

Child Marriages and Divorce: Even though 1976 amendment to the Child Marriage Restraint Act rose the minimum legal age for marriage from 15 to 18 for young women and from 18 to 21 for young men, in many rural communities, illegal child marriages are still common. An article in the *New York Times* (May 1998) states that more than 5,000 women in Rajasthan, which showed that 56 percent of them had married before they were 15 years old.

Even divorce is rare and considered as a shameful admission of a woman's failure as a wife and daughter-in-law, the divorced women made up a miniscule percent of the total female population especially in IT field in India. Although there are many laws recognizing the rights of women, sufficient amount to maintenance is frequently violated to women upon divorce in India.

Incidence of Crime against Women in India

Regarding the incidence of crime against women in India has decreased from 141373 in 2000 to 140601 in 2003 except torture, sexual harassment and crimes registered under indecent representation of women act because these crimes still increased to considerable percentage in India. The details of crime against women in India is presented below. In many societies violence against women is an everyday occurrence and sometimes even considered "normal." The incidence of crimes against women has increased from 135771 in 1999 to 140601 in 2003. However the proportion to the total crimes has marginally declined from 2.76 percent in 1999 to 2.56 percent in 2003. In India, According to police report, every 26 minutes a woman is molested. Every 34 minutes a rape takes place. Every 42 minutes a sexual harassment incident occurs.

Every 43 minutes a woman is kidnapped. And every 93 minutes a woman is burnt to death over dowry. One-quarter of the reported rapes involve girls under the age of 16 but the vast majority are never reported. Although the penalty is severe, the convictions are rare.

Crimes against women in India, filed under both the IPC and the SLL, went up by 7.1 percent over 2010 and 23.4 per cent over 2007. Significantly, States with a high per capita income, and high education and literacy levels, reported high rates of crimes against women. According to NCRB data, there was a continuous increase in crimes against women between 2007 and 2011; the sharpest increase was between 2010 and 2011. West Bengal and Andhra Pradesh reported the highest rates of crimes committed against women as a percentage of the total crimes.

Incidence of Crime Against Women in India				
Crime	1998	2000	2003	Variation(%)
Rape	15151	16496	15847	4.6
Kidnapping	16351	15023	13296	-18.7
Dowry Death	6975	6995	6208	-11
Torture	41376	45778	50703	22.5
Molestation	30959	32940	32939	6.4
Sexual Harassment	8054	11024	12325	53
Immoral Traffic Act	8695	9515	5510	-36.6
Total	127561	137771	136828	20.2

Source: National Crimes Record Bureau, 2005

Not only the reported number of crimes but the incidence of crime against women also went up in 2011, with Tripura topping the list. The IPC component of crimes accounted for 95.8 per cent of the total crimes against women and the SLL component 4.2 per cent. There has been a steady increase in the rate of IPC crimes since 2007. Rape, one of the most grievous crimes against women, increased by 3.5 per cent between 2007 and 2008, and after a decline in 2008 increased by 3.6 per cent in 2010 over 2009. The increase was monumental in 2011 over 2010: 9.2 per cent. Madhya Pradesh, among the States, reported the highest number of rape cases, accounting for 14.1 per cent of the total number of cases. The crime rate was the highest in Mizoram, much higher than the national average.

The NCRB categorised rape cases as incest rape and other rape cases; marital rape remains an unrecognised category by lawmakers. Girls under 14 constituted 10.6 per cent of the victims, and 19 per cent were teen-aged girls between 14 and 18 years. The bulk of the victims, 54.7 per cent, were women in the age group of 18-30 years. As many as 141 victims of rape were over 50 years of age. The offenders were known to the victims in 94 per cent of the cases.

Women Empowerment Through Different Five Year Plan:

The concept of women's development in the First Five Year Plan (1951 -56) was mainly welfare oriented. The Central Social Welfare Board (CSWB), set up in 1953, undertook a number of welfare measures through the voluntary sector.

In the Second Five Year Plan (1956-61) women were organized into Manila Mandals to act as focal points at the grass-root levels for the development of women.

The Third, Fourth and other Interim Plans (1961-74) accorded high priority to education of women. Measures to improve maternal and child health services, supplementary feeding for children and nursing and expectant mothers were also introduced.

In the Fifth Plan (1974-78), there was a shift in the approach for women's development from 'welfare' to 'development'. The new approach aimed at an integration of welfare with developmental services.

The Sixth Five Year Plan (1980-85) was a landmark in the history of women's development as it received recognition as one of the developmental sectors and was included in the Sixth Plan Document as a separate chapter for the first time in the history of developmental planning. The Sixth Plan, adopted a multi-disciplinary approach with a three pronged thrust on health, education and employment.

In the Seventh Plan (1985-90), the developmental programmes for women continued with the major objectives of raising their economic and social status and to bring them into the mainstream of national development. A significant step in this direction was to identify/promote the 'beneficiary-oriented programmes' for women in different developmental sectors which extend direct benefits to women.

The Eighth Five Year Plan (1992-97), which was launched in 1992, promises to ensure that the benefits of development from different sectors do not bypass women and special programmes will be implemented to complement the general development programmes. Therefore, the flow of benefits to women in the three core sectors of education, health and employment will be monitored with a greater vigil. Women must be enabled to function as equal partners and participants in the developmental process. This approach to the Eighth Plan marks a further shift from 'development' to 'empowerment' of women. In order to meet both the increasing and challenging needs of women and children, there has been a progressive increase in the Plan outlays over the period of last four developmental decades. The outlay of Rs. 4 crores in the First Plan (1951-56) has gone upto Rs. 2000 crores in the Eighth Five Year Plan (1992-97).

'Empowerment of Women' as agents of socio-economic change and development became one of the nine specific objectives of the Ninth Plan (1997-2002). The Plan envisaged primarily to ensure that benefits flow to women from all the general development sectors and emphasized on:

(i) reservation of not less than 1/3rd seats for women in the Parliament and State Legislative Assemblies; (ii) convergence of existing services, resources, infrastructure and manpower in women specific and women-related sectors; (iii) adoption of special strategy of Women Component Plan (WCP) to ensure that not less than 30% of funds/benefits flow to women from other development sectors; (iv) organizing women Self Help Groups as a major process of empowering women; (v) high priority to reproductive child health care; (vi) universalizing on-going supplementary feeding programme; (vii) ensuring easy and equal access to education for women and girls; (viii) elimination of gender bias in all educational programmes; (ix) free education for girls up to college level including professional courses; (x) promoting skill development amongst women in modern upcoming trades etc. Some special initiatives taken during Ninth Plan included launching of an externally aided scheme of Swashakti (1998) for socio-economic empowerment of women through self reliant self help groups, instituting Stree Shakti Puraskars (1999), setting up of a Task Force under the Chairpersonship of Deputy

Chairman, Planning Commission to review existing women-specific and women-related legislations (2000), adoption of National Policy for Empowerment of Women (2001), celebration of the year 2001 as Women's Empowerment Year, recasting of Indira Mahila Yojana as Swayamsidha (2001), launching of Swadhar (2001) to extend rehabilitation services for women in difficult circumstances etc. Tenth Five Year Plan 'Empowerment of Women' as Agents of Social Change and Development was continued in the Tenth Plan. Towards this a Sector-specific 3-Fold Strategy was adopted based on the National Policy for Empowerment of Women (2001).

In the context of the preparations of the 11th Five Year Plan (2007-2012), the Planning Commission constituted a Steering Committee on the 'Empowerment of Women and Development of Children' under the Chairmanship of Dr. Syeda Hameed, Member, Planning Commission with the following Terms of Reference. The female population of the country rose marginally from 48.1 per cent of the total population in 1991 to 48.3 percent of the total population in 2001. In absolute numbers, this implies an increase by 89.4 million from 407.1 million in 1991 to 496 million in 2001. The growth rate of female population for the 1991-2001 decade was 23.08, slightly higher than the male population decennial growth rate of 22.26. The expectancy of life at birth has been rising steadily for women. It increased from 58.6 in 1987-91 to 66.91 in 2001-06, and is higher than the male life expectancy of 63.87. However, demographic imbalances between men and women continue to exist, even worse, in certain regions.

The National Policy on Women 2001:

The National Policy on Women 2001, articulated a series of goals towards women's empowerment. The objectives of this Policy include (i) Creating an environment through positive economic and social policies for development of women to enable them to realize their full potential (ii) The de-jure and de-facto enjoyment of all human rights and fundamental freedoms by women on equal basis with men in all spheres -political, economic, social, cultural and civil (iii) Equal access to participation and decision making of women in social, political and economic life of the nation (iv) Equal access to women to health care, quality education at all levels, career and vocational guidance, employment, equal remuneration, occupational health and safety, social security and public office etc. (v) Strengthening legal systems aimed at elimination of all forms of discrimination against women (vi) Changing societal attitudes and community practices by active participation and involvement of both men and women, (vii) Mainstreaming a gender perspective in the development process, (viii) Elimination of discrimination and all forms of violence against women and the girl child; and (ix) Building and strengthening partnerships with civil society, particularly women's organizations.

The 11th plan approach to gender equity has FIVE key elements:-

1) The recognition that women are not a homogenous category for planned intervention - that they belong to diverse castes, classes, communities, economic groups, and are located at a range of geographic and development zones, and that mapping and acknowledging the specific deprivations which arise from these multiple locations, can alone determine the success of planned interventions. In order to operationalize this understanding, official directives must be issued to WCD programmes as well as women-related programmes in other Ministries to reach women across multiple axis of deprivation (gender, class, caste, community, marital status, geographic location etc.), to monitor implementation and collect disaggregated data along these multiple axis. The double deprivation of particular categories of women (SC, ST women, Muslim women, single women/widows, and women in conflict zones like the north-east and J&K), in addition to being addressed through general programme interventions, have to also be addressed

through a range of special, targeted and/or pilot interventions for those particular categories of women.

2) The recognition that only inclusive development of all categories of women can ensure holistic national development toward the millennium development goals.

3) The recognition that both inter-sectoral convergence as well as targeted, exclusive women-focused planning (through the Ministry of WCD) are necessary to achieve inclusive development towards the social, economic and political empowerment of women.

4) The recognition that for interventions in favour of women to have a sustained, long term, incremental impact beyond individual five year plan periods, they have to be four-pronged - i) to provide women with basic entitlements such as food security, health and education, ii) to address the reality of globalization and its impact on women by prioritizing economic empowerment and mainstreaming women in new and emerging areas of the economy iii) ensure an environment free from all forms of violence against women- physical, economic, social, psychological, and iv) ensure the participation and inadequate representation of women at the highest policy levels, particularly in Parliament and Assemblies. Even a State like Kerala, with high female literacy, has only 7 women in a 141 member State Legislative Assembly. This situation must not continue beyond the 11th plan.

5) The recognition that permanent institutional mechanisms, such as a Women's Knowledge Commission or alternatively a permanent (Inter-Ministerial) Standing Committee on Gender, with 50% participation of civil society gender experts, must be put in place to include women's participation, experiences, capacities and knowledge into the process of development planning, formulation and administration across all sectors. There must be mandatory representation of qualified women in all Planning Commission Steering Committees.

The feminization of poverty in India has been well documented in recent years, demonstrating the rising levels and differential gender impacts of poverty on women. Liberalization of the economy has led to a paradigm shift in the country's economy towards technology dominated sectors rendering women dominated sectors like agriculture unviable and without any security cover. Liberalization has increased wage differentials, job vulnerability and unpaid work burden for women, while lowering their social safety nets. Unequal access for women to schooling, land, credit facilities, alternate employment, skill training and technology also undermines their prospects for poverty reduction. 11th Plan has to address the issues relating to feminization of poverty, especially that of large gender differential in wage rates, exploitation of women.

Conclusion

There is no doubt that status of women in India is developing over the period of time though there are many incidences of crimes against women have been reported now and then. Hence transforming the prevailing social discrimination against women must become the top priority in our policy and it must happen concurrently with increased direct action to rapidly improve the social and economic status of women in India.

The onset of liberalisation has not helped the larger cause of gender sensitivity in any way. Feminists point out that the greater public space created for middle-class women thanks to liberalisation policies, though projected as empowering, is used to couch the structural issues impending on Indian women. The rising number of rapes and other forms of sexual violence on women cannot be separated from the change that the liberalisation policies brought about in representations of women in the public sphere. There is a substantial pornographisation of the media. The dominance of the visual media in the last two decades has, in fact, helped strengthen the already existing and potent cultures of misogyny in India. The increasing sexualisation and

communalisation of a woman's body in our cinema, advertisements, and television programmes needs to be situated within prevalent masculinist understandings of women, gender and sexuality.

Annie Raja, general secretary of the National Federation of Indian Women, also put the blame for the systemic violence against women squarely on neoliberal economic policies. "Neoliberal economic policies have led to the commodification of women, which has a direct link with the rising incidents of violence against them. There is no dearth of legislation against crimes against women, but there's little political will on the ground to translate it into action."

Crime against women including rape, therefore, has to be understood within the masculinistic functions of our economy. Rape is an expression of the extreme tyrant masculinity operating within patriarchal constructs. The phenomenon of rape needs to be understood further in psychoanalytical studies. But it definitely reflects the anxieties of men who have developed some sort of ambivalent relationship with women in a context of changing nature of public spaces. And all such processes make women random objects of hostility.

It is, therefore, imperative to understand that demands for punishments like the death penalty and chemical castration and using the language of protection will not only diffuse society's need to understand masculine notions of power, but also perpetuate them.

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E-GOVERNANCE IN THE EDUCATION SECTOR IN INDIA**Rimmi Datta****Jiagunj Institute of education, Jiagunj, Murshidabad, West Bengal****ABSTRACT**

Education is one of the most important factors in achieving the development goals of the country. It is the key to the national development. In India Education has seen massive growth in recent years. Electronic Governance (e-Governance) is the use of Information and Communication Technologies (ICT) for the planning, implementation, and monitoring of government programs, projects, and activities. E-Governance is expected to help deliver cost-effective and easy-to-access citizen services, and improve processing of transactions both within the government, and between the government and other agencies. An integrated Higher Education Service System (HESS) at a national level can be one of the key Information and Communication Technology initiatives to help India become a provider of world-class education. E-governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities. E-governance can bring forth new concepts of citizenship, both in terms of citizen needs and responsibilities. Its objective is to engage, enable and empower the citizen. In this paper, an attempt has been made to discuss the concept of E-Governance and its impact in the education sector in India.

Key words: E-governance, Information and Communication Education, E- Learning, NeGP.

INTRODUCTION

After the liberalization of Indian economy in the early nineties', computerization started growing aggressively with several MNCs opening their offices in India. A number of legislative measures by the union and state governments in the subsequent years prepared the ground for e-governance in India. During the latter half of same decade a National Action Plan for Effective and Responsive Government was adopted at the Conference of Chief Ministers held on 24th May 1997 in New Delhi which was later rechristened as National e-Governance Action Plan (NEGAP) and finally in May 2006 was passed by Union Cabinet as NeGP (National e-Governance Plan). The plan aims at making administration accountable and citizen-friendly, ensuring transparency providing public services to the common man in his locality at affordable costs through electronic means. The rise of electronic governance is a striking phenomenon transforming governments across the globe. India's National e-Governance Plan (NeGP) has put forth the vision of seeing India as one of the top nations of the world in providing online services to its citizens. The purpose of implementing e-governance is to enhance good governance. Good governance is generally characterized by participation, transparency and accountability. The recent advances in communication technologies and the Internet provide opportunities to transform the relationship between governments and citizens in a new way, thus contributing to the achievement of good governance goals. The use of information technology can increase the broad involvement of citizens in the process of governance at all levels by providing the possibility of on-line discussion groups and by enhancing the rapid development and effectiveness of pressure groups.

Advantages for the government involve that the government may provide better service in terms of time, making governance more efficient and more effective. In addition, the transaction costs can be lowered and government services become more accessible. E-Governance is the use of a range of modern Information and Communication Technologies such as Internet, Local Area Networks, mobiles etc. by Government to improve the effectiveness, efficiency, service delivery and to promote democracy.

CONCEPT OF E-GOVERNANCE

UNESCO defines e-Governance as: “Governance refers to the exercise of political, economic and administrative authority in the management of a country’s affairs, including citizens’ articulation of their interests and exercise of their legal rights and obligations. E-governance may be understood as the performance of this governance via the electronic medium in order to facilitate an efficient, speedy and transparent process of disseminating information to the public, and other agencies, and for performing government administration activities.” E-Governance is the public sector’s use of information and communication technologies with the aim of improving information and service delivery, encouraging citizen participation in the decision-making process and making government more accountable, transparent and effective. E-Governance involves new styles of leadership, new ways of debating and deciding policy and investment, new ways of accessing education, new ways of listening to citizens and new ways of organizing and delivering information and services. E-governance can be defined as delivery of government services and information to the public using electronic means. Such means of delivering information is often referred to as ICT. Use of ICTs in government facilitates an efficient, speedy and transparent process for disseminating information to the public and other agencies, for providing services, and for performing administrative activities.

E-GOVERNANCE IN EDUCATION

The Mission of the National e-Governance Plan (NeGP) is to focus on Education sector that Provide greater opportunities of access to higher education with equity to all eligible persons and in particular to the vulnerable sections. It can be extended to various existing institutions, new upcoming institutions supported by State Governments and Non-Government Organizations/civil society to supplement public efforts aimed at removing regional or other imbalances that exist at present. The plan can initiate policies and programs for strengthening research and innovations and encourage institutions public or private to engage in stretching the frontiers of knowledge. NeGP can promote the quality of higher education by investing infrastructure and faculty, promoting academic reforms, improving governance and institutional restructuring.

E-governance helps in:

- Overriding Administrative Delays in Education System.
- Bring in Transparency, Accountability and Timely resolution of process vulnerability that exist within school/higher/technical education system.
- Would help in optimal uses of available resource, fund monitoring/management and forward planning.
- Would help students/learners in on-line exam/test and Certification.
- Training and empowerment of teachers to effectively use the new method of teaching, learning etc.
- The State Governments/Central Line Ministries can ride on some of the core platforms created under NeGP, while promoting quality and collaborative education.

THE OBJECTIVES AND STRENGTHS OF E-GOVERNANCE IN EDUCATION

The benefits of e-governance in an educational sector has improved efficiency, increase in transparency and accountability of educational administrative activities convenient and faster access to services, and lower costs for administrative services. The main purpose for introducing e-governance in education is to enhance good education. E-governance in education provides new ways of communicating to the students, new ways of imparting education and new ways of organizing and delivering information and services. E-governance and education is an institutional thinking that seeks to entrust in building, managing and sustaining students, teacher, learner and others for achieving the larger benefits of e-government system.

E-governance is designed to meet challenges of –

- a) Accessibility
- b) Scalability
- c) Relevance
- d) Quality
- e) Affordability
- f) Accessibility

E-governance provides strength to the educational administration of the country. The e-governance initiative has been mooted with an aim to provide faster delivery of services to all stakeholders in education sector. These are:

- Reaching the masses.
- Overcoming distance and accessibility.
- Enabling lifelong learning.
- Changing the system of learning.
- Standardized curriculum materials.
- Limiting fraud in assessment process.

IMPACT OF E-GOVERNANCE IN EDUCATION

E-governance solution in the field of educational sector has changed the way of administration, which is designed to make the system user-friendly, time saving and cost saving also. Many of them are flexible enough to adapt to the changing educational environment efficiently, quickly and effectively. It is an integrated solution in the Education sector that facilitates the processing and maintenance of large volumes of information such as: registration, admission, student information, classes, time table, transport, attendance, library, salary, expenses, examinations, performance, grades, hostels, security, reports, management, transport, staff details and fees among various departments in an institution. E-governance in relation to Education can improve efficiency and effectiveness of the overall education system. The impact of e- governance in education can be measured in with respect to:

a) Students:

- Improved means of education.
- Better service to students.
- Increased participation in education affairs.

b) Organization (Universities, collages etc):

- Economic Impact.
- Improved Quality of service.
- Transparency in operations.
- Improvement in education system.
- Increased efficiency of faculties and of administration processes.

c) Overall education system:

- Long term impact on organization goals.

- Improved Education system.
 - Empowerment of faculties, students and encouragement of their participation in governance.
- Thus E-Governance solution in the field of educational sector incorporates whole data and processes of an educational Institution into a unified system, making the process uncomplicated, well-organized and error proof.

CONCLUSIONS

E-governance is a new mantra for governments across the world and India. The most important driving force behind e-governance establishment and development is Innovation. To achieve a world class standard in education it is imperative to have an improved and innovated means of access to information all over the world which is possible only by the introduction of information and communications technology based e governance in educational institutions. E-Governance solution in the field of educational sector has changed the way administration is being done now. The solution incorporates whole data and processes of an Educational Institution into a unified system, making the process uncomplicated, well-organized and error proof. The solution is designed to make the system user-friendly, time saving and cost saving also. Many of them are flexible enough to adapt to the changing educational environment efficiently and quickly. E-Governance solutions in Educational sector incorporates the latest in technology to bring you a system that combines administrative and university management functions that are necessary to successfully handle all of the challenges of running an educational institution. Automating every unit of an academic institution, Educational Solution provides real time information processing and knowledge management. It is an integrated solution that facilitates the processing and maintenance of large volumes of information - including student, faculty, inventory, asset management, facility management, transport, library, staff details, payroll and student fees among various departments in an institution. For lecturers, e-governance programmes represent a change in the way teaching was imparted. For students, e-governance has provided an alternative ways of learning in which learning can take place outside the lecture hall.

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**AN ENQUIRY INTO NATURE AND CAUSES OF EDUCATIONAL
BACKWARDNESS OF SCHEDULED TRIBES IN INDIA**

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Abstract

Educational development may be considered as a stepping stone for sustainable social and economic development of scheduled tribes largely. Tribal should be educated not only for themselves but also for the fact their correlation with socio-economic, political, and gender must take place in more egalitarian process. In this backdrop, the present study has made attempted to find out the scope for tribal economy and society develop into egalitarian system where the most underprivileged section of tribal society seek access to primary, secondary, technical and higher education, and a fare participation in indifferent levels of

government activities. The study represents that rapid growth of tribal economy and sustainable education must reduce poverty and inequality of tribals, create employment opportunities and promote socio-economic status with social justice.