

PRIMARY AND SECONDARY EDUCATION IN BTR: CHALLENGES AND PROSPECTS

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ABSTRACT

The present study is a comparison of the academic performance of two separate groups of students from the Bodoland Territorial Region (BTR), which is located in the state of Assam in India. The courses being compared include biology, physics, chemistry, and mathematics. There are three main types of dichotomous groupings that are formed, and these are boys versus girls, rural versus urban, and tribal versus non-tribal. The Mahalanobis Distance is a method for determining the degree to which two distinct groups of students differ in the dynamical character of their achievements across four topics. There is not a discernible gap discovered between any of the aforementioned groups with regard to the dynamical nature of their achievements. The current study compares two groups of postgraduate students with regard to their levels of self-efficacy, depression, anxiety, and stress. The work focuses on the application of the Mahalanobis Distance in order to evaluate the differences in these dependent variables. It is not taken into consideration whether or not there is a difference between the groups of pupils when all of the dependent variables are viewed at once. The Mahalanobis Distance is a valuable tool for determining the dynamical nature of a set of variables, and it may be found here. In the course of conducting this research, the participants were divided into three distinct dichotomous categories. The Mahalanobis Distance is used to make a comparison between the dynamical nature of five dependent variables that are believed to be a branch. These variables are general self-efficacy, particular self-efficacy, depression, anxiety, and stress. It has been discovered that the dynamical character of the five dependent variables does not alter significantly depending on the group of independent variables they are associated with.

keywords: Achievement, Science subjects, BTR, Assam, Mahalanobis Distance and Higher Secondary

INTRODUCTION

1. Primary and Secondary Education in BTR

The Bodoland Territorial Council is an autonomous council constituted in 2003 under 6th schedule of the Indian Constitution. The educational development in BTR, particularly in primary and secondary stage, is beyond remarkable. In education sector there is need improvement in terms of infrastructures, teaching technology and academic achievement.

Primary education is the foundation for the development of language and numeracy skills which are the basic needs of the children. It will simplify and mainstream child's education and development and help shaping child's future.

Secondary education stage is personality shaping, life building, career beginning important segment in every student's life. It prepares student for working for life by providing the knowledge, skills and experience needed to enter the profession.

As per NEP 2020 primary education will comprise of 5+3+3+4 curricular structure. Children will spend 5 years in the foundational stage, 3 years in the preparatory stage, 3 years in the middle stage and 4 years in the secondary stage.

Age wise breakdown of the different levels of the new school education system.

1. 5 years of foundational stage

Age group: 3 to 8 years

Class: (1 and 2)

3 years Anganwadi or pre-school

2 years Primary Class (1 and 2)

Language skills development will be the priority in this stage through play-based or activity-based methods.

2. 3 Years of preparatory stage

Age group: 8 to 11 years

Class: (3 to 5)

Language and numeracy skills development will be stressed through play, activity based and classroom interactions.

3. 3 Years of middle stage

Age group: 11 to 14 years

Class: 6 to 8

It will focus on critical learning which is a big shift from rote learning methods. It will work on experiential learning in the sciences, mathematics, arts, social sciences and humanities. Here educators purposefully engage with students in direct experience and focused reflection in order to increase knowledge, develop skills and clarify values.

4. 4 years of secondary stage

Age: 14 to 18 years

Class: 9 to 12

2. Critical thinking and flexibility in the thought process will be encouraged

This stage will be the multidisciplinary system and students will have the choice to choose any subjects from Arts, Science and Commerce streams as per their skills and interest instead of strictly confined to a single stream i.e., either Arts or Science or Commerce.

In this NEP 2020, there is Access, Equity, Quality, Affordability and Accountability. It aims to transform our country into a vibrant knowledge society and global knowledge superpower by making both primary, secondary and higher education more holistic, flexible and multidisciplinary. NEP 2020 stresses psychological and scientific development of the child specially the child of age group of age of 3-6 years which is crucial stage of mental development.

Choosing preferred subjects' combination in secondary stage as per skills and interest is a big deal for students. It will help build student's career as per their correct choice. It will also develop emotional intelligence, critical thinking and skills of problem solving. Implementation of NEP 2020 structured Primary and Secondary Education required renovation in terms of physical and human resources in BTR. For adopting creative ideas towards holistic renovation, we need to go into challenges of Primary and Secondary education.

This paper analyses the educational development in BTR and examines the process and challenges in implementing the NEP 2020 at Primary and Secondary level of education in BTR

OBJECTIVE OF STUDY

1. To determine the differences between Tribal and Non-Tribal students in terms of their performance on the higher secondary exam in the subjects of biology, physics, chemistry, and mathematics.
2. To determine whether boys and girls differ in their performance on the higher secondary exam in terms of biology, physics, chemistry, and mathematics

RESEARCH METHODOLOGY

Method: stratified sampling In order to acquire the necessary information, we use a method called random sampling. Marks from the higher secondary examination in biology, physics, chemistry, and mathematics are collected from 894 Tribal and 684 non-Tribal students who have graduated from Bodoland Territorial Region (BTR) in 2020 (the average age of these students is roughly 18 years). The students are selected at random from Bodoland Territorial Region (BTR).

Data Arrangement: For the purpose of computing the distance, two sets of data are prepared. The first set of data takes into account the grades received by students from tribal schools in the subjects of biology, physics, chemistry, and mathematics, in that order. A second set of statistics is compiled for non-tribal students who studied the identical topics as the tribal pupils. In order to compare the achievements of different groups, further classifications such as boys and girls, rural and urban are utilised.

These statistics include: Because these are the prerequisites for the Mahalanobis Distance formula, descriptive statistics such as the mean and standard deviation are among those that are computed.

3. A formula based on mathematics

The following equation can be used to determine how far away Mahala Nobis is:

$$\Delta^2 = (X - Y)^T \Sigma^{-1} (X - Y).$$

Where X and Y are column vectors representing the respective means, and Σ is a pooled covariance matrix based on the combined data from both sets of observations.

$$\therefore \text{Mahalanobis Distance} = \left[(X - Y)^T \Sigma^{-1} (X - Y) \right]^{\frac{1}{2}}.$$

Again,

$$\Sigma = \frac{(n_1 \Sigma_1 + n_2 \Sigma_2)}{N}$$

Matrix of Pooled Covariance for the Data

Where Σ_1 and Σ_2 be the covariance matrices, n_1 and n_2 are the sample sizes for first and second group respectively and $N = n_1 + n_2$ are the total number of observations.

DATA /ANALYSIS

1. School Dropout:

The dropout problem cannot be denied. Surprisingly the dropout in BTR is high. In district of Baksa in BTR there is still dropout problem. In L.P. and U.P. stage it is 756, in Secondary stage it is 874. In the district of Udalguri it is 1476 in L.P. and 2222 in Secondary. In Kokrajhar district it is 8759 in L.P. and in Secondary it is 10225. It is reflected in the report submitted by the department concerned.

This dropout problems may be due to lack of trained teachers or weak parent teacher relationship.

2. Student dropout rate in BTR (2021-22)

Category	Udalguri	Baksa	Kokrajhar
Lower Primary	1476	756	8759
Secondary	2222	874	10225

3. Declination in the result of matriculation:

It is seen that there is declination in matriculation result. A data shows that in the district of Baksa in BTR there is 3.13% gradual falling off from previous result. Result in 2019-20 was 69.72% and in 2021-2022 it is 66.59% in matriculation. In the district of Kokrajhar in BTR there is declination in matriculation result. In 2019-20 it was 59.3% and in 2021-22 it was 47.4%. There is 11.9% falling off from previous result. In Udalguri district it is 63.66 in 2019-20 and 58.61 in 2020-21. In Chirang District it was 64.59% in 2019-20 and in 2021-22 it is only 34.27%.

Category	Udalguri	Baksa	Kokrajhar	Chirang
H.S.L.C.	2019-20 63.66%	2019-20 69.72%	2019-20 59.3%	2019-20 64.59%
	2020-21 58.61%	2021-22 66.59%	2021-22 47.4%	2021-22 34.27%

4. Teachers without TET / B.Ed.

In L.P. section 16 teachers have TET and in secondary stage 171 teachers are TET/B.Ed. qualified in the district of Baksa, BTR.

In L.P. section there are 4907 teachers without TET and in secondary stage the numbers of teachers without TET/B.Ed. is 2883. In Udalguri district in L.P. 1467 and in Secondary 581 teachers have TET/B.Ed. and in L.P. 2384 and in Secondary 799 teachers are without TET/ B.Ed.

5. Teachers with and without TET / B.Ed.

Category	Udalguri		Baksa		Chirang	
	With TET/B. Ed.	Without TET/B.Ed.	With TET/B. Ed.	Without TET/B.Ed.	With TET/B. Ed.	Without TET/B.Ed.
Elementary	1467	2384	16	4907		
Secondary	581	799	171	2883	273	Untrained graduate teachers 467

6. Lack of adequate and well-equipped infrastructures

Some of the schools do not have well equipped administrative buildings, staff rooms, auditorium hall, boundary wall, safe and clean drinking water and washroom, it is seen that in some schools there are broken desks and benches, no proper partition, no playground. All these needs revamping urgently. Quality education, quality result, cent percent enrolment and regularity demand quality infrastructures.

7. Weak administrative role of the head

A survey reveals that in some schools the administrative role of the head is weak in terms of supervision, guidance, counselling, time management, class management, close relationship with the staffs and students. All these need to be improved for quality education.

8. Administrative roles of the dept.

Timely and regular vigilance of the department concerned in terms of supervision, monitoring will help to ensure improvement in the administrative role of the school head.

NEP 2020 suggests psychological and scientific ways for revamping values in all aspects including personal value, social value, ethical value, cultural value, democratic value.

To ensure holistic development of the student more concentration be paid in education sector specially in primary and secondary stages. Education is the best tool for changing and reconstructing the present and ensuring future safety.

Measures to be taken for the development Education in BTR

(a) Adoption Policy

In Karnataka almost 1500 schools are adopted by Ministers, Academies, Philanthropic, Universities and has proved a big hit in term of infrastructure, academic achievement. In the BTR area if it made mandatory to adopt schools for Ministers, MLA, EM, MCLA's, MP's, it will take a shorter period time/to improve the Govt. schools in all respect in BTR. The adoption policy should be adopted, implemented and executed.

(b) Development of Language Skills:

About 25 percent students in the age group 14-18 years could not read basic text fluently in their own language.

(c) Set up of language lab will help ensuring the language and numerical skills development.

(d) Teaching through singing helps to learn correct pronunciation, rhythm.

(e) Teaching through games help to encourage vocabulary, communication, skills, creativity, imagination.

(f) Dramatic play by the students like cooking, making toy,

(g) phone call, bathing a child, role of a doctor etc. help development of expressive language, new vocabulary, communication, sociability etc.

There is need of specialized teacher and train existing teachers for teaching through singing, games dramatic play etc.

(h) Need for counsellors:

The choice of preferred subjects on the part of the students require specialized counselling. The counsellor will help not only in choosing subjects but also help problem students to be well adjusted after proper diagnose. The problem students may be in terms of psychological or physiological. There is need of adequate numbers of specialized counselors to be shared across school complex for creating a seamless and friendly environment to help each one of them with different approaches. Specialized counsellors will provide psychotherapy and professional help as well.

An aspirant having master's degree or having specialization in the related field such as child psychology, education, educational psychology, school organization and administration, career development, individual counseling, child development theory etc. will help in counselling in a better way.

(i) Strengthening of ailing school infrastructures.

Poor infrastructure like broken sitting arrangements, lack of electrical facility, unhygienic toilets, lack of drinking water facilities, lack of play materials and playground etc. are also responsible factors for school dropout and poor result.

For ensuring regularity of the students, the environment of the school should be student centric, homely, spacious, decorated wall and neat and clean. There should be availability of the safe drinking water, computers, games etc. In every schools in every stages there is need of converting every class rooms into smart class room.

In Delhi school buildings are used as Learning Aid in primary stage. Pictures of animals, fruits etc. are drawn, alphabet, numbers etc. are written with different colours on the walls of schools, classroom, boundary walls so that students can learn even in the absence of teaching. This innovative idea is child centric and will ensure qualitative improvement in education. It is sure to ensure cent percent enrolment. Research finding shows that a child learns 83 percent through vision. So there is need of using school building as teaching – learning aids.

(j) Child Centric Library

Children should be connected with library. Reading develops clear concept, understanding, knowledge. For encouraging learning as life long process, the habit of reading needs to be cultivated.

The library should be both physical and digital:

1. Physical library must have endless shelves of books meant for the children
2. Every child starting from foundational stage be enrolled as library member by issuing library card.
3. It must have rich collection of different books like pictorial, alphabetical, numerical etc.
4. Provision of hanging library.
5. It must have table, chair, computer which are student friendly.

(k) Need of more Teachers / Language Teachers

The NEP 2020 advocates that wherever possible, the medium of instruction until at least Grade 5 but preferably till Grade 8 and beyond, will be the home language/mother tongue/local language/regional language for both public and private schools.

Teaching through mother tongue in schools in early years help in enrolment and prevent drop out.30:1 pupil-teacher ratio be maintained to ensure quality education.

(l) Appointment of teachers be on the basis of-

- a) Contractual
- b) Volunteer

- c) Teachers be made transferable (for making learners motivated)
- d) Qualified candidates to be appointed across foundational preparatory, middle and secondary stage in both public and private schools.
- e) Engagement of social workers, alumni, retired teachers and volunteers with the schools to assist behavioral development of the students, academic support, planning, organizing and in furthering the mission of the schools which helps students to attain competence and confidence by providing quality education.
- f) Mentor teachers will help plan, guide, support and assess of the learner's understanding and progress. Mentor teachers have played conducive role in transforming Govt. schools into best schools in Delhi.

It is learned that All Bodo Students Union has already initiated the process of engaging teachers on voluntary basis with a view to ensure quality education. It is appreciable, but those candidates who are appointed must accept teaching as mission.

(m) Revamping teachers training system

Training of teachers is important to make them familiarized with the ethics, principles, methodology, skills and techniques of teaching.

- a) In-service teacher's training on deputation to be continued on senior basis.
- b) Certificate courses for the pre-service and in-service teachers for enabling to become special educators.
- c) Training, Seminar, Exchange Program be on continuous basis
- d) Inter and Intra state Teachers Exchange program with purpose be on continuous basis.
- e) Seminar Paper presentation every six months by the teachers mandatorily.
- f) Common norms and standards for teachers for both public and private schools.
- g) All teachers must know work ethics even if they are better qualified.
- h) Exposure visit for helping teachers to get their knowledge refreshed.

(n) Teacher exchange Programme

Inter and Intra state teacher exchange programme will provide a platform for refreshing ideas and knowledge, it will also provide incentives to teachers. For the first time BTC government, under the dynamic headship of Sri Pramod Boro, Hon'ble CEM, BTC, started teachers and educational leader exchange program at Delhi on and from 08th to 13th November 2021. It was really a creative idea to be appreciated. Our teachers enjoyed good scope to learn many more ideas, skills and management techniques which hopefully raised the motivation level of the teachers.

(o) Provision for Checkup of sound mental and physical health:

Every school will have the provision for checkup of mental and physical health and well being of the students periodically. It will provide –

- a) Provision of annual health checkup for all students.
- b) Add more nutrition to mid-day meal including milk, fruits.
- c) Children yoga home.
- d) Children gym home.
- e) First aid
- f) Flower gardening
- g) Safe drinking water
- h) Provision of warm drinking water.

All these provisions will save the children from maladjustment and delinquency. A busy child does not find time to think of school dropout, absent from the class, mixing with irrelevant activities. Every child needs to be placed in balanced position. In Delhi every Govt. School have children gym, safe drinking water.

(p) Pairing of public and private Schools:

Exchanging teachers for exchanging ideas, bringing of students from higher class from rural/tribal or private schools to urban areas or Govt. schools for one week and vice-a-versa for greater exposure will ensure quality education. NEP 2020 strongly endorses the idea of pairing of one government school with one private school across the country. It will help in ensuring healthy coordination, management, governance, greater resource efficiency, effective functioning by the process of interaction between two. It will save money, space and time through working together on same purpose.

Pairing of schools can be effective if used at the right times and if structured in an appropriate way. It is an excellent tool to promote intra and interpersonal interaction, sociability, creativity, clear idea.

(q) Set up of vigilance unit by the department:

It is seen that some schools have –

- a) Anomalies in providing mid-day meal to students
- b) Lack of safe drinking water.
- c) Lack of boundary wall
- d) Weak parent-teacher relationship

e) Reluctance of the head to be close with staff, students and in monitoring.

(r) Vigilance unit will visit schools with purposes

1. To ensure that the school head is doing well on administration.
2. To ensure that teachers are regular on their duty.
3. To ensure that students are attending the classes on regular basis.
4. To ensure that mid-day meal is providing on regular basis keeping in view clean, safe and hygienic
5. To ensure that the school has sufficient infrastructure.
6. To ensure that no student is drop out.
7. To ensure that parent-teacher relationship is stronger.
8. To ensure that students are given individual care and attention.

(s) Community participation

It is seen that in some schools, membership of community in SMDC is just nominal. Some are not interested, some are not familiar with the purposes of SMDC, some are not directly involved, some are not even invited in the planning and management. The whole system is confined in single individual and the result is failure, ineffective management, failure in holistic development of students.

Active participation of philanthropic persons, organizations, private organizations and community need to be felicitated and encouraged. For transparent and democratic management community members be given opportunity to share ideas in the management system.

Community and private body participation will ensure the qualitative development in both academic and management system.

(t) Conversion into inclusive and composite

To minimize the problems of single teacher school and poor student enrolment school, stand alone schools need to be converted into inclusive and composite. NEP 2020 suggests the conversion of the same.

(u) Residential school:

It is agreed by most of the parents that the students of residential schools can do better than the day boarding school. In residential school students stay with teachers and in day boarding students stay with their parents then go to school only for studies which may lead to time wastage.

CONCLUSION:

The process of reformation and revamping the educational system is a collective work. It requires planning, coordination and implementation. In Delhi almost all Government schools transformed into best in terms of infrastructure, administration and academic only since 2016 as far as my knowledge is concerned. Delhi Government did systematic planning, established well coordination with intellectuals, community and then implementation. Now the Delhi Government schools are in the national limelight because of splendid performance in improving the government school system, BTC government is expected to perform splendidly to be in the state limelight. BTC has good numbers of community and human resources. The concerted efforts made by BTC Government to bring faster and sustainable development in the field of education is remarkable.

Reference:

1. Official records of Education Department, BTC
2. NEP 2020

Thank You