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A Few Words From Director, SCERT, Assam

Research based intervention is now being considered as an indispensable instrument for quality assurance in education. Stereotyped educational initiatives rarely yield any fruitful result for betterment of the educational scenario of a country. Hence innovative research based actions are a must for our state also to take it forward in the light of contemporary developments in the field of education.

SCERT, Assam has been putting emphasis on research and research based activities related to school and teacher education right from its inception. This is a humble attempt made by the Department of Research and Evaluation, SCERT, Assam to bring out the third volume of its Educational Research Journal by compiling research papers contributed by researchers working in different fields of education. I expect that this informative journal will certainly help in dissemination of research findings among educational practitioners and also help teachers, teacher educators, educational planners and administrators in understanding the present status of school and teacher education and to design appropriate result oriented plan of action for development thereof.

I would like to express my sincere gratitude to the contributors of research papers, the members of editorial board, reviewers, editors and the support group for their painstaking effort in bringing out this volume.

Dr. Nirada Devi
Director,
SCERT, Assam, Ghy-19

Editorial

It has now become inevitable for any educational organization to ensure fruitful application of research based findings for quality control in its educational interventions. Different indicators of quality education can critically be examined and strategies can also be devised through research based planning for judicious and optimal use of available resources in the field of education. It appears that research seminars and conferences are gaining popularity among the academicians in our state in the recent days, but attempts to publish research papers in a form of journal are very limited. As such, restricted dissemination of findings of these research studies limits its utility.

This attempt of the Department of Research and Evaluation, SCERT, Assam to publish the third volume of educational research journal with ISSN will not only help in dissemination of findings of such studies among educational stakeholders but also motivate educational practitioners to do researches on various educational problems in the state. Considering the rare availability of this type of opportunity in the state like Assam, priority has been given to include as many research papers as possible in order to popularize the research based action for quality improvement.

Minor corrections have been made by the editorial board without deviating from the main content to maintain uniformity related to language and lucidity of the studies. In spite of research studies being taken up by individuals, systematic approach has sparsely been adopted by most of them. Lack of orientation or awareness of systematic methods of research might be one of the reasons for this though they have shown sufficient conceptual clarity in presenting the knowledge gathered. Therefore, the people interested in educational research need to be equipped with proper research techniques so that the in depth study that they do can be represented for facilitating education policy formulation. Much of the study undertaken are either action research or applied research. Therefore, fundamental or basic studies on various dimensions of education are also required for quality education. Appropriate authorities therefore need to

give proper exposure to research motivated or interested persons and grant schemes giving ample opportunity to them to carry out fruitful researches.

What has been observed is that the departments which implement the schemes are generally not research concerned. So even if any quality research is done, that remain in the racks of the university libraries or elsewhere with little access to the people who really need to carry out these results in actual field. Proper qualitative methods for qualitative studies seem to be rarely used as reflected in the methodologies adopted for the studies. Hence a congenial research environment should prevail in the State and the thirst for innovative methods and techniques for better results be increased by research and other academic organizations by continuously orienting the researchers and updating their ideas about research.

This time attempt has been made to publish the journal as peer reviewed one with the help of some renowned educational specialists especially in the field of research.

I express sincere gratitude to Prof. Daisy Borah, Prof. Mukut Hazarika, Prof. Manashree Gogoi and Prof. Neeta Kalita Baruah of Dibrugarh University; Prof. Polee Saikia and Dr. Dulumoni Goswami of Guwahati University; Dr. Mizo Prova Borah, Deputy Director (Retd.) of SCERT, Assam and Dr. Sumona Roy, Joint Director of SCERT, Assam for their noteworthy contribution towards standardising papers for publication.

I would like to take this opportunity to thank the researchers who contributed papers to this journal, the members of the editorial board and the supportive group for their painstaking effort in bringing out this volume of educational research journal.

Dr. Jayanta Kr. Sarmah
Chief Editor

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Teachers' Empowerment for Effective Classroom Procedure

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SECRETARY TO THE GOVT. OF ASSAM

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DISPUR, GUWAHATI

Abstract:

The teachers need to be empowered enough so that they can play the role as transmitters, inspirers and promoters of man's eternal quest for knowledge. All the training programmes for teachers should be need-based and cover all aspects – transaction of content, pedagogy, latest practices of teaching and learning, assessment strategies, covering both scholastic and co-scholastic areas. An effective teacher knows pedagogy of children besides the knowledge of a variety of teaching skills. Along with attractive school environment and effective teaching learning procedures, the teacher's behaviour in the classroom is also of utmost importance. Carefully designed learning environment that facilitates the child's intellectual, physical and social development and which is supported by love and caring attitude of teachers certainly helps to sustain the retention of children in schools. A teacher should be a facilitator of children's learning in a manner that helps children's to construct knowledge and meaning.

Introduction

Teachers are the significant persons connected with children in their day-to-day lives at school premises. They share the responsibility of guardianship of these children in absence of parents. They facilitate to shape the lives of children through inculcating in them necessary knowledge,

skills and strong values. Strong bond between the teacher and the children can only be built with polite, loving and sympathetic behaviour of teacher. Teacher's behaviour is of utmost importance in making the classroom procedures effective. It is the teacher's behaviour only, which works as a magnetic force to attract children for the schools. All children want active involvement in the activities organized at the school premises besides learning and playing together.

"A teacher needs to be prepared in relation to the needs and demands arising in the school context, to engage with questions of school knowledge, the learner and the learning procedure", emphasises National Curriculum Framework for Teacher Education (NCFTE), 2009.

The school system needs not only competent and committed teachers, but they should also be empowered in making day-to-day classroom procedures effective, interesting and meaningful to cater to the needs and interests of all learners sitting in inclusive classroom set-up.

The National Policy of Education (1986, revised in 1992) and its Programme of Action envisaged improvement and expansion of education in all sectors, elimination of disparities in access and emphasis on improvement in quality at all levels. There was also a realization that if the challenging goals of UEE had to be achieved, it was necessary not only to initiate or expand programmes but also to increase participation and ensure good quality education to all children.

Need for continuous professional development

The teachers need to be empowered enough so that they can play the role as transmitters, inspirers and promoters of man's eternal quest for knowledge. All the training programmes for teachers should be need-based and cover all aspects – transaction of content, pedagogy, latest practices

of teaching and learning, assessment strategies, covering both scholastic and co-scholastic areas.

The professional development of teachers should be a continuous procedure through refresher or in-service teacher training programmes, exposure to other good institutions or in the monthly cluster level meetings, where their problems be discussed and strategies for further improvement are provided. The CRCC, BRCC and DIET faculty are expected to provide timely academic support to the teachers as per their actual needs during school visits or after classroom observations. The teachers need to be equipped not only to teach but also to understand the students and the community of parents well so that the children find the classroom environment interesting for learning and their retention is sustained in the school, ultimately leading to their improved achievement levels.

Pre-service and in-service components of teacher education have become inseparable. The teacher education system through its initial and continuing professional development programmes is expected to ensure an adequate supply of professionally competent teachers to run the nation's schools. A teacher functions within the broad framework of the school education system – its goals, curricula, materials, methods and expectations from the teacher. Preparation of teachers should be in relation to the needs and demands arising in the school context, the learners and the learning procedure. Due to fast developments in the area of science and technology as well as the economic and political changes taking place in the society, the expectations from the teachers are also changing from time to time.

Coordination for development of teacher education

Pre-service training needs to be improved and differently regulated both in public and private institutions, while systems for in-service training require

expansion and major reform that allow for greater flexibility. Teacher education as a whole needs urgent and comprehensive reform. There is need to bring greater convergence between professional preparation and continuing professional development of teachers at all stages of schooling in terms of level, duration and structure. Teaching is a profession and teacher education is a procedure of professional preparation of teachers.

Vision of teacher education and teacher's role

Regarding vision of teacher education and teacher's role, following statements are given in NCFTE (2009) –

- *Teachers need to be prepared to care for children and to enjoy being with them.*
- *Teachers need to view learners as active participants in their own learning and not as mere recipients of knowledge.*
- *Teacher education must engage with theory along with field experiences. Teacher education should integrate academic knowledge and professional learning into a meaningful whole.*
- *Teachers need to be trained in organizing learner-centered, activity-based, participatory learning experiences – play, projects, discussion, dialogue, observation, visits, integrating academic learning with productive work.*
- *Teacher education should engage teachers with the curriculum, syllabi and textbooks to critically examine them rather than taking them as 'given' and accepted without question.*

- *Teacher education should provide opportunity to student-teachers for reflection.*
- The programme should engage teachers with children in real contexts rather than teach them about children through theories alone.
- The programme should help teachers to develop social sensitivity and consciousness and finer human sensibilities.
- In view of the many-sided objectives of teacher education, the evaluation protocol needs to be comprehensive and provide due place for the evaluation of attitudes, values, dispositions, habits and hobbies, in addition to the conceptual and pedagogical aspects through appropriate quantitative as well as qualitative parameters.

Duties of teachers (Section 24 of the RTE Act 2009)

Right of Children to Free and Compulsory Education Act–2009 (RTE), which is a historic legislation of free India, has been dedicated to the children of India by implementing it from 1st April 2010. The Act stipulates that education provided to children will be of comparable quality with emphasis on all round development. Section 24 of the RTE Act describes the duties of teachers as –

- a. Maintain regularity and punctuality in attending school
- b. Conduct and complete the entire curriculum within the specified time
- c. Assess the learning ability of each child and accordingly supplement additional instructions, if any, as required.

- d. Hold regular meetings with parents and guardians and apprise them about the regularity in attendance, ability to learn, progress made in learning and any other relevant information about the child.
- e. And perform such other duties as may be prescribed.

Section 29 of the RTE Act states guidelines that are to be considered by the academic authority during the development of materials and followed by the teachers -

- a. Conformity with the values enshrined in the Constitution
- b. All round development of the child
- c. Building up child's knowledge, potentiality and talent
- d. Development of physical and mental abilities to the fullest extent
- e. Learning through activities, discovery and exploration in a child-friendly and child-centred manner
- f. Medium of instruction shall, as far as practicable, be in child's mother tongue
- g. Making the child free of fear, trauma and anxiety and helping the child to express views freely
- h. Comprehensive and continuous evaluation of child's understanding of knowledge and his or her ability to apply the same

The RTE Act emphasises that no child shall be subjected to physical punishment or mental harassment. Any teacher, who contravenes, may be subjected to disciplinary action. Facing punishment or any type of mental

harassment in the class or school premises will create disinterest among the students and they may dropout from the school.

Children commit mistakes. It does not mean that they should be punished. There are various ways to tackle them friendly. The more the children are engaged in constructive or purposeful activities in the class, the problem of indiscipline among the children will reduce drastically. Any kind of stress in children should be removed through mutual understanding and informal discussions with them. Children should also feel free at the same time to approach their teachers any time with regard to their academic or personal problems. Mutual trust and confidence must sustain between the teachers and the children.

When the children remain actively engaged in activities and are emotionally satisfied, they remain more disciplined. In a child-friendly classroom environment, learning also takes place more. Good and cordial relations between the teacher and children also contribute towards better learning by the children.

Mahatma Gandhi was always against punishing students in the class. According to him, “It is simply improper to subject students to any form of punishment. By doing so, the feelings of respect and pure love that teachers should have for the students disappear”

Further, RTE Act emphasizes that no teacher can engage himself or herself in private tuition or private teaching activity. The concerned teacher is responsible for the progress and development of each child under him/her. After the implementation of RTE Act, now the teachers can devote more time with the children in class and other school activities, as deploying them for non- educational purposes from time to time has been prohibited.

Only their assistance can be taken in exceptional cases viz. at the time of decennial population census, disaster relief duties or during elections related duties.

Teacher's classroom behaviour

Teacher's behaviour is considered very important and crucial in dealing with any classroom situation. Both children's motivation as well as distraction in doing particular things in the class depends largely upon the behaviour of a teacher. Why in a particular class, the children remain quite motivated and interested and do not want to miss a single period, but in another class by another teacher in the same school, the children do not feel quite energetic and try to avoid attending that class. May be the teacher's behaviour was very harsh and criticizing.

In spite of teachers with the same background, same culture, same sex and same training experience, we often see that some teachers have remained very successful in teaching in the classrooms and were liked by all children. While there were other teachers, who when went to teach, children wanted to avoid their classes. This difference was only due to their behaviour. The more the teachers are able to sustain good rapport with children, the stronger is the bond that prevails between them and the children. The teachers' desirable behaviour has a positive force, which attracts children.

An effective teacher knows pedagogy of children besides the knowledge of a variety of teaching skills. Along with attractive school environment and effective teaching learning procedures, the teacher's behaviour in the classroom is also of utmost importance. Carefully designed learning environment that facilitates the child's intellectual, physical and social development and which is supported by love and caring attitude of teachers certainly helps to sustain the retention of children in schools. A teacher

should be a facilitator of children's learning in a manner that helps children's to construct knowledge and meaning.

If the teachers start making efforts sincerely and strive for desired changes in their behaviour, the existing classroom procedures can be greatly improved resulting in the increased retention and achievement of children. On the basis of classroom observation of teachers by the CRCCs and BRCCs as well as by the DIET faculties, necessary constructive feedback should be provided to the concerned teachers in a very cordial manner. Demonstration for model lessons may also be provided as per needs during training of teachers. Providing the needed support to teachers at the school premises is the key to success.

Teaching is considered as a noble profession to built on trust and selfless dedication and is dedicated towards the development and growth of children. A teacher is someone who grooms, nurtures and shapes the personality of children. A teacher helps the children to realize their hidden potentials. A true teacher teaches children the values of life like truth and respect, the value of time, the value of sincerity and depth whatever one does, the value of hard work, the value of reasoning and taking responsibility for one's actions.

Since time immemorial, students have shared a special bonding with their teachers, but the intensity of this bonding depends on the attitude and behaviour of teachers towards their students. The more the teachers become welcoming and friendlier in their approach, the more the students enjoy attending the classes regularly.

Any teacher can become effective in day-to-day classroom situations, if he/she follows the following basic guidelines or principles –

A. Understands the needs of children

- *Greets children warmly at first sight in the school premises.*
- *Makes each and every child feel that he/she is important in the class and his/her needs are heard and taken care of timely.*
- *Tries to build close rapport with all children through open communication with them and occasionally involving himself/ herself in their activities.*
- *Shows interest in solving the problems of children, both academic and personal.*
- *Treats all children equally irrespective of sex, caste, culture, religion or socio-economic background.*
- *Identify the reasons why some children are not taking interest in learning or in doing particular things and then takes appropriate measures.*
- *Remains communicative and receptive in the class. A smile on the face of a teacher adopts a friendly mind-set, which certainly communicates through positive body language and words.*
- *Develops good rapport with parents, local people and social leaders of the area and tries to understand their expectations.*

- *Knows children well so that the teaching strategies can be tailored as per their individual requirements.*
- *Understands needs of children in order to identify appropriate educational activities, materials, equipment and procedures.*

B. Praises/ encourages/ appreciates/ inspires

- *Encourages children's positive actions and right responses (correct pronunciation, good handwriting, maintaining cleanliness, desirable habits, etc.)*
- *Always gives credit to such children who assist the class in one way or the other.*
- *Appreciates children when they ask any question or when they initiate any new or creative ideas.*
- *Helps children as per their needs to succeed in their efforts for learning.*
- *Encourages and facilitates self-learning among children through the use of worksheets and flash cards.*
- *Provides a variety of opportunities and situations to children so that they can construct knowledge themselves through interacting with these.*
- *Appreciates good work of children, their good drawings, craft work, clay models, innovative items, etc. and exhibits them in the class.*
- *Praises children on winning in competitions - poems recitation, reading from the book, singing,*

participation in cultural activities, games and sports, etc.

- *Encourages children when they raise doubts, request for clarifying their difficulties or want to discuss their personal problems.*

C. Respects children's ideas and involves them in teaching-learning and other activities

- *No child should feel that his/ her idea has not found a place.*
- *Appreciates and uses original ideas of children in planning of future lessons.*
- *Identifies fast learners and uses their potential in helping slow learners, who face difficulties in some subjects.*
- *Involves children in the development of TLMs and their use in the classroom.*
- *Involves children in the management of class, library, school canteen, gardening, receiving guests, organization of morning assembly, school decoration, sports and cultural activities, exhibitions, competitions, etc.*
- *Encourages children to take part in debates, discussions, story telling, saying jokes and puzzles, singing poems, dramatics and various competitions.*
- *Encourages deserving children to perform leadership roles by making them class monitor, health monitor, sanitation monitor, etc.*

- *Involves children in the distribution of articles in the class like pencils, exercise books, textbooks, mid-day meals, etc.*
- *Encourages children of the class to create short stories, write them in their note books and tell to other children with action.*

D. Ensures active participation of children in class

Questioning ensures active participation of children in the classroom procedure and thus sustains their interest in learning. In each and every class, questions are asked by the teachers. Questioning as a technique can be considered as one of the most important tools of teaching. In effective classroom discussion, both the teacher and children put questions to each other.

It serves as an important tool in the hands of teachers not only to know the effectiveness of their teaching but also to know the extent of effective learning that has occurred among the children during any instruction or activity. Classroom questioning can be made quite effective through proper training to teachers as well as through on-site guidance in the actual classes. Questions during teaching serve the following purposes:

- *To focus and refocus certain aspects of instruction*
- *To check recall of specific facts or any information already learnt by children*
- *To test the status of children's abilities and knowledge*
- *To diagnose specific difficulties of children in certain areas*

- *To distinguish between intelligent, average and those children with learning deficiencies*
- *To promote or seek any further information*
- *To know whether the children are paying attention or not*
- *To know the level of understanding of children during summarizing any topic*
- *To sustain the interest of children in classroom learning*
- *To know the mental procedures going on in children's mind*
- *To arouse curiosity and stimulate creative thinking*
- *To ensure active participation of children in the teaching learning procedure*
- *To explore needs, interests, hobbies and engagements of the children*
- *To know more about the children, their parents/relations and the surroundings*

For making classroom procedures effective and to be successful, the teachers need to consider the following aspects also -

Developing sensitivity towards the needs of all learners

Teachers need to be equipped to sensitively bring and include girls also in the classroom transaction along with the boys. It is necessary that teachers who teach and manage the classroom are sensitized and made aware of

the philosophy of inclusive education and oriented to the different kinds of adjustments that schools have to make in terms of infrastructure, curriculum, teaching methods and other school practices to relate teaching to the needs of all learners. The teachers will be required to continuously build the capacity of each child under them in the class, irrespective of religion, caste, sex or status. The children with special needs as well as the out-of-school children mainstreamed in the age appropriate classes after special training should be provided necessary guidance and support so that they may also adjust with other children of the class academically, emotionally and socially.

Facilitating each child to progress further

Each child should be facilitated to progress further, step by step. The learning acquired in this way is more permanent as it is based on strong foundations and has no learning gaps. During the classroom, a teacher needs to monitor each and every child daily during the procedure of learning in order to assist him/ her with timely corrective measures. More emphasis on self-learning and peer learning is required. To clarify difficult concepts, contextual teaching aids/ objects and local resources should be extensively used. Any learning gaps, if identified in any child, should be removed at the earliest possible.

Each child is unique and progresses at his/ her own pace

Each child has unique capabilities and inherent talents. The teacher needs to identify those through observing the child's behaviour in various situations and his/ her involvement in activities both inside and outside the classroom. Once the child's potential in some area is identified, that should be encouraged and promoted. No two children are alike. Each child learns and progresses at his own pace.

Emphasizing self-learning

When and ever any child learns himself/ herself through own efforts is called self-learning. Children prefer self-learning, when the available materials are quite interesting and presented in asystematic way, gradually moving ahead from simpler to difficult concepts. The children learn a lot from the situations also, which happen around them through their active participation and keen observations. Many situations or activities may be created either inside the classroom, at the school premises or in the immediate surroundings. Children's involvement in these should be encouraged to the maximum.

Assistance of teacher may be required by the child as per his/ her needs. Many States have designed and developed very good self-learning materials like kits and flash cards in various subjects for different classes.

Making learning joyful and exciting

Children must feel excited in the activities of the class, while they acquire new knowledge and skills. There must be freedom in the class to explore and experiment with the available materials as per their individual interests. Better understanding must prevail between the teacher and the children for exchange of feelings and ideas. There should be no fear of unnecessary criticism and physical punishment.

Emphasis should be on '*learning with fun and excitement*'. Both teacher and children must feel continuously interested in the teaching learning procedures. Throughout the period of class, active participation of all children should be sustained. The learning activities can be made quite

interesting through making them relevant to the lives of children, as these will sustain interest of children for coming to the school regularly.

More the learning will be activity-based and participatory, more the children will enjoy in the class. When the classroom environment becomes child-friendly and there is no fear of any punishment, the children participate more and more and freely communicate with the teacher. The available teaching learning materials should be extensively used in the class. In the development of teaching learning materials, efforts should be made to ensure children's participation as far as possible.

When the children are happy in the class, they accept challenges easily. They like to accept and perform difficult tasks. Children should feel excited in doing things. More and more hands-on experience should be provided to the children through different projects and activities, which interest them.

Use of stories, poems, songs, dramas, puzzles, jokes, etc. should be made extensively for developing skills in reading, writing and speaking. Children may be guided in preparing puppets. These may be used in dramatizing several text materials and for inculcation of positive values. Flash cards may be prepared and used from time to time for enhancing problem solving skills among children. These may also be used as self-learning materials and for group activities. Games and all joyful activities should be integrated with learning. For the enrichment of learning, exposure visits to local surroundings may also be organized, where children may feel free to observe, touch, record their feelings and share their experiences among themselves and with the teacher.

Utilizing experiences of field level innovations and good practices

Successful classroom practices for increasing achievement of learners and their retention at the schools as well as innovations in any area of SSA

should not only be identified and documented but should be widely disseminated to all the States/ UTs for their benefit through both print and electronic media.

Qualities of an empowered Teacher

Following Table gives a comprehensive view of a dynamic, vibrant and a model classroom, which is expected to change the scenario of school environment that will not only attract and sustain children in schools but will also promote their holistic development - mentally, physically, emotionally and socially.

Existing classroom	Future classroom
· Teacher dominated	✓ Teacher as a facilitator
· ‘Chalk-Talk-Text’	✓ Variety of activities, child-centered
· Passing information and knowledge	✓ Development of competencies, desire to learn
· Only textbooks, blackboard	✓ Variety of TLMs (Besides textbooks, variety of supplementary reading materials, teaching aids, learning corner)
· Uninteresting class environment	✓ Stimulating, child-friendly, enjoyable, secure, inclusive
· Rigid time table (scholastic focus)	✓ Flexible (focus on both scholastic and co-scholastic activities, values’ inculcation)
· Criticism, punishment	✓ No mental harassment (child can express views freely)
· Child afraid, school boring	✓ Attractive school environment (cultural activities, competitions, provision for games and sports, excursions to places of interest))
· Fear of board examinations	✓ No board examinations (only continuous and comprehensive evaluation of child’s all round development, knowledge and abilities)

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QUESTION PAPERS OF HSLC AND AISS EXAMINATIONS CONDUCTED BY SEBA AND CBSE: A COMPARATIVE STUDY

Dr (Mrs.) Manashee Gogoi

Abstract:

Question papers play one of the most important roles in any education system. In the prevailing education scenario in India, a question paper is the major tool used for appraisal of the pupils' achievement in a particular field. With the help of question papers, one tries to find out whether the set objectives of the curricula are realized and thereby, evaluate the entire teaching-learning process. The teachers as well as the students plan their respective works and activities keeping an eye on the questions set in the question papers. If the question papers include questions demanding thorough and in-depth study, they will also orient their teaching learning techniques and habits to meet those demands.

Class-X Board examination is the first public examination that a student face in his/her regular course of study. In Assam, Class-X examinations are mainly conducted by the Board of Secondary Education, Assam (SEBA) and Central Board of Secondary Education (CBSE). There is a public apprehension that it is easier to score high marks/grades in All India Secondary School (AISS) Examination conducted by CBSE than High School Leaving Certificate (HSLC) Examination conducted by SEBA. It is also discussed that the examinations conducted by CBSE are more reliable and valid. This necessitates a comparative study of the examination systems of SEBA and CBSE. This paper attempts to make a comparative study of one of the important aspects of examinations – the question papers of HSLC and AISS examinations.

The objective of the study was to analyze the question papers of HSLC and AISS examinations of 2017 and 2018, and compare them in respect of following aspects: a) Instruction to the examinees, b) Coverage of instructional objectives, c) Coverage of contents, d) Types of items and their suitability in the light of instructional objectives to be assessed and e) Options given in the question papers.

The following question papers of HSLC Examination (2017 and 2018) conducted by SEBA were taken for analysis: English, General Science, General Mathematics and Social Science. On the other hand, the question papers on English-Communicative, Science, Mathematics and Social Science of AISS examinations (2017 and 2018) were included in the sample of the present study.

The study revealed that there is considerable difference in each aspect under the study in the Class-X question papers of HSLC and AISS examinations.

Introduction :

Question papers play one of the most important roles in any education system. In the prevailing education scenario in India, a question paper is the major tool used for appraisal of the pupils' achievement in a particular field. With the help of question papers, one tries to find out whether the set objectives of the curricula are realized. It acts as a tool to evaluate the entire teaching-learning process. The teachers as well as the students plan their respective works and activities keeping an eye on the questions set in the question papers. If the question papers include questions demanding thorough and deep study, they will also orient their teaching learning techniques and habits to meet those demands.

Class-X Board examination is the first public examination that a student faces in his/her regular course of study. In Assam, Class-X

examinations are mainly conducted by the Board of Secondary Education, Assam (SEBA) and Central Board of Secondary Education (CBSE). The Class X Board examination conducted by SEBA is called High School Leaving Certificate (HSLC) Examination, while that of CBSE is known as All India Secondary School Examination (AISSE). There is a public apprehension that it is easier to score high marks/grades in AISS Examination than High School Leaving Certificate Examination conducted by SEBA. It is also discussed that the examinations conducted by CBSE are more reliable and valid. This necessitates a comparative study of the examination systems of SEBA and CBSE. This paper attempts to make a comparative study of one of the important aspects of examinations – the question papers of HSLC and AISS examinations.

Objectives of the Study:

The major objective of the study was to analyze the question papers of HSLC and AISS examinations conducted by SEBA and CBSE respectively, and compare them in respect of the following aspects:

- a) Instructions to the examinees
- b) Types of items and their suitability in the light of instructional objectives to be assessed
- c) Coverage of instructional objectives,
- d) Coverage of contents,
- e) Options given in the question papers

Methodology :

A) Method : The method adopted in the study is content analysis. Here, the question papers of HSLC and AISS examinations prepared by SEBA and CBSE were analyzed using content analysis technique.

B) Sample : Out of the several subjects offered by SEBA and CBSE, the question papers of the common subjects viz. English, Science, Mathematics and Social Science were taken for analysis. The title of the subjects slightly differ – SEBA designate these as : English, General Mathematics, General Science and Social Science, while CBSE designate these as : English (Communicative), Science, Mathematics and Social Science. The question papers of the years 2017 and 2018 prepared by SEBA for HSLC examinations in each of these subjects were taken for analysis. There are three sets of question papers in AISSE for each subject. Besides these, there is one separate question paper for visually impaired students in Science and Mathematics. There is no separate question paper for visually impaired students in subjects English (Communicative) and Social Science. Out of these question papers, eight Set-1 question papers (one in each subject for two consecutive years 2017 and 2018) have been selected purposively for this study.

Findings of the Study:

The findings of the study have been presented in the following heads:

a) Instructions to the Examinees: In the AISS question papers, a detailed 'General Instruction' is given regarding time limit, maximum marks, number of pages, number of questions, distribution of marks in each group and each question, number of options at the top of the question paper and word limits. Moreover, 15 minutes time has been allotted for reading the question paper.

On the other hand, no specific instruction is given in the HSLC question papers except mentioning the full marks, pass marks, time and number of pages in the question paper.

b) Types of Questions :

The questions were divided into different types on the basis of the length of the answers, marks allotted to them and the objectivity in scoring as given below :

Objective type/ Multiple Choice (1 mark), Very Short Answer Type (1 mark), Short Answer Type (2 to 3 marks depending on the nature of the subject) and Long Answer Type (4 marks and above). Table-1 and Fig.1 show the distribution of different types of questions (in nearest percentages) in the question papers under study:

Table - 1
Distribution of Different Types of Questions in the HSLC and
AISS
Examinations conducted by SEBA and CBSE
(In Rounded Percentage)

Subject	Type of Question	HSLCE		AISSE	
		2017	2018	2017	2018
English / English(Comm unitive)	OT/MC*	28	14	00	05
	VSAT*	5	25	19	30
	SAT*	22	22	11	20
	LAT*	45	39	70	45
General Maths / Maths	OT/MC	15	15	00	00
	VSAT	00	00	04	08
	SAT	48	47	47	52
	LAT	37	38	49	40
General Science/ Science	OT/MC	12	12	10	0
	VSAT	19	10	03	03
	SAT	44	60	53	48
	LAT	25	18	34	37
Social Science	OT/MC	10	10	00	00
	VSAT	00	00	09	09
	SAT	41	41	47	41
	LAT	49	49	44	50

* OT: Objective Type, MC: Multiple Choice, VSAT: Very Short Answer Type,
SAT: Short Answer Type, LAT: Long Answer Type

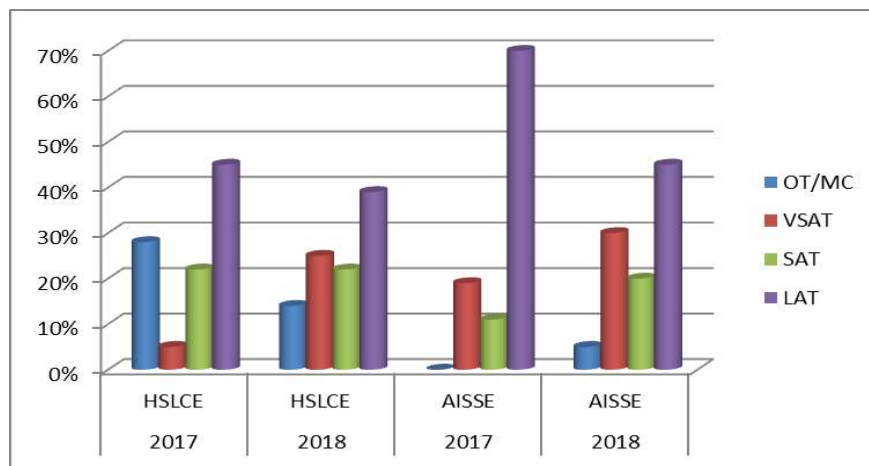


Fig 1: Distribution of Different Types Questions in the Question Papers of English /English (Communicative) of HSLC and AISS Examinations.

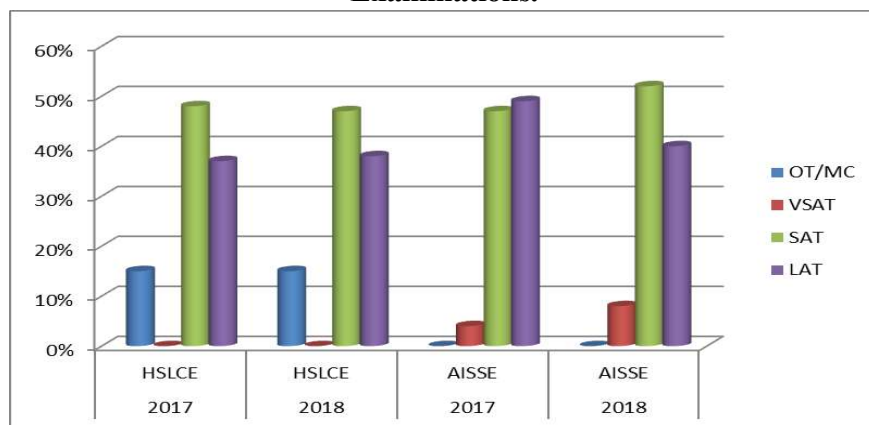


Fig 2: Distribution of Different Types Questions in the Question Papers of General Mathematics / Mathematics of HSLC and AISS Examinations.

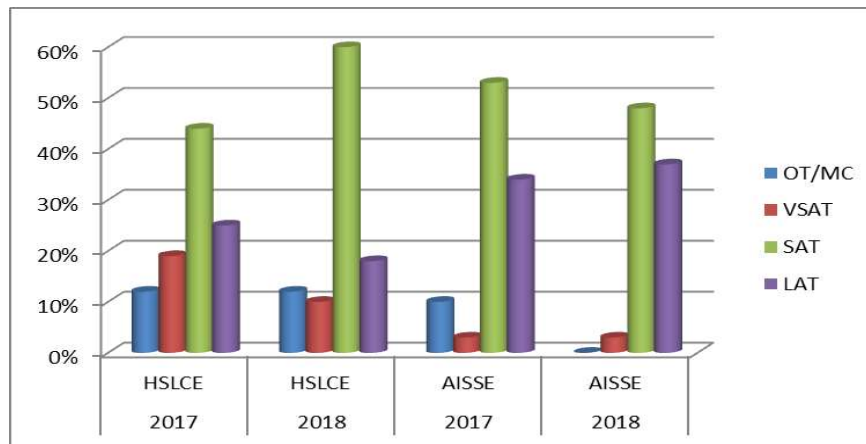


Fig 3: Distribution of Different Types Questions in the Question Papers of General Science / Science of HSLC and AISS Examinations.

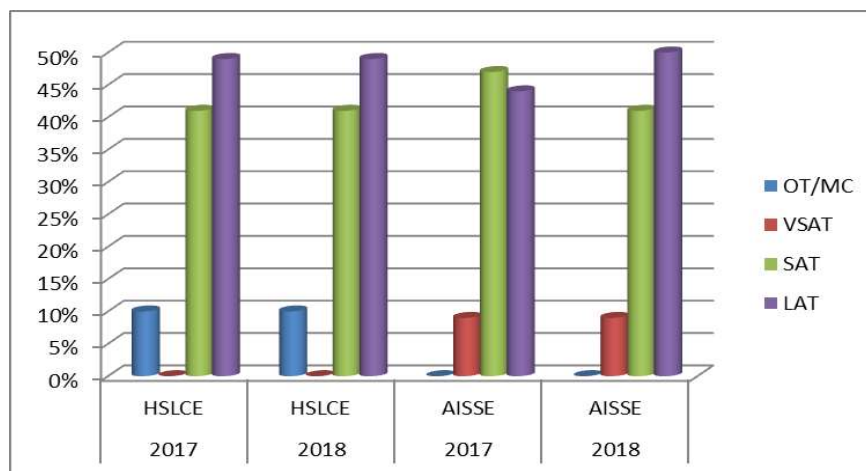


Fig 4: Distribution of Different Types Questions in the Question Papers of Social Science of HSLC and AISS Examinations.

The Table-1 and the Figures-1 to 4 reveal that there is variation in types of questions set in the question papers both in HSLC and AISS examinations. The percentage of OT/MC and VSAT questions in the HSLCE question papers was comparatively

more than that of AISSE question papers in all the subjects. There was no OT/MC questions in the AISSE question papers in the Science, Mathematics and Social Science. Only 5% OT/MC questions were observed in the English question paper. On the other hand, the percentages of OT/MC questions ranged between 10 to 15 percent in the HSLC examination question papers in the year 2018. There were 28% OT/MC questions in the HSLCE English question paper of 2017. This scenario was totally opposite in the years 2010 and 2011 (**Gogoi and Hazarika, 2013**). The percentage of MC/OT and VSAT questions the least in Social Science question papers of HSLC examination.

The short answer type questions prevailed (ranged between 40% to 60% of the total marks) in all the question papers except English in both HSLC and AISS examinations.

In the AISSE question papers of English (Communicative) and Mathematics, the percentages of LAT questions have been increased in 2018 in comparison to 2017 question papers. This trend is not observed in HSLC examination question papers.

c) Coverage of Instructional Objectives :

The questions were also divided into different types on the basis of the instructional objectives they meant to measure – Knowledge, Comprehension, Application and Skill. Table-2 and the Figures-5 to 8 show the weightage given to different objectives in the question papers.

Table : 2
Objective-wise Weightage in the Question papers of HSLC and
AISS Examinations conducted by SEBA and CBSE
(In rounded percentage)

Subject	Objective	HSLCE		AISSE	
		2017	2018	2017	2018
English / English(Com municative)	Knowledge	23	30	16	04
	Comprehension	42	54	70	51
	Application/Expression	35	16	14	45
	Skill	00	00	00	00
General Maths / Maths	Knowledge	01	03	00	01
	Comprehension	75	42	37	54
	Application	15	50	59	40
	Skill	09	05	04	05
General Science/ Science	Knowledge	65	44	39	65
	Comprehension	17	42	41	25
	Application	08	09	16	04
	Skill	10	05	04	06
Social Science	Knowledge	60	44	06	10
	Comprehension	38	54	88	86
	Application	00	00	00	00
	Skill	02	02	06	04

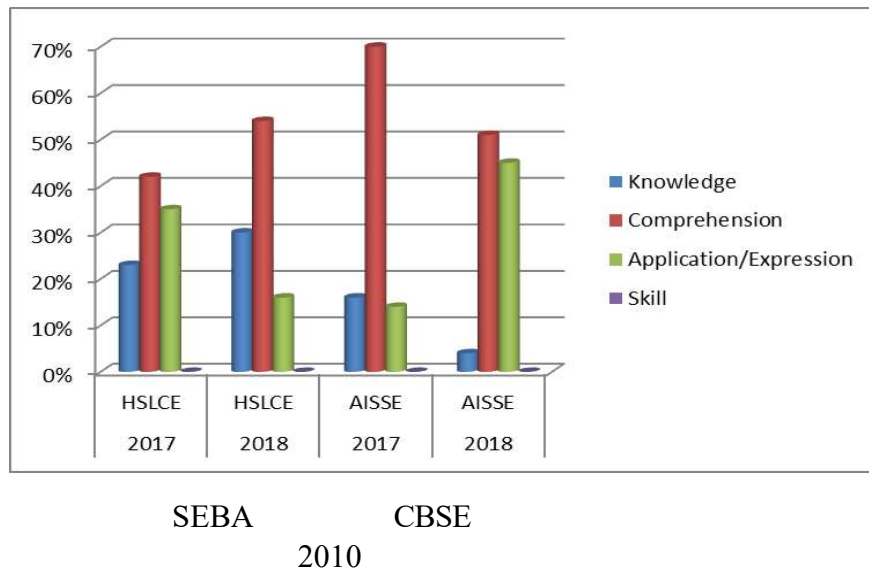


Fig. 5: Objective-wise Weightage in Question Papers of English / English (Communicative) of HSLC and AISS Examinations.

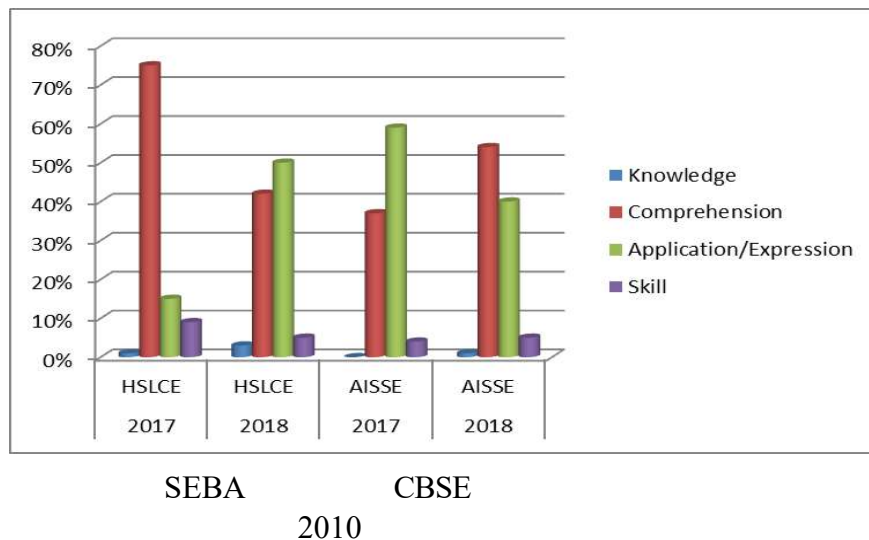


Fig. 6: Objective-wise Weightage in Question Papers of General Mathematics/Mathematics of HSLC and AISS Examinations.

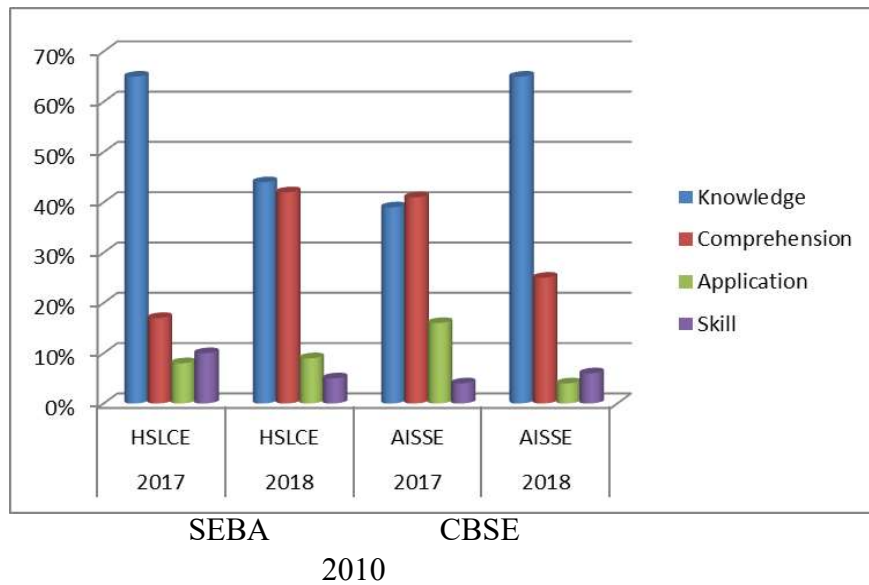


Fig. 7: Objective-wise Weightage in Question Papers of General Science / Science of HSLC and AISS Examinations.

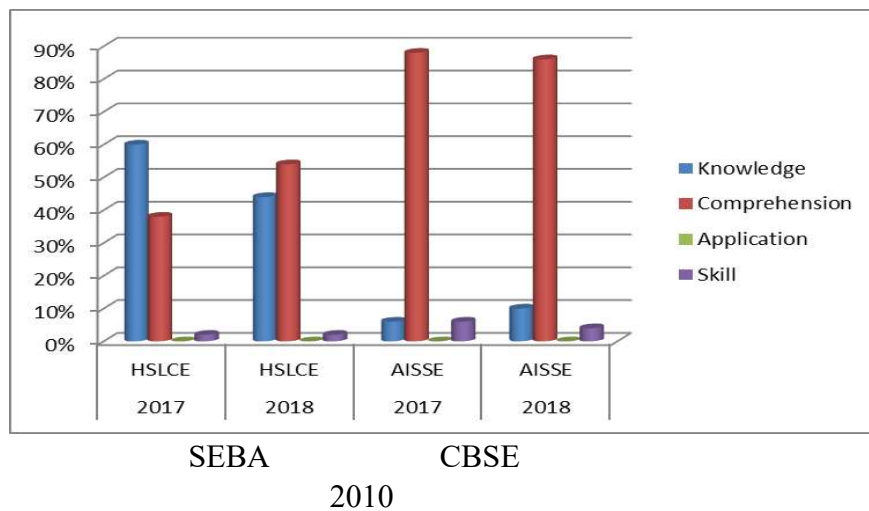


Fig. 8: Objective-wise Weightage in Question Papers of Social Science of HSLC and AISS Examinations.

It is revealed from the Table-2 and Figures-5 to 8 that about 50% of marks in General Science (65% in 2017 and 44% in 2018), about 50% (60% in 2017 and 44% in 2018) in Social Science and more than 20% of marks in English have been allotted to knowledge level questions in the HSLCE question papers. The percentage of marks allotted to knowledge level questions is comparatively low in all the AISSE question papers except in the question papers of Science.

In AISSE question papers more emphasis is given in comprehension and application in all the subjects except Social Science. In HSLCE question papers, the application level questions are very few. It is interesting to note that there is no application level questions in any of the four question papers of Social Science of both the examinations.

In all the question papers, the weightage of skill (manipulative) questions is very less, highest being 10% percent in the 2017 HSLCE General Science question paper.

d) Coverage of Contents :

In both HSLCE and AISSE question papers, weightage to different contents has been given as per their blue prints. However, as the numbers of multiple choice and very short answer type questions are more in the HSLCE question papers than that of the AISSE question papers; naturally coverage of content area is more in HSLCE question papers.

e) Options given in the Questions:

No over-all option has been observed in the question papers of HSLC and AISS examinations. However, internal options are found in all the papers except AISSE Mathematics

and Science question papers of 2017. Table-3 shows the options given in different question papers:

Table-3
Options given in the Question Papers of HSLC and
AISS Examinations

Subject	HSLCE		AISSE	
	2017	2018	2017	2018
English	8/28	8/28	6/11	All the questions have options
Mathematics	6/34	6/34	No Option	7/30
Science	13/36	11/36	No Option	6/27
Social Science	9/38	12/38	2/30	10/26

The Table reveals that about one third (13 out of 36 and 11 out of 36) of the questions in the SEBA General Science question papers (2017 & 2018) have alternative questions. Similarly, in Social Science and English question papers of HSLC examinations of 2017 and 2018, a large number of optional questions were given. The optional questions are least in General Mathematics question papers.

A remarkable increase in optional questions is observed in the AISSE question papers of 2018 in comparison to that of the question papers of 2017. In 2017, there was no optional questions in AISSE Mathematics and Science question papers, while there were only 2 optional questions (out of 30) in Social Science question papers. In 2018, all the questions of English question paper had options. Similarly, the numbers of options in Science, Mathematics and Social Science were also quite high.

The optional questions reduce the reliability and validity of the question papers as the examinees are evaluated with

basically different question papers. It is also noticed that in some question papers, options are given even in very short answer and multiple choice type questions.

Options for visually impaired candidates in the Social Science question papers of HSLC and AISS examinations increase their inclusiveness.

f) Organization of Questions:

It is observed that the questions in the AISSE question papers are organized on the basis of their types and then within a specific type they are organized unit-wise. However, the organization of questions in the SEBA question papers does not follow a definite systematic pattern.

It is observed that the breakup of marks has not been shown in a number of the questions of the AISSE question papers.

Conclusion and Recommendations :

A good question paper may help to improve the entire teaching learning process. On the other hand, defective questions in a question paper may lead to confusion and under performance of the examinees. In order to improve the qualities of the question papers, following measures may be taken up :

- i) The question paper setters and moderators need to be trained properly in constructing different types of question and preparing a balanced question paper.
- ii) Number of knowledge questions should be reduced in the question papers while at least 30% of the questions should be application questions in a question paper of Class X level.

- iii) Number of options in the question papers should be minimized. There should not be any options in the multiple choice and the very short answer type questions. Knowledge questions also should not have any options.
- iv) Breakup of marks should be shown clearly against the questions having more than one part.
- v) Care should be taken so that there is no ambiguous question in the question papers. Questions beginning with '*What do you mean by...*', '*What do you understand by...*' etc. are ambiguous and hence should be avoided.
- vi) The questions should be organized in a systematic manner in the question papers. Questions should be organized on the basis of their types and contents within a particular section.
- vii) It is observed that there are separate question papers in AISSE (in the subjects Science and Mathematics) for the visually impaired students. In the similar way, optional questions may be given in the HSLCE question papers in these subjects for visually impaired students, specially in the questions that test drawing skill.
- viii) Detailed scoring key and marking schemes of old question papers of AISSE are made available to students in the official website CBSE. Similarly, SEBA may also upload the question papers and scoring key/ scheme of the HSLCE question papers after the examination in its official website.
- ix) Like CBSE, SEBA may also provide extra time for reading the question papers.
- x) The instructions regarding word limit of the answers to different questions of AISSE examinations are given at

the top of the question paper. SEBA may also take similar measures.

From the above discussion, it has become clear that there is vast difference between the HSLC and AISSE question papers. Question papers of both examinations need to be improved to make those able to evaluate pupils' true level of measurement. However, question paper is only one aspect which affects the students' achievement. A detailed comparative study of the teaching-learning experiences provided in SEBA and CBSE schools needs to be conducted to find out the real cause of the difference in achievement of students under these two boards.

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The status and challenges of using QR codes by teachers through DIKSHA:

A study of Maharashtra

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Abstract

The digital ICTs such as mobile learning have become customary and there has been a growing interest in using Quick Response (QR) codes for teaching and learning purposes. Looking at various e-content aggregation initiatives of states such as Maharashtra, the Central Government launched a national level digital platform called Digital Infrastructure for Knowledge Sharing (DIKSHA) to integrate all e-content at one common platform that can be scanned through QR codes present in state curriculum textbooks. Maharashtra was among the pioneers to introduce QR codes in textbooks for access of e-contents by teachers and students. This study focuses on understanding the status of the use of QR codes by teachers through DIKSHA and identifying challenges faced by them. The study is based on a survey response of 5633 teachers along with 8413 teachers' of 1098 schools reached out through FGDs that were conducted across 36 districts of Maharashtra.

Keywords

ICT, QR code, DIKSHA, e-content, status, challenges

Introduction

Digital technologies are responsible for increasing the pace of evolution of the society. The kind of digital innovations that proliferated way faster than any other innovations in India is the use of mobile phones. Mobile revolution gave rise to smartphone devices and simultaneously markets played an important role by making smartphones available at cheap prices to be accessible by people at large. Smartphones not only made various other technical innovations obsolete but also opened opportunities to integrate itself in various important sectors, one being the education.

ICT in education is an old yet trending concept and is assumed to solve the majority of problems such as availability of learning resources, independent and shared learning, increasing engagement in students etc. Technology in the classroom provides an excuse to set course structure and open options for multiple information sources. While traditional teaching methods take place within the classroom at specific times, ICT facilitates are independent of learning experiences. Technology when integrated in traditional teaching method, it manifolds students learning in the classroom. In a study when conventional classrooms were compared with ICT based classrooms, students with ICT classrooms were found to be more motivated, comfortable, engaged and received more information than conventional methods (S K Singhal, 2020). India has in front of her a huge market for add on to ICT tools. Thus, cheaper technologies such as QR codes can turn out to be the next major breakthrough in Indian education system.

India has witnessed various policies that have promoted the use of technology for teaching and learning. The first and foremost initiative taken to bring technology aspect in school is found in the National Policy on Education (NPE) 1986. The NPE promoted the use of computers in schools and when it got modified in 1992, the focus was reshaped to employ technology for quality education. The most recent initiatives include National Policy on ICT (2012), Digital India (2015),

SamagraShikshaAbhiyan (2018) that shaped various technology driven initiatives across varied sectors in the country. The key transformations that were brought through technologies in education include GIS mapping of schools, Data management through 'Shala Darpan', integration of databases across central and state schools through 'ShalaKosh', Direct Benefit Transfers (DBT) and linking of 'Aadhaar' database for teachers and students. To increase access to textbooks, 'E-pathshala' is developed by NCERT that contains E-textbooks and other learning resources for students. Learning spaces such as 'SWAYAM' and 'ShaGun' portals are developed to cater to teacher needs and teacher professional development(Singh, 2019). In short, ICT driven policies have addressed numerous aspects of the education sector. One of the important motives for technology integration is that it still remains a priority to facilitate day to day planning and pedagogy for teachers and making them self reliant. DIKSHA is an approach in a similar direction.

DIKSHA Portal was launched by MHRD with an aim to provide teachers and students with a range of E-contents in their regional language making it a holistic platform for contextualized learning material. DIKSHA contains E-books, learning material, activity resources, worksheets/assessments, Scholarship resources from grades 1st to 12th standard in 18 different languages/mediums. Additionally, DIKSHA also provides a platform to scan the QR codes present in the state curriculum textbooks for hassle free experience for teachers and students. DIKSHA has promoted the opportunity to teachers to create and upload their own content that led to localisation of QR technology. There are a large number of teachers today who are engaged in content creation and aggregation along with teaching full time in schools. The advantage of QR code is that it works better on mobile than large displays, shortens the time taken to write on board, present information in a better format, and make sharing learning material easy(Abby Ashraff Saprudin, 2014).

In 2017, Maharashtra introduced 'Maharashtra In-service Teacher Resource App 'MITRA' mobile application that encouraged teachers to

access E- resources for state curriculum. The initiative led to the development of vast amounts of e-contents by teachers. In 2017, Maharashtra introduced QR codes in State Board textbooks called Balbharti. Today, QR codes being present on each page of the textbooks help teachers to plan for their daily lessons. The ability of QR code to contain bytes of information at one place prevents it from becoming overloaded with information. Additionally, the time spent looking for material online is shortened and becomes convenient for teachers. The introduction of Central portal DIKSHA has helped to collate e-content across all states at one common platform making DIKSHA more comprehensive and resourceful.

As much as ICTs is helping to bring digitalisation in education space, it also comes with various bottlenecks. It is argued that there is a little evidence on having significant role of digital technologies have significant return in teacher transformation and student achievement. Just providing access to digital technologies has neither improved teacher practices nor in students learning (Sancho, 2015). Other challenges include lack of required infrastructure, information overload, language barriers and difficulty to integrate technological innovations and best practices in teaching and learning (Salehi, 2012), (Singh, 2018), (Goswami, 2014).

Need and Importance

With the introduction of QR codes in textbooks and promotion of DIKSHA app, a large number of teachers are actively using this for teaching and learning. Additionally, the government has taken a lot of initiative to teach the skill of e-content creation through workshops and training. As vast resources are injected to build a digital infrastructure to improve pedagogy and classroom practices, it makes it critical to analyse the status and acceptance by teachers of this technology. It is argued that digital technologies in education are going to sustain for a long run thus it is important to understand the improvements needed to make it more effective

and efficient. Lastly, pedagogy and technology were always assumed to be independent from each other. With the introduction of QR codes, teachers are using it widely to improve pedagogy in the classroom, hence a study highlighting the perception of teachers regarding use of QR codes for pedagogy makes it indispensable.

Statement of the Problem

At this point of time, a study is necessary to know how effectively QR code through DIKSHA are being used by the teachers in rural and urban Maharashtra State Board schools areas that are either of Marathi, English or Urdu medium and additionally, to know problems associated in using DIKSHA for classroom teaching. Hence the problem is stated as below-

The study and challenges of using QR codes by teachers through DIKSHA: A study of Maharashtra

Operational Definition

- **Maharashtra State Board Schools:** All the Marathi, English and Urdu medium schools that are affiliated to Maharashtra State Board.
- **QR code:** The Quick Response (QR) codes printed in the pages of Maharashtra State Board Textbooks.
- **Rural area:** The geographical area that is governed by Gram Panchayat, also includes tribal areas.
- **Urban Area:** The geographical area that is governed by Municipality or Municipal Corporation.

- **Status:** Status is based constructs such as awareness of DIKSHA, consistency of use, grade wise usage, subject wise usage, content quality on DIKSHA, DIKSHA vs other e-content

Objective

- To study the status of rural and urban teachers using QR code through DIKSHA app
- To find out the problems faced by the teachers while using Diksha app
- To provide suggestions to increase the use of QR code through DIKSHA app

Scope

The study is related to all grades from 1st to 10th standard and for all subjects having QR codes printed in Maharashtra State Board's textbooks.

Limitation

The study lists down following limitations:

- The study is conducted for the year 2018-19
- The study has 95% responses from Marathi medium teachers
- The study is dependent on the responses taken through survey and FGD

Research Methodology

Method: Survey Research method.

Population: 71,04,84 (No. of school teachers of Maharashtra as per UDISE data)

Sampling technique: Random sampling method was used.

Sample: 5633 sample size is taken with 95% confidence level and confidence interval of ± 1.3 . The rural to urban ratio of survey is observed to be 65:35. Almost 95% of survey responses consist of Marathi medium teachers. There were 1098 FGD conducted across 36 districts of Maharashtra that contained responses of 8413 teachers.

Data Collection Tools : 1.Questionnaire for teachers.

2. Interview schedule for FGD

Statistical Tools: Percentage calculation was used.

Methodology: Data collection tools were developed with the help of experts from DIETs. Data Survey data is collected through an online link provided to teachers. FGDs were conducted with the help of DIET officers in 1098 schools of Maharashtra. Data analysis was done with the help of expertise of an NGO called LFE (Leadership For Equity). Findings of data analysis are mentioned below:

Major Findings

Objective 1. To Study the status of rural and urban teachings using QR code through DIKSHA app.

Awareness of QR code and DIKSHA:

- The survey reveals that a total of 81% teachers of Maharashtra are using QR codes present in Balbharti textbooks.

- Almost 82% of rural teachers and 18% urban teachers are using QR codes for teaching and learning purposes.
- Though teachers are aware of QR codes in textbooks, only 72% of teachers use DIKSHA for scanning QR codes.
- FGD analysis indicates that 76% teachers of 4765 rural and 76% of 3648 urban teachers have DIKSHA app downloaded in their mobile phones.
- QR scanning feature of DIKSHA is preferred by 69% of teachers whereas features such as search and filter have only 28% and 3% preference respectively.
- The e-content in the form of videos is preferred by 94% of teachers.

Use Behaviour of DIKSHA:

- From the FGD it is observed that in 25% schools of Maharashtra, less than 25% teachers DIKSHA app whereas in other 25% schools, more than 75% teachers use DIKSHA app
- It was realized from the FGD that out of all 8413 teachers who participated in FGDs across state of Maharashtra, 74% rural and 82% urban teachers i.e. a total of 6545 (77.7%) have used Diksha app at least once in their classrooms whereas 4672 (55.5%) use QR code consistently in their classrooms.
- The survey suggests that almost 59.5% urban private school teachers are using QR code consistently, backed by ZillaParishad (ZP) schools with 56%. On the other hand, only 12% teachers from Municipal Corporation schools use QR code consistently. These figures provide a possibility of teachers using DIKSHA consistently.

Subject wise use status:

- The survey reveals that teachers who are using DIKSHA, 46% of teachers find QR codes effective for Mathematics followed by Science (43%), Marathi (40%) and English (36%).
- Subjects such as Geography, History, and Environment Awareness were also noted to have received more than 20% response.
- FGD indicates that 75% of teachers find Marathi content most relevant followed by English (74%), Math (67%) and Science (64%).
- All other subjects fall in between 30-50% response rate.
- This suggests that more and more teachers are using QR codes for different subjects. Clearly the availability and quality of e-content for different subjects seem to have increased the preference.

Grade wise use status:

- When teachers were asked regarding the usage of QR code through DIKSHA with respect to grades, it is found that 42% of 8th, 47% of 9th while 46% of 10th grade teachers are scanning QR codes for teaching.
- All grades of 7th and less record less than 20% responses.
- FGD responses reveal that 1st to 4th grade 46% use, 5th, 6th, 7th grade 52-56% whereas 45% primary schools teachers are using DIKSHA on the other hand 32-35% secondary teachers are using DIKSHA in classroom.
- Clearly, this poses a question regarding awareness, availability and quality of contents on DIKSHA for higher grades.

Quality of content:

- When teachers were asked about the quality of contents on DIKSHA, 51% rural and 53% urban teachers responded that they found content on DIKSHA appropriate to the topics.
- While 22% rural and urban teachers found DIKSHA content entertaining and engaging, 12% of rural and urban teachers found it interactive. Only 1.37% of rural and 0.39% of urban teachers found the contents of inferior in quality.
- According to FGD analysis, 48% found DIKSHA content effective whereas 22% find other e-content more effective than DIKSHA.

Experience of use of DIKSHA:

- The survey reveals that 67% of rural and 32% of urban find using DIKSHA easier than YouTube.
- Almost 78% survey responses agree that e-contents of DIKSHA are aimed at school curriculum.
- 76% of teachers feel that DIKSHA can be used easily by students as well as parents.
- 78% teachers feel that DIKSHA has made learning easy and interesting for students.

Effectiveness of DIKSHA e-content:

- FGD analysis shows that 97% of schools find e-content on DIKSHA effective for teaching and learning.
- Of 97%, 60% schools have experienced increase in student engagement through DIKSHA use in classroom, 43% schools

reveal DIKSHA has helped in self learning whereas 72% schools felt that DIKSHA has helped in problem resolution in a short time.

Objective 2: To find out the problems faced by the teachers while using Diksha app

- The survey reveals that out of 61% who responded, 82.4 rural and 78.8% teachers struggled to have expected speed and uninterrupted internet access. As per FGD, 51% of school teachers face issues with internet connection.
- About 10% rural and 14% urban teachers are unable to use QR codes due to high student strength in the classroom. 22% of schools in FGD also face the same problem.
- Less than 5% of teachers are unaware of DIKSHA features and use of QR codes whereas FGD analysis suggests 13% of schools lack DIKSHA awareness.
- Only 1% of teachers feel that lack of ICT devices and restricted subject time limit obstructs scanning of QR codes in the classroom.
- Around 62% of FGD responses reveal that teachers face difficulty opening several interactive contents.
- The other challenges of teachers include lack of technical skill for 25% schools.

Objective 3: To provide suggestions to increase the use of QR code through DIKSHA app.

- **Content should be more accessible:** 69% of schools have suggested that there should be facilities to save downloaded e-content in computer or pen drive. Hence content should be more accessible.

- **Preference for type of content:** 46% schools have suggested that more content should be made available in different formats such as videos, pdf etc. and 34% teachers feel that there should be more interactive contents.
- Suggestions from the study also include development of more content in the form of videos which are short and easy to understand.

Other Suggestions:

- **Quality of content:** The study suggests that teachers find it difficult to access a lot of e-content on DIKSHA, hence, it is important to create content that is compatible with different devices.
- **Skill building of teachers:** The study highlights the need to train teachers with basic technical skills to make use of QR code as well as DIKSHA app effectively. There are teachers who are using DIKSHA but are unaware of features such as 'filter' and 'search' options that can help to improve experience. Thus, the need to skill teachers is essential.

Conclusion

QR codes in education are still at its very niche stage. The ability to scan the QR code and adopt in day to day teaching is still an arduous task for a large number of teachers. It can also lead to failure in the classroom if it does not engage students. Thus, it is important to take into account the need for QR codes to improve pedagogy in the classroom and promote self learning. The purpose of learning should not be lost in the way of scanning the codes. Thus, efforts to make this technology an enabler rather than a distraction is required and needed to be encouraged. When content is well formulated and organized, QR codes can bring substantial benefits to learning.

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Children With Special Needs (CWSN) and Parental Stress : A Study

Dr.Bharati Das.

Abstract:

As we all know for the all-round development of a child, the role of parents is very significant. Normal parents usually worry about numerous factors related to their children and that tends to create a lot of parental stress, which further affects the daily life of their children when they start growing up. Parents always want to protect their children from the negative forces of the society. However, when a child is born with one or multiple disabilities, the unexpected and permanent nature of such traits, often become the cause of parental stress. Malaya Das from Kalyani University of West Bengal mentioned in her research study that there is considerable evidence in this regard to suggest that the parents of children with developmental disabilities, experience more stress than the parents of children without disability. She also asserted that a child's disability is significantly related to parental stress. Therefore, it may be assumed that the provision and facilities of education on the part of the children, having specific disabilities, can reduce the stress level among the parents to a great extent. Because, it is hoped that such children should also come under the ambit of education, grow up along with children without disabilities and are accepted positively in society. This paper is an attempt to discuss about the parental stress towards their Children With Special Needs. The main objectives of this paper are to study the level of Parental Stress towards CWSN in Barpeta District of Assam, to study the mental status of parents of CWSN, to find out the attitude of parents towards CWSN and normal children in the family, to study the co-relation between mental status of parents and parental stress, to study the correlation between attitude of parents towards CWSN and Normal children in the family and

Parental Stress, to study the Correlations between Attitude of Parents toward Special Children and Parental Stress and to give some suggestions on how positive attitude of teacher and other persons of the society can make a revolution for the parents of CWSN. In this study the researcher will take the purposive sampling technique for sample selection for the Barpeta District of Assam, Descriptive Survey method is used for data collection and statistically correlation method is used for data analysis. The area of the study will be Barpeta District of Assam.

Key Words:- Children With Special Needs (CWSN), Parental Stress, Mental Stress etc.

Introduction

As we all know for the all-round development of child, the role of parents is very significant. Normal parents usually worry about numerous factors related to their children and that tends to create a lot of parental stress, which further affects the daily life of their children when they start growing up. Parents always want to protect their children from the negative forces of the society. However, when a child is born with one or multiple disabilities, the unexpected and permanent nature of such traits, often become the cause of parental stress. Malaya Das from Kalyani University of West Bengal mentioned in her research study that there is considerable evidence in this regard to suggest that the parents of children with developmental disabilities, experience more stress than the parents of children without disability. She also asserted that a child's disability is significantly related to parental stress. Therefore, it may be assumed that the provision and facilities of education on the part of the children, having specific disabilities, can reduce the stress level among the parents to a great extent. Because, it is hoped that such children should also come

under the ambit of education, grow up along with children without disabilities, and are accepted positively in society

In a country like India, the educational programme has also engaged itself with making room for special educational activities to empower the differently able persons, while focusing on the development of the formal aspects of education. However, the first step towards a change in Education for the differently able persons is the increased involvement of parents and other concerned adults in the arena of Inclusive Education. Parents usually play the role of teachers, continuing to educate their children long after their childhood is over. However, the case is never so easy for the parents of the disabled children. It is important that in order to develop the effectiveness of Inclusive Education, the involvement, collaboration and interaction amongst parents, students, and the school authority is necessary which will definitely reduce the level of parental stress. (Sources: Ninth Five Year Plan, 1997-2002).

As per the Census 2011, the differently able population in India is 268 lakhs. In terms of percentage, this stands at 2.21%. There has been a marginal increase in the differently able population in India, with the figure rising from 219 lakhs in 2001 to 268 lakhs in 2011. There are 149 lakhs men with disabilities as compared to 118 lakhs women in a country like India. (Source: Census Report: 2011)

Objectives of the study

1. To study the level of Parental Stress towards CWSN in Barpeta District of Assam
2. To find out the mental status of parents of CWSN.
3. To study the attitude of parents towards CWSN and normal children in the family.
4. To study the co-relation between mental status of parents and parental stress.

5.To study the correlation between attitude of parents towards CWSN and Normal children (all children) in the family and Parental Stress.

6 To study the Correlations between Attitude of Parents toward Special Children and Parental Stress.

7.To give some suggestions on how positive attitude of teacher ,other persons of the society can reduce parental stress..

Methodology of the study

For the present study, Descriptive Survey Method is used .The investigator conducted different survey with the help of parental stress scale (PSS) and self made questionnaires.

Sampling of the study

Purposive sampling method has been used for selecting the CWSN and their parents block wise for studying the level of parental psychological stress towards CWSN.Total sample 247 numbers of parents and their special need children were purposefully selected from 4 numbers of educational blocks namely Barpeta,Mondia,Chenga,Bhawanipur among all 7 numbers of Educational Blocks under Barpeta District.

Tools for data collection

i. Parental Stress Scale developed by Dr. Malaya Das, Dept. of Education, Kalyani University has been adopted to find out the level of parental stress towards CWSN . This scale was developed and standardized by Dr. Malaya Das, Dept. of Education, Kalyani University, West Bengal in order to measure the nature of parental stress of the parents who have special need children. It is a self-reported verbal scale, which contained 34 items including positive and negative items. It was a five point scale, response categories range from strongly disagree, disagree, undecided, agree and strongly agree. The score ranges from 0 to 4. The highest score of the scale means that the level of the stress of the parents is highest.

ii. Self prepared questionnaire has been also used to study the background information of the teachers and parents and their special need children.

Statistical Implication

For quantitative analysis of the present study, various statistical techniques were used. These techniques were found to be reliable in analyzing the data.

In the first, second, third objectives the investigator used simple percentile for studying the level of parental stress towards CWSN.

In the fourth, fifth and sixth objectives, Pearson correlation method was used to study the relation between mental status of parents and parental stress and to study the correlation between attitude of parents towards CWSN and Normal children in the family and Parental Stress.

Analysis of Data

Objective 1- To study the level of Parental Stress towards CWSN

To examine the Stress felt by the parents having CWSN in Barpeta Districts, Parental Stress Scale was applied upon 247 numbers of parents of CWSN. These sample CWSN and their parents were selected from 4 numbers of educational Blocks of Barpeta District, namely— Mondia, Barpeta, Chenga and Bhawanipur. Administration and scoring of the Parental Stress Scale, among the parents of the sample CWSN helped us to assign the level of parental stress of the CWSN.

Parental Stress Group

Low stress group = 34 – 79

Moderate stress Group = 80 – 124

High stress Group = above 124

Table 1: Parental Stress and Father/Mother Respondent

Level of stress	Range of stress	Father		Mother		Total	
		Count	%	Count	%	Count	%
Low Stress	34- 79	39	20.6	13	22.8	52	21.1
Moderate Stress	80 - 124	143	75.7	40	70.2	183	74.4
High Stress	Above 124	7	3.7	5	7	12	4.5
Total		189.0	100.0	58.0	100.0	247.0	100.0

Table 1 presented the response of the father and mother on the level of stress. Here the stress is divided into low, moderate and high level. The data shows that 20.6% fathers and 22.8% mothers have low parental stress, 75.7% fathers and 70.2% mothers have moderate parental stress and 3.7% fathers and 7% mothers have high stress.

Objective 2.To find out the mental status of parents of CWSN.

Here the investigator studied the mental status of the parents of CWSN. The level of mental status of the parents are divided into three level like stable, disturbed and unstable.

Table 2 : Mental Status of the Parent

Level	Father		Mother		Total	
	Count	%	Count	%	Count	%
Stable	99	52.4	35	61.4	134	54.5
Disturbed	55	29.1	12	21.1	67	27.2
Unstable	35	18.5	11	17.5	46	18.3
Total	189.0	100.0	58.0	100.0	247.0	100.0

The above **Table 2** shows the mental status of the parents of CWSN. Here, the investigator divided the level of mental status as stable, disturbed and unstable. The data reveals the mental status of the parents of CWSN, 52.4% fathers and 61.4% mothers are mentally stable, 29.1% fathers and

21.1% mothers are mentally disturbed and 18.5% fathers and 17.5% mothers are mentally unstable.

Objective 3. To study the attitude of parents towards CWSN and normal children in the family.

For this study the investigator classified the attitude of parents as affectionate, casual and indifferent towards the all children including their special need children also.

**Table 3: Attitude of Parents Toward CWSN and Normal Children
(all children)
in the Family**

	Father		Mother		Total	
	Count	%	Count	%	Count	%
Affectionate	129	68.3	44	77.2	173	70.3
Casual	53	28	12	21.1	65	26.4
Indifferent	7	3.7	2	1.8	9	3.3
Total	189.0	100.0	57.0	100.0	247.0	100.0

From the **Table 3** it has been found the attitude of the parents toward their CWSN and normal Children. The investigator classified the attitude of parents as affectionate, casual and indifferent. The attitude of 68.3% fathers and 77.2% mothers towards CWSN and normal children is affectionate, the attitude of 28.0% fathers and 21.1% mothers towards CWSN and normal children is casual and the attitude of only 3.7% fathers and 1.8% mothers towards CWSN and normal children is very indifferent.

Objective 4.To study the co-relation between mental status of parents and parental stress.

Generally, the mental status of the parents and parental stress are related to each other. With the help of Pearson Correlation Method the investigator tried to find out whether there is a relation between mental status of the parents and parental stress.

Table 4: Correlation between Mental Status of the Parents and Parental Stress

	Mean	Std. Deviation	Pearson Correlation	Sig. (2-tailed)
Mental_status	1.64	0.774	.165(**)	0.01
Parental_stress	98.5	19.845		

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

According to the above **Table 4**, the mean score of mental status is 1.64. S.D .774 and mean score of Parental stress is 98.50, S.D 19.845 with r-value is .165 which is significant at the 0.05 level. So, the above Table reveals that there is a significant relationship between mental status of the parents and parental stress.

Objective 5.To study the correlation between attitude of parents towards CWSN and Normal children (all children) in the family and Parental Stress.

The investigator by using Pearson Correlation Method tried to study the correlation between the attitude of parents towards CWSN and normal children in the family and Parental Stress

Table 5: Correlations between Attitude towards CWSN and Normal Children (all children) and Parental Stress

Attitude	Mean	Std. Deviation	Pearson Correlation	Sig. (2-tailed)
Attitude towards CWSN and normal children	2.67	0.536	-.218(**)	0.001
Parental stress	98.5	19.845		

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

From the above **Table 5** it has been found the correlation between the attitude towards CWSN and normal children with parental stress. The mean score of attitude towards CWSN and normal Children 2.67, S.D .536 and the mean score of parental stress is 98.50, S.D 19.845, r-value is -.218, which is significant at 01% level of significant but negatively correlated.

So, the above table reveals that parental attitude towards all Children and parental stress of the CWSN are not related to each other.

Objective 6 .To study the Correlations between Attitude of Parents Toward Special Children and Parental Stress

For this the investigator by using Pearson Correlation Method wanted to study the relationship between the attitude of parents towards special children and parental stress .

Correlations between Attitude of Parents Toward Special Children and Parental Stress

	Mean	Std. Deviation	Pearson Correlation	Sig. (2-tailed)
Attitude of parents towards special children	2.57	0.594	-.127(*)	0.047
Parental_ stress	98.5	19.845		

* Correlation is significant at the 0.05 level (2-tailed).

According to the above **Table 6** the mean score of the attitude of parents towards Special Children is 2.57, S.D .594, and the mean score of Parental stress is 98.50, S.D. 19.845 with r- value -.127 which is significant but negatively correlated at the 0.05 level.

So, the above table reveals that there is a negative relationship between the attitude of parents towards Special Children and parental stress.

Major Findings of the study

- From this study, it has been found that total 20.6% fathers and 22.8% mothers have low parental stress, 75.7% fathers and 70.2% mothers have moderate parental stress and 3.7% fathers and 7.0% mothers have high stress.
- Regarding mental status of the parents of CWSN, it is found that 52.4% fathers and 61.4% mothers are mentally stable. 29.1% fathers and 21.1% mothers are mentally disturbed and 18.5% fathers and 17.5% mothers are mentally unstable.

- Correlation between mental status of parents and parental stress, data reveal that there is a significant relationship between the mental status of the parents and parental stress.
- The attitude of the parents toward their all Children, 68.3% fathers and 77.2% mothers are affectionate, the attitude of 28.0% fathers and 21.1% mothers are unpleasant and 3.7% fathers and 1.8% mothers are indifferent by their attitude.
- Regarding the correlation between the attitude towards all Children and parental stress. The mean score of attitude towards all Children 2.67, S.D value is .536 and the mean score of parental stress is 95.50, S.D. 19.845, r-value -.218, which is negatively significant at .05% and .01% level of significant.
- Regarding attitude of the parents towards CWSN, the study shown that the attitude of 63.0% fathers and 57.9% mothers are pleasant. The attitude of 32.3% fathers and 35.1% mothers are unpleasant and 4.8% fathers and 7.0% mothers are very stressful, they become indifferent towards CWSN.
- There is a significant relationship between attitude towards special children and parental stress of CWSN with the mean score of Attitude towards Special Children being 2.57 and S.D. .594. The mean score of Parental stress is 98.50, S.D. 19.845 with r- value -.127 which is negatively significant at the 0.05 level of significant.

Suggestions

- Identifying, assessing, and certifying the CWSN had been not up to the marks. More team members, special educators need to be definitely mobilized for identification and assessment of CWSN, which defiantly reduce the level of parental stress.
- The teams or agencies can submit the list of identified and assessed CWSN to the appropriate authority in the district for certification.

Unless a person or child is certified as CWSN he/she will not be able to avail any services or benefits from the authority.

- There should be a yearly district level refresher course for the parents of CWSN, on how to upgrade their skills, to support the CWSN.
- Promotion of various activities taken by NGOs working in the field of disability is another way for improving the number of professionals to work in the field of disability.
- DIETs/ Teachers Training Institutions as resource center could be facilitated to network with NGOs and start more Quality Professional Courses & Training Programmes in the Disabilities Sector for parents and other professionals.
- Training for professionals in the assessment of Low Vision, Autism, Learning disabilities need to be taken up. This will increase the number of experts for helping the CWSN
- Mobile Consultants could be involved in carrying out Functional Assessment and Curriculum planning for the CWSN.

Conclusion

The study conducted by the investigator on the theme Children With Special Needs (CWSN) and Parental Stress : A Study shall be a notable contribution to the field of Education . The study has collected and documented data and information for needful action to be taken by educational administrations, educational planners, policy makers, sociologists, psychologists with reference to the CWSN. The suggestions of the investigator shall be a positive message, as they will serve as the guidelines to be implemented for education of the CWSN. The study has a social implication from the point of view of creating awareness amongst

the teachers, parents and the community members for quality Education of CWSN and facilities in Inclusive Education programme which will definitely minimize the parental stress towards their special need children. If we observe the National education policy 2020 which was approved by the Union Cabinet of India on 29 July 2020, some relief we will get because the deferent modification of existing education programme as per NPE 2020 will definitely help all children, specially the CWSN. The policy is a comprehensive framework for elementary education to higher education as well as vocational training in both rural and urban India which will help the CWSN very effectively. They can choose their vocations as per their capability. The vision of the policy is to develop energetic knowledgeable society by providing high quality education to all students including CWSN, which definitely reduce the mental stress of the parents also. Regarding language the policy raises the importance of mother tongue and regional languages as a medium of instruction until class 5, which will defiantly help the slow learners. The policy also states that no language will be imposed on the students. The policy maker informed the Nation that a more detailed language strategy would be released in the National Curriculum Framework in 2021. School education restructured by 5+3+3+4 model which includes 3 years of preschool or anganwadi, followed by classes 1 and 2 in primary school. This will cover children of ages 3-8 years. So, from the very early age the CWSN will get equal importance with the normal students in the schools in the Inclusive Education programme. Another important step taken by the National Education policy 2020 is reducing the stress of examination of the students, school students will answer three examinations, in classes 3, 5 and 8 only. Board examinations will be continued to be held for classes 10 and 12 but will be re-designed. This policy aims at reducing the curriculum load of students and allowing them to be more “inter-disciplinary” and “multi-lingual”. All round Skill development of students are also given extra importance by the policy makers. In **Higher education programme also one new structure of 3 years degree course we can observe.** This will include professional and vocational areas and will be implemented as it follows a certificate after completing 1 year of study, a diploma after completing 2 years of study, Bachelor’s degree after

completion of a 3-year study. This process will help the CWSN along with normal children, which will reduce the wastage, stagnation and dropout related problems. The researcher definitely believe that this kind of educational programme will help the CWSN to develop self confidence among themselves.

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Content Analysis of the Elementary level Text Books from Gender Perspective

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Abstract:

In general term Curriculum means whatever taught in school. Broadly, curriculum comprises of the teaching learning and assessment materials available for a given course of study. With the changing demands of the society it is becoming significant to have an improvised and revamped comprehensive curriculum. Responding to such demand National Curriculum Framework (NCF) 2005 has advanced various suggestions to revise the curriculum in terms of different aspects. Gender sensitivity or equality in text books is one of such suggestions. Text books are the important repositories of knowledge. A well designed text book can promote creativity, imagination, critical thinking and social values among the students. Since the adoption of the National Curriculum Framework (NCF) 2005, text books are prepared keeping in mind the issue of Gender sensitivity in all possible areas. This paper is on textbook analysis from a Gender perspective. It limits its scope to the books designed by SCERT for the students of elementary level in Assam. Considering the significance of the upper primary level studies, the paper concentrates on the text books of class VII and VIII, the last stages of the elementary level. The subjects considered for the review are Language, and social sciences. The study follows analytical method to analyze the content of the texts. Since the public schools in Assam run in vernacular medium, the medium of texts selected for this study is Assamese. Starting from the cover page, the paper focuses on the style of writing, designing of activities, illustrations and exercises. It also aims at comparing the text books before and after the

implementation of the suggestion made by NCF, 2005. This paper is highlighting both positive and negative aspects reflected through the contents of the subjects in the texts.

Key words: Elementary level, Equality, Gender Sensitivity, Inclusion, Text books

Introduction

Gender is a socially constructed phenomenon on the basis of the differences ascribed to men and women in a particular society. The gendered perspective may vary from society to society but its common influence is that it creates a second order perspective towards the girls and women against the male section of the society (Aksornkool, 2003). This influence overpowers most of the time the ideal set up of a society and give rise to patriarchy and domination in any possible form.

Gender sensitivity may otherwise be termed as awareness about gender disparity. It is an analytical and critical issue that focuses on the mitigation of gender disparities. It comprises of the efforts and concerns that focuses on the role of both the sexes, male and female as equal social beings and that significantly contribute to the social change and development. Such concerns are to be best implanted in the young minds at different levels so that they can lead to an unbiased healthy society. There are different areas that can focus on gender sensitivity. Such areas are: sensitivity at home, sensitivity in school, sensitivity in curriculum etc. The present study concentrates on gender inclusive curriculum. It reviews and analyses the Social Science and Language text books designed by SCERT for the upper primary level students in the state of Assam.

Textbooks as an Effective Teaching Aid:

It is understood that education plays a constructive role in improving the subjugated status of women in society. Gender inclusive textbook can be effective in bringing a change in this picture. Indian education system is a dynamic system consisting of traditional values integrated with modern educational views and thinking process. It is an ever changing continuous process followed by new policies. In Assam, the social and educational profile of the classroom is multi-class, multi-caste, multi-religious, and multi-lingual and gendered with disability. Thus classroom consists of learners who belong to diverse ethnic, racial, cultural, linguistic and socio-economic backgrounds including children with special needs. And gender cuts across all these categories at varied levels.

Following the alarming decrease in the number of girls against number of boys, the Ministry of Human Resource Development, Government of India has launched the scheme Beti Bachao Beti Padhao in 2015. The motto of this scheme is to save the Girl child, educate the girl child. This is a step towards minimising the gender gap in education. The aim of "*Beti Bachao Beti Padhao*" should not be limited only to sending the girls to school but to make them aware and confident of the rights and opportunities they may access. This can be effectively initiated through a well designed curriculum and text book. The common school going generation in India is mostly depended on the text books.

Text books are considered as the most essential part of formal teaching learning process. Textbooks are the source of information which not only develop the ability to read and write but they also encourage having critical thinking, independence and creativity (Gouri, 2016). The materials provided in the textbooks have got incomparable influence on the tender minds of the school children. On the basis of the materials provided in the texts, the teachers present the content to the students adding his expertise on the process and this helps the students to visualize and frame an idea about their society and the roles played by different people in the same.

This is one of the earliest and most significant influences on the growing minds. When these young minds are fed with progressive non biased ideas it spreads to their family and society gradually leading to a better social change. Even after the patriarchal influence of the society today's students raise voice against oppressive nature of the society towards women. When the young minds of a family are taught such lessons, even illiterate family members can also get motivated through them. Gender biased language or content in the textbooks may adversely affect the learners and this may lead to a biased, oppressive and unfair society (Garbhavi & Mousavi, 2012). Hence, it is significant to analyse the existing textbooks and take necessary measures for its improvement.

When the text book will emphasize on the rights and duties of women and include stories and facts of successful women in a male dominated society, it will help the girls growing up more confident and help them to make their own decisions. It will equally influence the growing boys not to consider the girls as someone to be dominated but to keep a balance in society and to give respect and better opportunities to their counterpart in maintaining a healthy and balanced society. It is not only to empower the mindset of the girls through the contents and interpretation of the text books but also to implant neutral feeling to the opposite gender making them sensitive for the holistic development of the country and society as a whole. But to what extent the school environment through the text books and the interpretation by the teachers can influence the girl child to make them aware of the potentialities of female section and the possible role that they can play.

School is a miniature society. After home school is the most influential place wherefrom the child can learn and shape their social roles and attitudes. It can provide the platform to inculcate approved social behaviour and attitude in children. In order to make the school environment more learner centric and effective new measures are being taken by the concerned

authorities. Right to Education Act, 2009 and the National Curriculum Framework 2005 are such initiatives that focus on the teachers' training and review and modification of the school curriculum and thereby modifying the text books. To promote education and to achieve actual development of the society, both men and women need to be empowered in all directions.

Referring to the statements made by Blumberg R.L (2007), Islam (2018) argues that gender bias in the textbook is one of the "hardest budge rocks in the road to gender equality in education". Again he mentions the report of The United Nation's Girl Education Initiative which has identified gender bias in textbooks as one of the five challenges towards achieving gender equality in education. According to him, "Biased textbook contents not only limit women's worldviews and career choices, but they also distort their self-image and the image of the opposite gender group" (Islam KMM, 2018). Even then compared to other areas of school education there are less research works done on the analysis of textbooks at different levels. \

Objectives of the Study

Identifying the significance of textbooks in the formation of social attitude and behaviour in the young minds the study proceeds with the following objectives:

- To critically examine the gender sensitivity in the elementary level textbooks published before and after the implementation of the NCF 2005.
- To analyze the areas of gender inclusion, and proper representation in the textbooks.
- To compare text books published by NCERT and SCERT prepared after the implementation of NCF 2005.
- To assess the impact of School Text Books in creating and mitigating the gender gap in school level.

Methodology

The study proceeds through *analytical method* focusing on the objectives as placed above. For the purpose, the sample text books of Language and Social Sciences designed and published by SCERT for class VI to VIII are collected. For comparative analysis the two sets of textbooks are analysed, one published before the implementation of the RTE 2009 and NCF 2005, i.e. published before 2005 and the other from the implementation of the Guidelines suggested by the two documents. The publication years of the second set of textbooks ranges from 2011 to 2017. Keeping in mind the issue of gender inclusion, exclusion and proper and improper representation of gender, the study analyzes the content of the books as per the objectives determined. It includes the analysis of these books focussing on the cover pages, content, visuals, illustrations, activities and language. In order to make the study more concrete, a comparative analysis is done between the textbooks published by NCERT and SCERT for the students of the elementary level in the state of Assam.

The study focuses on the qualitative analysis of the concerned text books.

- ◆ The social science and Assamese text books were analyzed for the classes of VII and VIII considering the significance of these subjects in framing social attitude of the students towards society and the opposite gender.
- ◆ Class VII and VIII are considered significant as this period comprises of the students of growing age where they can form and nurture their attitude and behaviour towards society. Hence, a lot of psycho-physical and social changes take place during this period where the text books have a significant role to play. The consulted books are published by Assam State Textbook

Production and Publication Corporation Ltd., SEBA, SCERT and NCERT in different years of publication.

Analysis and Findings

The National Curriculum Framework 2005 published by the National Council of Educational Research and Training (NCERT) includes the guidelines for syllabus, textbooks and teaching practices in the schools of India. One of the significant suggestions of the NCF is to remove gender disparity in education. The NCF 2005 recommends that children's life at school must be linked to their life outside the school. This principle brings a significant change in the curriculum and text books leading to a fruitful child centred learning system.

As per the suggestion of the NCF, the focus of the Social Science should be shifted from Civics to topics related to Social and Political life (SPL) of contemporary India. The pedagogy SPL is to use real life situations as the children learn best through real life examples. Instead of definitions the suggestion is to use case studies and narratives to explain concepts. On the basis of these suggestions the paper proceeds with content analysis of the following books.

Book 1: Social Science textbook of Class VIII, year -2007

The content of the book is classified into four sections- **Geography, Economics, History and Political Science**. No reference is made to the social and political life of people in particular. It is not prepared in accordance with the NCF 2005. The content of the chapters are also presented in a traditional way just providing information about history, economy and polity. The implications and relevance of these contents in practical context is not emphasized. The chapters lack scope for creative

thinking and imagination for the young minds. There is no guideline provided for the teachers regarding the skills of imparting knowledge through the lessons. In the Economics section there is a chapter on Natural Resources but no reference is made to Human Resource, the concept of which is quite significant for the students of this level. The presentation and the language of the book are primarily male centric and information are provided surrounding the male population and the initiatives taken up by the males for the society. No inspiring story to reflect the progressive role of girls and women in the development of individual and society is included. Overall, the traditional books were not gender inclusive but exclusive.

Book 2: Social Science text book designed for Class VIII, year-2016

The limitations of the traditional text books are tried to overcome in the new textbooks published in accordance with the National Curriculum Framework (NCF) 2005. Where the previous book contained no matter related to the gender inclusive content, the present book has an inclusive content. This book includes modified quality content prepared as per the suggestion of the NCF. The initial pages of the book incorporate lucid notes on the suggestion to the teacher regarding effective and valued teaching in the classroom. The entire content of the book is classified into 3 sections. These are: Geography, History and Economic and Political science. The last section includes important lessons discussing the potentiality of women and their participation in work force and as decision makers in the family.

In the chapter 17 on “*Manov Sompod anru Brittimulak Siksha*” explaining the concept of human resource it is effectively shown how the family of one Amal Saikia, a village school teacher ended up in pathetic condition as his educated sons did not show any interest in any other possible livelihood except government job which they could not get. On the other hand, the family of one Khalilur Rahman, a cultivator managed to rise to an affluent status as his wife and daughters earned their living by weaving

cloth and setting up a beauty parlour in the village after completing training in town. Another positive note in this lesson is that Khalilur Rahman inspired his daughter to attend the training of beautician in town in spite of her disability. This lesson may leave three positive impacts on the young minds. First one is the importance of vocational education; second, considering boys and girls as equally potential, and the third is the possibility of being successful despite of disability.

Chapter 19: The chapter on financial institution and socio-economic Development the different finance agencies of India are discussed and the self employment of the women through the help of the micro finance institution is focused upon. It talks about the self-help groups which constitute around 50% of the total self help groups in Assam.

Chapter 23: The chapter on Fundamental Rights starts with an inspiring story about girls' education where a girl working as a domestic child labour is rescued with the help of the police and local women and sent to school to continue her studies. This exemplifies right to equality prescribed in the Indian constitution. Right to assembly is also depicted through the pictures of women protesting against price rise and exploitation. The entire book contains the message of equal opportunity and rights of boys and girls starting from participation in election, getting training as NCC cadets and availing school education.

Language text books of class VI and VII

The Assamese language textbooks of class VI and VII are reviewed for the purpose of the study. Both the textbooks are prepared by SCERT according to the NCF 2005 and hence they are inclusive of the gender equality concepts. The text book of Class VI contains a very interesting chapter named “*Aitak Moi Kidore Porhiboloi Xialo*”. The chapter

positively represents women in two different roles. Emphasizing the need of adult education it presents how an elderly woman learns alphabets from her granddaughter and gradually becomes competent in reading magazine of her own interest. In the exercise part of the same chapter two pictures are given. In the first one a school girl is teaching elderly people and in the second one a woman is reading newspaper beside her husband.

The Assamese textbook of class VII is also found to be gender inclusive in nature. From the cover page to the end the pictorial representations, the exercises and content are found emphasizing on gender sensitivity to a considerable extent. It includes a chapter on the “Anne Frank’s Diary”. Another chapter “*Progotir Sonali Baat*” presents men and women as equal contributors to the economy of a society. In doing this the chapter also makes the students aware of the importance of vocational studies. Women in present time are utilizing the skills to earn for themselves and the family. Women self- help-groups are discussed here with its positive contribution towards women empowerment.

However, one point referred in the book while discussing the dresses and culture of different community is to be critically noted here. One sentence can be quoted here “*somajot mohila xokole poridhan kora posakor majot okol soundajrya pritiei nohoi, tar logote udbhasito hoi samajik ruchibodh....jatir sanskritik boisistya bor prokot hoi*”. These sentences seem to make the women folk the only bearers of culture and tradition through the dresses they wear. There are already too many critical discussions regarding the dressing sense of women in the present society imagining the women as the sole bearer of culture through dresses. Such comments in a book may aggravate such feeling in the mind of the students where the male dressing sense does not come to the purview of representing culture and tradition of a particular community. This may be noted as misrepresentation of a gender. Thus, as per the second and the third objective we have analysed the textbooks of language and social science designed for the upper elementary level and found that the books published before the implementation of NCF 2005 are traditional in nature and they

are not gender inclusive. Significant interventions have been taken by the concerned authority in this regard and hence we get in hand the present gender inclusive textbooks with creative contents.

Comparison between NCERT and SCERT textbooks:

As per the third objective, when we proceed in the study of comparing the NCERT and SCERT books of Assam we find a significant difference between the two. The social science text books prepared by NCERT for class VII has a complete separate book named Social and Political Life (SPL) designed and developed exactly in accordance with the suggestions of the NCF 2005. This section includes chapters on equality that ranges from gender equality to socio-political equality in India. With meaningful practical narratives the chapters highlight on the fabricated gender differentiation and the real situation out of it. It contains a separate section on Gender where lessons like “Growing up as Boys and Girls” and “Women Change the World” are included. The effective social and environmental movements led by women get pictorial representations in these chapters and the potentiality of women power gets well treated.

A similar chapter signifying the equal dignity of work and the non discrimination between boys and girls from home itself is depicted in the Social Science text book prepared by SCERT for class VII. The name of the chapter is “*Shramar sama Morjyod aaru Samatulya*”. In this chapter the dignity of a homemaker is presented in a respected way with a tabular representation of the possible income that she may make out of these household works. The chapter presents the glorifying roles of women in society referring to the first woman Prime minister of India Pratibha Devi Singh Patil, Jyapith Laureate Mamoni Roysom Goswami, Astronaut Kalpana Chawla, and Mountaineer Basendri Paal. The chapter also provides activities that need the active understanding of students regarding the value of the household work done by the female members of a family.

The chapters in both the books are inclusive of the gender equality and it represents women in a dignified manner.

Findings:

The study proceeds with some specific objectives. The first one is to critically examine the selected textbooks from gender perspective. As per the objective the selected books are critically examined in view of the suggestions made by the NCF 2005 guideline to maintain gender equality. For the purpose the textbooks of language and Social Sciences are selected keeping in mind the scope of these subjects focusing gender issues. The textbooks were selected from class VI to class VII published by both NCERT and SCERT to make a comparative analysis. After the detail analysis of the contents of the referred books the study appears with the following findings:

- i. The books published after 2009 are based on the suggestions and guidelines of the NCF 2005 and RTE 2009. They are positively gender inclusive in all respects- starting from the cover page, contents, visuals and exercises. This is a significant improvement in comparison to the books prepared in the traditional ways before the NCF guidelines.
- ii. The presentation of the contents with live experiences of people illustrated through different real stories and visuals are effective in creating positive imagination and understanding in the young minds.
- iii. Women and girls are shown as role models in content, visuals and passages mentioned in the exercises. Narratives have been drawn from real life incidences of girls and women.
- iv. Women as active agents of social change are presented in most of the chapters. They are presented in empowered form.
- v. Activities and exercises designed in the textbooks promote creativity, imagination and critical thinking among children.

Scope for improvement:

- a. Following the third objective of the study, a comparative analysis was done between the NCERT and SCERT Social Science text books. The study found that the NCERT text books are more gender inclusive in comparison to the SCERT books. In NCERT publication, the class VII Social science book is divided into three sections of separate books and one entire section is devoted to the concept of Equality focusing on the gender equality in particular. The SCERT books can incorporate similar issues to make it more inclusive and effective.
- b. Language used in the textbooks is gender inclusive. Though trivial, yet an issue of misrepresentation of gender equality is found in the class VII text book of Assamese where the women are presented as the sole bearers of culture through their dresses. This may reflect biased representation of a gender that needs better presentation.
- c. Further, there are certain scopes of modification in the chapters related to Indian Nationalism. While discussing the role of the national leaders in the national movements, some reference can be positively made to the female leaders participating in it with visual aids.

Conclusion

In order to make textbooks gender sensitive it is necessary to maintain equality between the two sexes while presenting their social contributions and achievements over the ages. This will help in bridging the gap between them and make the new generation conscious about the need of gender neutral perspective for a progressive and developed society. Constructive discussion on the productive role of both men and women and lessons on the equal rights and opportunities provided by the constitution to both the sexes would lead to the dignified status of women

where their potentialities would get a platform to flourish. In the concluding remark it can be said that the books prepared according to the guidelines of NCF 2005 are gender inclusive as they give equal representation of both men and women almost in all possible areas. These books are ready to stimulate the imagination, creativity and understanding in the young minds. The presentation of men and women as equal partners in progressive social change and development makes the textbooks more gender sensitive and inclusive. SCERT can take note of the NCERT books in this regard so far as the presentation is concerned. If we compare the old books and the books designed as per the NCF guidelines then we observe a significant positive shift in the entire approach of curriculum designing and textbook preparation. This can be taken to the optimum level if the suggested scopes for improvement are taken into consideration.

Coming to the picture of Assam, it is worth mentioning that the optimum level effort and opportunities for Girls' education at Elementary level are provided during *Sarva Shiksha Abhiyan* or 'Education for All' programme which recognizes that ensuring girl's education requires changes not only in the education system but also in societal norms and attitudes. The teachers have a significant role to play in this regard. Teachers are the primary stakeholder in imparting positive attitude towards gender equality in the young minds while discussing the lessons in class. The class comprises of students from different culture, social status and family background and gender cutting across all these categories. The teacher is expected to play a crucial role in transacting the materials provided in the textbooks with sensitivity and commitment to preserve the dignity of each and every student so that it ensures the expected positive change in society through the classroom.

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(Re)Configuring Constructivism in Classrooms: Three Proposed Models of Instructional Design

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ABSTRACT:

Since the publication of the National Curriculum Framework (2005), Constructivism has become a buzz word in the scenario of school education in India. However, the broader aspects of Piaget's Cognitive Constructivism and Vygotsky's Social Constructivism have neither been practiced nor their aberrations negotiated at the level of classroom transactions. Two constructive teaching models, again thanks to the National Curriculum Framework (2005), have gained much theoretical popularity: the Interpretation Construction (ICON) Model and the 5 E Model. These models did not achieve popularity in practice in the Indian school system because of a highly skewed teacher-student ratio, infrastructural issues and the wide hiatus that remains between the idea of ideal classroom transactions and the evaluation methodologies of several State Boards across the country.

The current paper posits three pedagogical models which are based on different theoretical premises and practice based frameworks which will carry forward the spirit of constructivist classrooms in the most trying circumstances.

Key words: *constructivism, education, pedagogy, classroom*

INTRODUCTION

The present paper begins with three disclaimers: firstly, the models suggested are based on global best practices; secondly, the paper will revolve around the issue of teaching values in science classrooms; and, finally, the models wait widespread testing for validation.

Changes are inevitable for the development of society if it's leading to the progress of the society. The changes occur from individual to the different layers of community; hence transformation of the individual plays an important role in the societal change. Today's society is being challenged by a lot of complex scientific and technological issues. The need of the hour is to prepare a better tomorrow. This can be only achieved if the students are prepared with the 21st century skills will make them proper democratic citizens of tomorrow. The students who have the right mission and vision will in turn save the environment and save the world. The challenge lies in how to prepare such students through classroom transactions. What pedagogy literacy can be used in science classrooms to inculcate values and what theoretical frameworks can be used for practical teaching of imbibition of science and values to bring in the right amalgamation of science and values in the right proportions. Science education infused with values in the teaching learning process in the classroom transactions can bring about the right sensitization in the young generation who in turn will learn right social values and reach out to the community and environment better. Here the science teachers are the catalysts for bringing the transformation in the young scientific minds and prepare them to be instruments pivotal for the desired societal change.

Educating people regarding environmental problems should start at a very young stage and a formative evaluation process should be kept in mind to yield fruitful results. What students learn in classrooms should be relevant to them in the local and global contexts as well as for individuals and members of society in the present and future contexts. For reorientation and reorganization of the curriculum, as Zhou Nan Zhao suggests,

“Educational learning and sensitization should enable learners not only to be successful learning achievers in the school, but also responsible citizens, caring community members, effective workers and lifelong learners in an increasingly interdependent world.” (Retrieved from <http://www.ibe.unesco.org/cops/Competencies/PillarsLearningZhou.pdf>)

There is a need to broaden the educational goals and achieve holistic education for all to tackle the emerging global as well as local environmental issues of the 21st century. Text materials and other educational contents and activities should be designed in such a way that students are taught to develop knowledge of self and others, appreciation of diversity and awareness of similarities of human races and interdependence of humans, empathy and cooperative social behavior, capability of encountering others and ability to resolve conflicts.

OBJECTIVES

Therefore, this paper posits two prime areas of attention: using pedagogical literacy in science classrooms to inculcate values; to suggest three theoretical frameworks for classroom teaching which also includes a framework that I have experienced in my home school as well as in the Indiana University, USA, as a part of the Fulbright program which can infuse science education with values.

The three theoretical frameworks proposed, if properly implemented in the classroom, through various activities can act as a great medium and tool to bring forth the infusion of values with science education. This paper posits to use these theoretical frameworks, that works best to embed values in science education within classrooms, depending on the situation and need of the science teacher so that science education do not lose its purpose and charm. The main objective is to show that any of these frameworks can serve the main purpose and teacher will have the freedom and the option to use whichever works best for him or her students. If the

coupling works, the student fraternity can greatly benefit and can develop holistically to their fullest potential.

Classrooms and the activities undertaken can act as wonderful sites of imbibition. Sensitization of younger generation happens through these activities and projects and it combines social values with science education. Along with science, students learn patience, team spirit, empathy, develop self-esteem, work cooperatively and collaboratively with each other, and reach out to the community and environment in their vicinity. The paper boils down to an education with respect to physical nature which has an impact on human nature. In doing so, the paper will go through proposed models developed from different theoretical premises and practice-based frameworks that aligns humanity and education in classrooms that teachers may facilitate in classroom transactions for developing altruism.

METHODOLOGY

Overlapping Instructional methodologies in science education is used in class room teaching to implement the proposed models.

Overlapping Instructional methodologies in science education existing all around the world varies from project based learning, inquiry based learning, and problem based and place based learning. Science learning brings in students critical thinking, problem solving, develop curiosity and help in decision making. Certain commonalities are shared by all these methodologies: student-centricity, participatory in nature, use of multimodalities, and flexibility. But these methodologies also have their own individual characteristics. The challenge is to adopt a model that would impart effectively the above mentioned traits besides effective value system to the students.

PEDAGOGY LITERACY IN INDIAN CONTEXTS

Pedagogy literacy in terms of Indian contexts chiefly rests on two methodologies: Project based learning (PBL) and Inquiry based learning (IBL).

In the project based learning of science, the questions addressed are very much related to real life and are meaningful. As Krajcik et al. (1999) suggests, "Project based science calls for a question or problem that is meaningful and important to learners." (p.9). The source of the question can be real life contextual question from the teacher or a natural question from the student. In project based learning students, teachers and community collaborate to meet the end. This is inevitably very important as this helps in building up of the right skills and attitudes in the students.

Inquiry based learning requires the identification of assumptions, use of critical and logical thinking, and consideration of alternative explanations. (p.3). Students should become conversant with the strategies of using thinking skills, while they learn. This would include hands-on experience such as inquiry and problem based approaches "including asking questions, planning and conducting investigations, using appropriate tools and techniques to gather data, thinking critically and logically". (Llewellyn, 2013, p.3). Five essential features of inquiry include "engagement of learners in scientifically oriented questions, giving priority to evidence, formulate explanations from evidence, evaluate their experiences in the light of alternative explanations, which reflect scientific understanding and communicate and justify their proposed explanations". (Llewellyn, 2013, p.3).

Place based education is based mainly in this thought, if we want children to flourish, to become truly empowered, then let us allow them to love the Earth before we ask them to save it. As Thoreau's in *Walden* puts it, "the

more slowly trees grow at first, the sounder they are at the core, and I think the same is true of human beings..

Proposed models that align science with values in classroom transactions

1. DOUBLE HELIX MODEL

The importance of teaching values along with the concepts of environmental science is rightly suggested by Elliott (1993) as “cognitive initiative” or the capacity to initiate a course of action to improve situation; the capacity to diagnose, discern and discriminate the practically relevant dimensions of the problem situation; the capacity to share the thoughts and feelings, the points of view, of those who are involved in the situation; and the capacity to reflexively self-monitor one’s own actions and their consequences in the environment.” (p.23).

This double helix model proposed by me (2014) is a small attempt to correlate environmental education with values.

One strand will represent the environment and another represent the values, strongly intertwined and bonded with each other. Day to day classroom transaction is the interconnecting bond. Same colour of both strands emphasis their equal importance and brings together two disciplines.

The present model rests on the following five methodologies that are closely related to classroom transactions:

1. Constructivist approach leading to meaning making education, working from questions to situate discussions at different levels of proficiency, unique to each group.
2. Historical cases- common daily incidences of life
3. Classroom transactions inside and outside the classrooms
4. Practice stimulated actions in real life situations
5. Real practice infield trips after learning theory in classrooms.

The model is activity based and is flexible.

2. PROGRESSIVE MODEL FOR CLASSROOM TRANSACTIONS

Being fortunate to be a Fulbright Distinguished Teacher, I got an opportunity to attend the classes at Indiana University (IU) and visit some schools in Bloomington like Bloomington High School North. I also got an opportunity to discuss with academics of IU and library readings have shaped the end product of this project. The end product of all these resulted in an activity based pedagogical model for sensitizing young learners towards protection, conservation, and enrichment of environment. Hands-on experience that would crystalize around life-centric situations coupled with classroom activity in Environmental science classrooms together make this model effective. The scope of making learning interesting lies in this model as it relates to real life situations of students.

This model has one main driving question like PBL (Project based learning) and many open ended questions like IBL (inquiry based learning). All the seven steps of the model leading one to another makes it a really progressive transaction model for classroom transactions. The model is activity based, has multiple modalities, is flexible and can be carried across the curriculum.

WORKING OF THE MODEL

This model involves seven steps, one leading to another. The steps are as follows:

1. Reflection of knowledge

The teacher tests the previous knowledge of the students through some activity or specific questions related to the topic. Students actively engage in discussions so student talk time is more than teacher talk time. Active participation of the students itself reinforces the previous concepts and helps the teacher to locate the learning *locus standi* of the students of the particular

topic. Students are genuinely interested as they are active in answering the questions and discussions.

2. Setting up an extension that is unexplored

This step is where context is introduced. The teacher tries to create a right ambience where students come up with the right driving questions, come up with the driving question. Here also student talk time is more than teacher talk time.

3. Major questions asked by the students and refined by the teacher

Students actively involved in the discussions collaborate and cooperate with each other and come up with topics they want to work. If there is slight disagreement, teacher helps them to refine the questions. Again student talk time is more than teacher talk time.

4. Comprehensive input from readings, expert interaction/peer interaction

Teacher gives the textual material regarding the concept and students also interact with peers or experts. Teacher is the facilitator.

5. Collaborative work: finding answers, gathering data

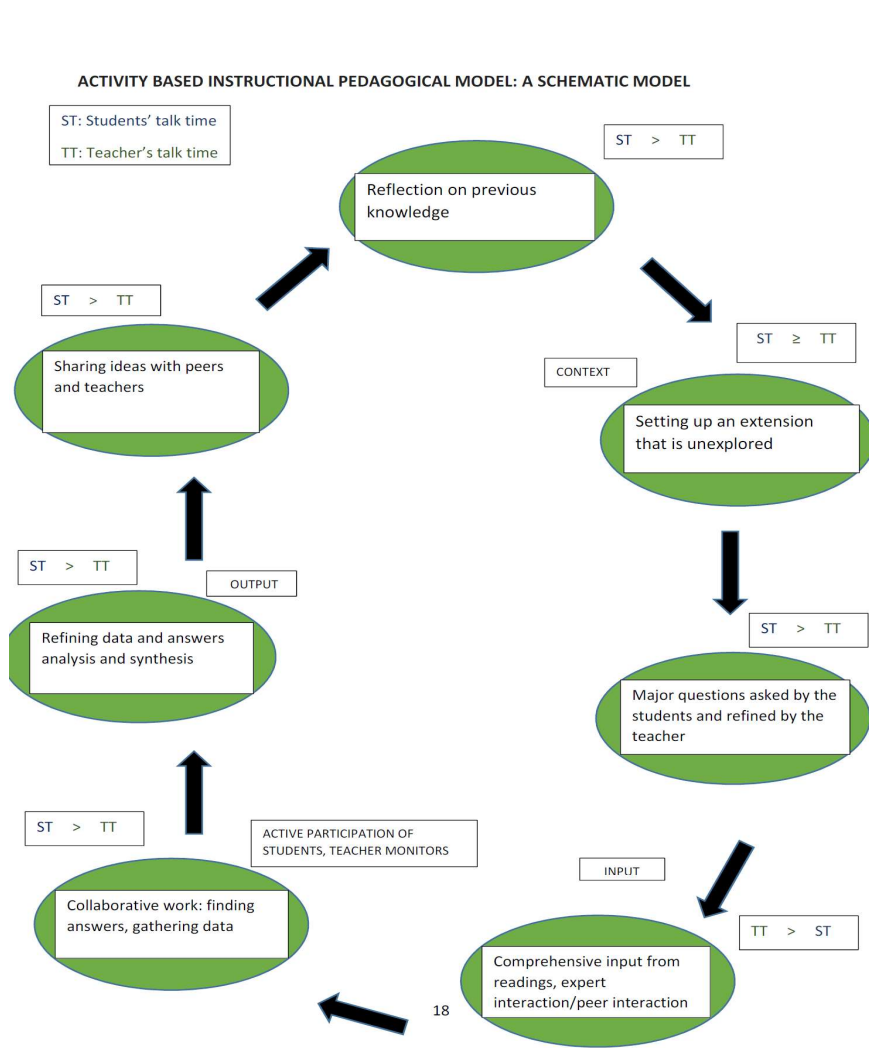
Students seek answers to the refined question and they collect data to seek answers. Here again cooperation and collaboration of students come into play. It involves critical thinking and problem solving skills. Student talk time is greater than teacher talk time.

6. Refining data: Analysis and synthesis

Unless data is not correctly interpreted the output will fail. All the global competencies are involved in this step. This step crystallizes the data collected by the students in the previous step. Scientific communication is at maximum and conclusions are derived. Students are completely involved in this step and feel the ownership. Teacher merely acts as a guide.

7. Sharing with peers and teachers.

For completion of any step it should cascade down to the peer group. Feed backs and reflections help to concretize whatever learnt properly as well as leads to the next driving question. Here again, student involvement is more than teacher involvement.



3. PRISMATIC MODEL AND CLASSROOM PEDAGOGY:

Here is the prismatic model proposed by yours truly (2015) which integrates science education with value inculcation in the classroom transactions. As the frame work puts forth

“the seven corners of the prism represent the seven values which learners acquire in the path of their scientific inquiry and seeking answers to the questions. These values are sympathy, empathy, ability to take calculated risks, perseverance, problem solving and decision making skills, responsibility and we spirit.”

METHODOLOGY

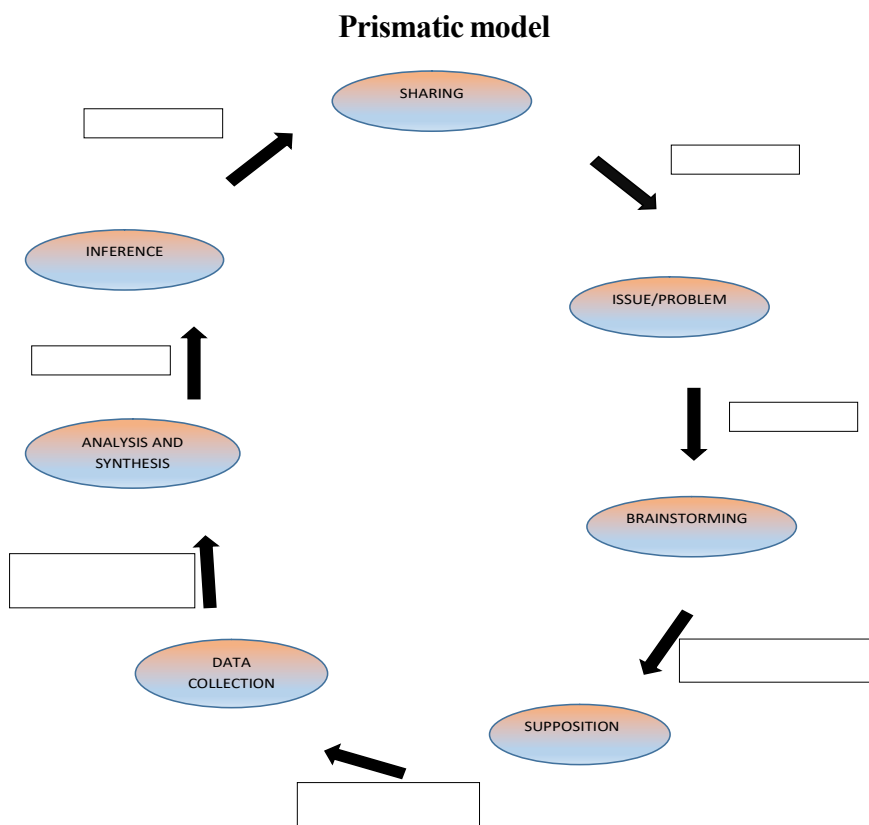
The different steps involved in the model are as follows:

1. **Addressing an issue or problem:** Scientifically driven questions are addressed in this step. Teacher being a facilitator creates an environment where the students out of curiosity and enthusiasm come up with the inquiry question or teacher can pose the questions herself/himself.
2. **Brainstorming:** In this step, brainstorming occurs among learners and they discuss various aspects of the issue cooperatively and collaboratively. Here empathy is reflected. They learn to listen and respect others views as well as their own.
3. **Supposition:** In this step, the hypothetical question is crystallized. Here the ability of learners to take calculated risks is developed. It definitely shows the progress the human being. Teacher helps to refine questions.
4. **Data collection:** The students cooperatively and collaboratively identify the sources of data collection and persevere to achieve the most valid data tapping all the resources. Perseverance and firm belief in the purpose drives them and teacher acts as guide and facilitator here.
5. **Analysis and synthesis:** Data that is collected are analyzed and synthesized to come up with the right output stage and hence is the most important step. If this comprehensive step is not executed properly, the

output fails. The 21st century skills of problem solving and decision making skills are exhibited here by the students.

6. Inference: After analysis and synthesis, learners infer the right conclusions of the issue / problem they were working. Since they are completely involved, they claim ownership in the knowledge acquired in the process. This brings about the responsibility in them towards solving the issue/ problem as they feel involved in the process.

7. Sharing: No knowledge is complete without sharing with their peers/ teachers and this helps to get the right feedback which allows them to think more critically. The sharing brings we spirit in them and makes them bond better as a team



CONCLUSION

All these theoretical frame works that rests on PBL and IBL methodologies is intended to build in student's consciousness towards environmental concerns, empathy towards societal problems and make them participate actively in ameliorating them, as rightly echoed in Environmental Education Series 3 UNESCO-UNEP International Environmental Education Programme(1985), "Environmental education should not be confined to provide the learners knowledge but should develop environmental attitudes and skills which reflect the awareness of the surrounding environment and acceptance of the responsibility of actions to resolve environmental issues and concerns."(p.2)

I strongly believe that transformation begins with the individual and filtrates to the society. To bring this transformation it's inevitable to infuse science and values and have right amalgamation of both. I leave it to the science teachers to use whatever theoretical framework they want to adopt in the classroom transaction which they believe will bring about the best transformation in each and every one they teach in a science class room.

All these frameworks are humble attempts to align science and values in classroom transactions and I strongly hope it would go a long way in teaching values and science in proper amalgamation in classroom transactions.

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WOMEN EDUCATION AND SOCIO-ECONOMIC STATUS OF THE BODO WOMEN: A STUDY IN TIOKHABI AND JALAH GAON OF CHARAIDEO DISTRICT OF ASSAM

Tulumoni Chetia

Anjali Saikia

ABSTRACT:

The Bodo Community of Assam is one of the ethnic groups of North-East India with its distinct identity and its socio- economic status. The socio-economic life of a society is equally controlled by women, as by men, with their active participation in various socio- economic activities. In this paper, attempt has been made to highlight the present educational and socio-economic status of the women of the Bodo community of Tiokhabi and Jalah Gaon of Charaideo district of Assam. This paper also tries to study the problems of women education and the role of the Bodo women in the upliftment of their socio- economic status in society.

Keywords : Bodo Community, Women, Education, Socio-Economic status

INTRODUCTION: The Bodo community is one of the significant aboriginal tribes of Assam. Historians and Anthropologists determine that they are originated from Mongoloid racial group and from the stand point of linguistic, the Bodos are basically Tibeto-Burmese group. They are the single largest minority tribal group of Assam and as aboriginal inhabitant of Assam. They settled in the plains of Assam since 2nd millennium B.C. Now the Bodos are mainly found in the four districts of Assam viz Kokrajhar, Chirang, Baksa and Udalguri under the Bodoland Territorial Council Area

(BTCA). A large number of Bodos are also scattered in the districts of Barpeta, Nalbari, Darrang, Goalpara, Kamrup, Sibsagar and Charaideo in Assam.

Charaideo is one of the prominent districts of Assam and famous as the first capital of Ahom Kingdom. It has been the meeting ground of diverse ethnic groups since time immemorial. A huge number of Bodo populations are concentrated in Charaideo district. More than 6000 Bodos have been living with their distinct identity in Charaideo district (undivided Sibvagar district) since 19th century in British period. They migrated from the lower Assam in searching for new site for their settlement. In this district, the Bodo dominated villages are namely Tiokhabi, Dolakharia, Dolakhariahabi, Longpotiahabi, Betijan, Jalah, Sarupathar, Barahi, Garia Chiga, Dabolohabi, Singarijan, Aideubari Habi and Aideubari Bagicha Grant. Every village consists of 40 to 80 Bodo households. The living patterns and cultural activities of this tribe of Charaideo district has resemblance with the Bodos in other parts of the state. Though they have assimilated with their neighboring communities without losing their own ethnic identity, yet they have been suffering from some serious educational and socio- economic problems which are standing as hindrances on the way of development.

The Bodo women are the integral part of their society. It is seen that women are nearly the half of the total population size of a society. So their participation in socio- economic developmental activities is very important. Generally the women of Bodo community are very active in household activities as well as economic activities. But it is unfortunate that the modes of operation of economic activities are primitive in nature. Various traditions, customs, superstitions have been prevailing in their society and there women are still shackled under such social evils. The main reason for such social evils is the absence of literacy. Because female literacy plays a vital role for any kind of national development. So education is very important for everyone, especially for women. Education can make them aware of their rights and duties, understand the basic concepts of health, nutrition, family planning etc. But it is seen that there is a lack of broad and special

study about their problems which are causing the main obstacles on the socio- economic development of the Bodo community of Charaideo district, Assam. So it is very urgent to conduct a comprehensive study about the educational and socio- economic status of the Bodo women and the problems of women education of this community.

Objectives of the study: The major objectives of the study are :-

1. To study the socio-economic status of the Bodo women in Tiokhabi and Jalah Gaon, Charaideo district of Assam.
2. To study the educational status of the Bodo women in the study area and
3. To identify the problems of women education in the study area.

Area of the study: The investigators have selected two villages for the present study. The selected villages are—

Tiokhabi Gaon: Tiokhabi Gaon is situated 10 km. away from Sonari town of Charaideo district. It comes under Begenabari Panchayat. There are about 340 families in the village and the total population is 1520. Among them, 695 are Bodo community people out of which 355 are male and 340 are female.

Jalah Gaon: The village is located in Sonari sub-division of Charaideo district of Assam. It is situated 13 km. away from Sonari town. It comes under Sarupathar Panchayat. There are 296 houldholds in this village and the total population is almost 1389. Out of 1389, the population of Bodo community is 657, out of which 342 are male and 315 are female.

Methodology:

Method: To complete the present study, the descriptive survey method is used .

Sources of data: Both primary and secondary sources are used to collect data for the study. The primary data has been collected with the help of interview schedule and the secondary data has been collected from books and internet sources. Observation and discussions have been held with the knowledgeable persons of the study area.

Sample: To make the present study more effective ‘simple random sampling’ technique has been adopted for the selection of sample. In order to carry on the present study, 55 women are randomly selected from each village.

Analysis and interpretation:

Social structure: The social structure of the Bodo society is primarily patriarchal in nature and the father is the sole guardian of the family who takes all the general responsibilities of the family. When the entire property is distributed among the sons, a portion of the property is also given to the wife. In the absence of male child in a family, the entire property is also distributed among the daughters and they can enjoy such property even after their marriage. The mother also bears all responsibilities of her family and guide her children after the death of her husband if the son is minor.

Family structure: A Bodo family consists of father, mother, their sons and daughters and their grand children. It is seen that joint family is very rare in the study area. Generally married sons are separated from their parents after marriage. The unmarried daughters remain under the control of their parents till their marriage. However, the main responsibility of the entire family lies on the parents, who are the sole guardian of a family. After the death of the father the eldest son of the family bears the

responsibilities of the entire family and he is to be guided by his mother in some important affairs.

Health status: Generally good health is very essential for economic growth of the society. From the survey, it is known that the Bodo women are genetically healthy and hardworking. But after a thorough study on the health status of the Bodo women, it has been noticed that the women have to face a lot of health problems, they suffer from anemia, malnutrition and some other infectious diseases and it is because of insufficient medical facility in the area surveyed. Not only medical facilities but early marriage has also effected on women's health.

Participation in social institutions: Now-a-days women empowerment is considered as an immense effective stratagem for all round development of a society. Therefore, the Government of Assam has attempted to involve and encourage the rural women in decision making process through participation in Panchayatiraj. In the study area, we have observed the encouraging participation of women in Panchayatiraj system. The formation of SHGs by Bodo women is also a strategy of socio-economic development which helps them to participate in economic activities and increase their self-confidence. It also helps them to increase their personal income as well as their family income. A district level committee of women union known as All Bodo Women Religious Union (ABWRU) is also found in the study area.

Life style of Bodo women: At the time of field survey, we found that the Bodo women are genetically energetic and hardworking. They mainly engage in household activities like rearing of their children, cooking, weaving etc. Main role is played by women during the time of cultivation. The Bodo women are also interested in kitchen gardening. Animal husbandry also plays an important role in their economy. They rear various live stock like cow, buffalo, goat, pig etc. They are also playing an important role in celebrating all seasonal and religious festivals. Thus all the women of the Bodo community take more responsibilities to look after their family and

society by doing all types of religious, social and economic activities with their counterpart.

Occupational status: Occupation gives financial support, self-dependence and self-confidence to every individual. The following table shows the occupational patterns of the female members of the sample.

Table No. 1

Nature of occupation

Occupation	Govt. service	Private service	Agriculture	Business	Others	Total
Nos. of women	1	3	8	6	7	55
Percentage(%) of the total	1.82	5.45	69.09	10.91	12.73	100

It is revealed from the above table that the majority of the respondents (69.09%) are depending on agriculture for their livelihood. In service sector only 1.82% of the women have occupied in government service and 5.45% have occupied in private service respectively. 10.91% of the women are engaged in various business and the remaining 12.73% are engaged in poultry, weaving, piggery, goat farming etc.

Educational status: Education is the key factor of over all development of human society. The level of women education is an important indicator for understanding the present and future status of women in a society. Education is very much helpful to gather knowledge, information for social transformation and establishment of gender justice. It also reduces the gender inequality in the society by providing employment opportunity, information and confidence about the entering to any field of profession. After all, education helps the women to improve their internal spirit and hidden caliber and also gives chances of employment facilities for participation in public life.

It is a well known fact that the development of a society depends on both men and women. But in Assam, it has been observed that the women are lagged behind in education and the literacy rate of women is 66.27 percent which is less than the male literacy rate 77.85 percent as per census report of 2011.

Table No. 2

Educational status of women

Education	Tiokhabi Gaon						Total
	Below class x	HSLC	HS	Graduate	Post graduate	Illiterate	
Nos. of women	14	7	6	2	1	25	55
Percentage(%) of the total	25.45%	12.73%	10.91%	3.64%	1.82%	45.45%	100%

Table No.-3

Education	Jalah Gaon						Total
	Below class x	HSLC	HS	Graduate	Post graduate	Illiterate	
Nos. of women	13	6	5	1	0	30	55
Percentage(%) of the total	23.64%	10.91%	9.09%	1.82%	0%	54.54%	100%

It is clearly shown from table No.2 that the level of educational attainment of the women of the study area is not satisfactory. In Tiokhabi village, out of 55 respondents, 45.45% of women have been found illiterate, while most of the literate women have been found below class-X (25.45%). It is observed that only 12.73% of women have passed HSLC and only 10.91% have been found HS passed. Graduate and Post Graduate percentages

are very low .Only 3.64 percent respondents have been found to be graduate and 1.82 percent respondents have been found to be post graduate.

Similarly in Jalah Gaon, literacy percentage is very low. Out of 55 respondents, only 45.45 percent women have been found literate. 23.64% of the women have been found below class-X. It is also found that only 10.91 of the women have passed HSLC and 9.09% have passed HSSLC. Graduate percentage of the study area have been found only 1.82%. There is not any post graduate woman in this village.

Various Problems of Women Education:

It is observed that the development of women education in the study area is comparatively low. In our study some problems have been found in expansion of women education which can be summarized below:-

1. Problem of communication: Generally it has been found that the transport and communication system is very poor in the study area. Due to the lack of good communication facilities, various innovation of education have not been able to reach this area.

2. Poor economic condition of parents:-The economic condition of the families in the study area is not well grounded. Due to poor economic background parents cannot provide all the necessary things to their children in time.

3. Lack of awareness: Lack of awareness is the main problem for pursuing the girl child education. It is also noticed that some parents did not show much interest in sending their girl child in distance places for study purpose. Most of the parents are also conservative with girls' education.

4. Early marriage: Early marriage and discrimination between a girl and a boy are two of the most important problems of the women education in the study area. Even though having their potentialities they have to sacrifice themselves for their families.

Findings

1. Most of the families in the study area depend on agriculture. And as such the women of the villages are equal partners in economic activities in every household. Due to the lack of proper education the women are not able to maintain their position in the society.
2. At the time of field survey we found that the villagers belong to the rural background and they face some incurable problems like poverty, transportation, livelihood, early marriage, disparity among boys and girls etc.
3. In the field survey, it has been noticed that the villagers are deprived of affordable and comfortable transportation facilities. As the parents are not economically sound, they cannot spend required amount of money for their child to access professional or higher education. Today it is quite challenging for them.
4. In some of the cases, it has been found that due to low percentage achieved in HSLC and HSSLC examinations, they are unable to get admission in the college or Higher Secondary Schools. Again in some cases it has been revealed that students get admission in the colleges or Higher Secondary schools, but due to repeated failure in the examinations, they were dropped out from colleges or H.S. schools and finally it leads to discontinuation of their higher education.
5. In the study area it was found that the conservative and uneducated parents have low educational expectations for their girl child. They believe that their daughters don't require any education to play their role in society. So due to the parents apathy and indifference to the education of girls, the

percentage of female literacy in higher education has always been low in the study area.

6. The custom of early marriage which is prevalent even today in the study area is yet another effective bar to women education. The early marriage of girls almost completely blocks their way to higher education.

Suggestions

1. The mentality of the people of the villages should be changed. They must change their approach towards a girl child in every aspect. A girl child should be given equal opportunities as that of a boy, especially in case of education.

2. There is a need to change the mindset of the society that only the women of a family should perform the domestic work. They have to try to improve the environment of society which can encourage the girl child to go for higher education.

3. Government should formulate and implement different policies for stopping drop out of girl students in secondary and lower classes. On the other hand, good interpersonal relationship between teachers and students can help in reducing the dropout rate.

4. The trend of early marriage which leads to withdrawal of women from higher studies should be stopped

5. Special scholarships, governmental aids, financial assistance and governmental policies especially for girls should be provided which will encourage them for higher education.

6. Government should take some initiatives to provide employment opportunities in secondary sectors as per their qualification. It will help to improve their economic condition which will encourage others as well.

Conclusion:

In the conclusion it is found that the educational and socio- economic status of the Bodo women of the study area is not so satisfactory. It is also observed that due to much simplicity, openheartedness, frankness and due to lack of education the Bodo women become easily victims of the anti-social elements of some high caste societies. Hence it is a humble suggestion to the women of Bodo community in particular and all the members of the civilized human society to give importance in educating their daughters and sisters and make them conscious. It is seen that only a few women in the study area are engaged in government job but the percentage of such women is very less. Therefore the women of the Bodo community should take up various occupational measures to improve their economic status. We know that education is the sharpest weapon of all to protect themselves from the social evils of the society and only the educated women can maintain their position in the civilized human society as always high. Therefore, the government should lay stress on improving the educational and socio- economic status of Bodo women in Assam.

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Mental Health in relation to Stress of High School Students of Guwahati city of Kamrup Metropolitan District: A Study

Dr. Utpal Kalita

Abstract:

Main objectives of this study are to examine the stress of high school students and to study the influence of mental health of the students on stress. The present investigation falls under descriptive survey method. The population of this study consists of all the students studying in Secondary Schools of Guwahati city of Kamrup Metropolitan District, Assam. The sample of the present study consist of 120 students (per school 20 students) and they were selected from six (06) secondary schools of Guwahati city by applying stratified random sampling technique. In the present study, Mental Health Inventory (Jagadish and Srivastava) and Stress Scale (Dr. (Mrs.) Vijaya Lakshmi and Dr. Shruti Narain) were used to collect the necessary data. Major findings of this study are: (i) Most of the high school boys and girls have very poor level mental health; (ii) Students having very poor and poor mental health resulted in high stress and very good and good mental health resulted in low stress; and (iii) There exists significant relationship between mental health and stress of High School students.

Key Terms: Mental Health, Stress, High School Students, Gender

Introduction:

The main goal of education is not only to prepare students for academic excellence, but also enable the future generations of a country to learn the different challenges of living as a whole (learning about themselves, about healthy relationships, about social responsibility, compassion, etc). Adolescence is a challenging transitional period for many young people. Adolescents go through different changes in physical, cognitive, emotional and social aspects of their lives. During these developmental changes, adolescents believe that they are unable to communicate what they want with their parents, other family members, teachers and adults and often find themselves in the middle of conflicts and arguments. These situations lead to unnecessary stress, anger issues and low self esteem resulting in low academic performances, and disruptive behaviour in school and at home. Stress is an important determining factor among others that influences both physical and mental health of all individual.

There are different determining factors through which stress of students will be reduced. Mental health is one of them. As mental health play prime role in the life of an individual, one is expected to have very good mental health in order to lead an healthy life. Mental health has been reported as an important factor influencing an individual's various behaviours, activities, happiness and performance. Sound mental condition can help the students to take various responsibilities, understand the complications, try to solve them, plan for future and adjustment with others by becoming mentally strong. In order to survive in a fast changing and competitive world, the students need to develop and nurture mental health for better survival.

Conceptual Background:

a) Mental Health: Mental health is a psychological phenomenon and a condition of psychological maturity. It is a condition of personal and social functioning with a maximum effectiveness and satisfaction. Mental health involves positive feelings and attitudes towards self and towards others. The World Health Organization, 2001 defines mental health as “a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community”. Some of the behaviour of mentally healthy person is the sense of responsibility and being sensitive to the needs of others and making attempts to satisfy those needs for the welfare of others. The chief characteristic of mental health is adjustment. The greater the degree of successful adjustment the greater will be the mental health of the individual. Mental health is related to both social life and personal life. It aims at developing growth of both intellectual and emotional potentialities of an individual in an innate and complex culture.

b) Stress: Stress is the way of human beings reaction to both physically and mental changing events, and situations in their lives. Stress is defined as a response to a demand that is placed upon an individual. Stress is a normal reaction when brain recognizes a threat. When the threat is perceived, body releases hormones that activate “fight or flight” response. This fight or flight response is not limited to perceiving a threat, but in less severe cases, is triggered when we encounter unexpected events. Psychologist Richard S. Lazarus best described stress as “a condition or feeling that a person experiences when they perceive that the demands exceed the personal and social resources the individual is able to mobilize.” For most people, stress is a negative experience.

Literature Review:

Gupta (2002) conducted a study on mental health of adolescents in relation to self-concept. She concluded that there is a significant difference between mental health of male and female adolescents and between mental health of Government and Private School adolescents.

Reddy & Reddy (2004) indicated that the children have experienced more stress in physical and educational fronts and have less stress in the area of psychological and social fronts.

Kaur (2014) conducted a study to see the impact of mental health among school going adolescents. The findings of this study reveal that the significant differences exist in mental health of adolescents with regard to the level of academic stress they experience.

Justification of the Study:

Complexity of the universe is increasing day-by-day and the young students today are living in this increasingly stress-ridden atmosphere. Stresses among young ones are very common and natural. It may be because of their self, career, academics or any other issues. Almost all the young students undergo feelings of anxiety at some phases of lives. They live in a world where nothing seems to be guaranteed with certainty and at the same time they are expected to perform at every front, the main being the academics. This is the generation where everybody lives, breathes, eats and sleeps with competition. The all-pervasive competitive atmosphere, be it social or academic, encourages adolescents to constantly compare

themselves with their peers. Stress is partly created by parental pressure too when they expect the adolescents to perform and stand out among their groups. When they can't rise up to their expectations or are in a process of meeting it, adolescents suffer from frustration, physical stress, aggression, undesirable complexes, anxiety and depression.

The adolescence is a period of stress and strain; lots of changes start in an individual's life when he enters in adolescence period i.e. physical changes, emotional changes, social changes and so on. So, it is quite common that during this stage students behave in a different way. Researchers have opined that people who manage their own feelings well and deal effectively with others, are more likely to live peaceful lives. The greater degree of stress free life is significantly correlated with sound mental health of the individual. In reverse of this, poor mental health will lead to stress and greater conflict. This research helps to identify those students who have poor mental health and because of their poor mental health, they become maladjusted, under-stressed and low achievers in the school environment. Through the present study, the investigator tries to find out the relationship between mental health and stress of high school students of Guwahati city.

Statement of the Problem:

The research problem undertaken is entitled as "Mental Health in relation to Stress of High School Students of Guwahati city of Kamrup Metropolitan District: A Study".

Operational Definition of Key Terms:

- 1) **Mental Health:** Mental health refers to adjustment of one individual to oneself with a view of attaining maximum effectiveness,

satisfaction and cheerfulness. In this present study, the term refers to the status of students in different areas of mental health such as positive self-evaluation, perception of reality, integration of personality, autonomy, group oriented attitudes and environmental mastery.

- 2) **Stress:** Stress refers to pressure, strain or a sense of inner turmoil resulting from our perception and reaction to events or conditions. In the study, stress has been conceptualized as four dimensions of stress namely pressure, physical stress, anxiety and frustration.
- 3) **High School Students:** In this study, high school students mean the students who are studying in Provincialised high schools of Guwahati city of Kamrup Metropolitan District, Assam.
- 4) **Gender:** The term gender refers to boys and girls students of Provincialised high schools of Guwahati city of Kamrup Metropolitan District, Assam.

Objectives of the Study:

Main objectives of this study are:

- 1) To study the level of mental health of high school students.
- 2) To examine the gender difference of mental health of high school students.
- 3) To examine the level of stress of high school students.

- 4) To study the difference of stress of the high school students in regard to gender.
- 5) To measure the level of stress of different mental health groups of students.
- 6) To study the relationship between mental health and stress of the high school students.

Hypotheses of the Study:

- H₁: There exists no significant difference in the mean scores of mental health of high school boys and girls.
- H₂: There exists no significant difference in the mean scores of stress of the high school boys and girls.
- H₃: There exists no significant relationship between mental health and stress of high school students.

Methodology:

· **Method Used:** The present study was designed to study the mental health of high school students in relation to stress. On view of the approach followed, the present investigation falls in the domain of descriptive survey. It was done through survey method because it involved survey or visits to various institutions for the collection of data with the objective of analysing, comparing and interpreting the existing status.

· **Population and Sample:** The population of this study consists of all the students studying in High Schools of Guwahati city of Kamrup Metropolitan District, Assam. The sample of the present study was selected

from six (06) high schools of Guwahati city by applying stratified random sampling technique. From these high schools, 120 students (per school 20 students) have been selected as sample on the basis of equal allocation i.e., 60 Boys and 60 Girls.

· **Research Tools Used:** In the present study standardized tools have been used. Standardization is referred to proper item selection and high reliability, validity and usability. In the present study, following standardized tools were used:-

- a) **Mental Health Inventory:** This scale was developed and standardised by Jagadish and Srivastava (1983). This is used for measuring the mental health status of the students. The scale assess the mental health in six dimensions (1) positive self-evaluation, (2) perception of reality, (3) integration of personality, (4) autonomy, (5) group oriented attitudes, (6) environmental mastery. The scale consists of 54 statements with 4 alternative responses for each statement as always, most of times, sometimes and never. Scoring of the scale is ranging from 1 to 4. For true - keyed statements the scoring of 1, 2, 3 and 4 was given to never, sometimes, most of times, always and reverse for false – keyed statements. Total score and score in each dimension is calculated and categorised as very good, good, average, poor and very poor. High score indicates better mental health. The norms are different for each gender. The overall reliability of this scale is measured by split-half method and it is found to be 0.73.
- b) **Stress Scale:** The scale used for this study was constructed and standardized by Dr. (Mrs.) Vijaya Lakshmi and Dr. Shruti Narain. This scale comprises of 40 questions covering the range of four dimensions of stress namely pressure, physical stress, anxiety and frustration. For this scale, test-retest reliability was employed and

was found to be 0.82 which was significant. This inventory has found to possess high content validity.

· **Statistical Support:** The data were mainly analyzed in terms of Percentage analysis, Mean, t-test and Pearson Correlation.

Analysis and Interpretation:

The resulting data are analysed by using appropriate statistical treatment. The results have been explained below:

Table 1: Distribution of High School Students in terms of Level of Mental Health

Level of Mental Health	Boys (60)			Girls (60)		
	Range of Score	N	%	Range of Score	N	%
Very Good	195.89 & above	5	8.33	196.02 & above	3	5
Good	176.45 – 195.89	15	25	175.14 – 196.02	15	25
Average	157.01 – 176.45	10	16.67	154.26 – 175.14	7	11.67
Poor	137.57 – 157.01	5	8.33	133.38 – 154.26	6	10
Very Poor	below 137.57	25	41.67	below 133.38	29	48.33

Table-1 reveals that 8.33% boys and 5% girls have very good mental health, 25% boys and girls have good mental health, 16.67% boys and 11.67% girls have average mental health, 8.33% boys and 10% girls have poor mental health and 41.67% boys and 48.33% girls have very poor mental health

Table 2: Comparison of Mental Health of High School Boys and Girls

Gender	N	Mean	S.D.	t-value	Remarks
Boys	60	143.5	44.19	0.94	Not Significant
Girls	60	135.85	44.28		

It is evident from the table that the Mean and Standard Deviation of mental health of Boys are 143.5 and 44.19 respectively. Similarly the same for girls are 135.85 and 44.28 respectively. The obtained t-value 0.94 is less than the table value 1.96 at 0.05 level of significance. It indicates no significant difference in the mean scores of mental health of high school boys and girls. Here, null hypothesis is accepted.

Table 3: Distribution of High School Students in terms of Level of Stress

Level of Stress	Boys (60)			Girls (60)		
	Range of Score	N	%	Range of Score	N	%
High Stress	22 and above	17	28.33	25 and above	19	31.67
Moderate Stress	12-21	26	43.33	14-24	21	35
Low Stress	0-11	17	28.33	0-13	20	33.33

Table-3 reveals that 28.33% boys and 31.67% girls have high stress; 43.33% boys and 35% girls have moderate stress and 28.33% boys and 33.33% girls have low stress.

Table 4: Comparison of Stress of High School Boys and Girls

Gender	N	Mean	S.D.	t-value	Remarks
Boys	60	18.21	8.353	0.73	Not Significant
Girls	60	19.37	8.766		

It is evident from the table no. 4 that the Mean and Standard Deviation of stress of Boys are 18.21 and 8.353 respectively. Similarly the same for girls are 19.37 and 8.766 respectively. The obtained t-value 0.73 is less than the table value 1.96 at 0.05 level of significance. It indicates no significant difference in the mean scores of stress of the high school boys and girls. Here, null hypothesis is accepted.

Table 5: Number and Mean of Stress Score of Different Level of Mental Health groups of High School Boys and Girls

Level of Mental Health	Stress of Boys		Level of Mental Health	Stress of Girls	
	N	Mean		N	Mean
Very Good	5	6.23	Very Good	3	4.21
Good	15	13.92	Good	15	15.04
Average	10	18.27	Average	7	20.5
Poor	5	23.02	Poor	6	25.42
Very Poor	25	29.61	Very Poor	29	31.68

From the table 5, it is seen that there are variation among the different mental health groups of high school students regarding level of stress. Very good mental health group of boys and girls possesses low mean stress score (6.23 and 4.21 respectively). In the same way, highest mean stress score (29.61 and 31.68) are measured by very poor mental health group of boys and girls respectively. Likewise, good mental health group of boys and girls possesses mean stress score (13.92 and 15.04 respectively), the average mental health group of boys and girls possess mean score on stress (18.27 and 20.50 respectively) and poor mental health group of boys and girls possess mean score on stress (23.02 and 25.42 respectively).

Table 6: Co-efficient of Correlation between Mental Health and Stress of High School Students

Sr. No.	Variables	N	r-value	Remarks
1	Total Mental health and Stress	120	0.8	Significant
2	Boys	60	0.81	Significant
3	Girls	60	0.79	Significant

From the table 6, it is observed the obtained r-value 0.80 of mental health with stress of the high school students is significant at 0.01 level of significance that implying the rejection of null hypothesis of no significant relation between mental health and stress of high school students. Again in case of boys, the r-value of stress and mental health is 0.81 that is found to be significant at .01 level of significance. Similarly, the r-value of stress and mental health of girls is 0.79 found to be significant at .01 level of significance.

Findings and Discussion:

1. Most of the high school boys and girls have very poor level mental health.

Apart from that 25% boys and girls have good mental health. The reason for very poor mental health may be socio-economic condition of the family, overloaded of curriculum etc.

2. There exists no significant difference in the mean scores of mental health of High School boys and girls.

This finding of objective no. 2 is in agreement with the findings of Gove (1978), Srivastava et al. (1987), Taak (1999) and differed with the findings of Manjuvani (1995), Gupta (2002).

3. Most of the High School boys and girls have moderate level of stress.

This may be due to different social, psychological and personal problems faced by adolescents.

4. There exists no significant difference in the mean scores of stress of the High School boys and girls.

5. Students having very poor and poor mental health resulted in high stress and very good and good mental health resulted in low stress.

This finding of present study proves that mental health is a very influencing factor of stress of the high school students.

6. There exists significant relation between mental health and stress of High School students.

It is also revealed from the study that there is a significant relationship between mental health and stress in case of boys and also in case of girls which shows that mental health influences the stress among high school students.

Recommendations:

On the basis of the findings of the study, relevant literature studied and observations made by the researcher during the study, a few recommendations are offered which may help in developing mental health and reduce stress of high school students.

- 1) The findings showed that almost 42% boys and 48% girls had very poor level of mental health. So, it becomes essential on part

of the school authority to take care of this aspect of the students. Measures have to be taken to minimize the stress caused to the students by various educational and social factors. Introduction of courses like yoga, fine arts along with the curriculum will increase the levels of mental health among the students which intern will help them to perform well in all aspects of life.

- 2) Girls showed bad mental health when compared to boys. The competition they face and the pressure from the parents could be the reasons for bad mental health among them. Educational institutions and parents should understand that the mental health of these students can increase, when they grow and attain education in a stress free environment.
- 3) Knowledge about mental health and stress should be promoted among parents of the students and strategies to be taught to help to improve the resilience and coping strategies of their children.
- 4) Stress is necessary to challenge students to learn. Approaches are needed that reduce the negative aspects of stress (distress) which lessen students' learning and performance. The key to reducing distress is providing students with a feeling of control over their education, information about what to expect, and feedback regarding what can be done to improve their performance.
- 5) Parents should not overburdened the children and should not set over expectations in terms of excellence in academic pursuits beyond the capability and capacity of the children.

Conclusion:

It is concluded by saying that mental health is a best predictor that reduces the negative aspects of stress. If stress is managed properly than one can live a happy life with peace and harmony. Stress management and coping with mental health are two important core life skills as laid down by

WHO. For successful implementation of holistic education, adolescents must be managing their stress and developing their mental health. In this regard, Swami Vivekananda has given a very nice quotation i.e. ***“It is the heart which takes one to the highest place where intellect can never reach”***.

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