Learning Achievement Of The Girls Students Studying In Class IX In Mathematics: A Case Study Of Kasturba Gandhi Balika Vidyalaya (KGBV) Students Residing In Hostel Under Nagaon District Of Assam

Dr. Sahidul Ahmed
Assistant Professor
Department of Education
Amguri College, Amguri

Introduction

Kasturba Gandhi Balika Vidyalaya (KGBV) Scheme was come in to force in the year 2001under the umbrella of Ministry of Human Resource Development, Government of India and implemented under the scheme of Sarva Siksha Abhiyan to build the Indian education organism more accessible to the needs of disadvantage girls and to improve their access and retention. Under the scheme, residential schools for girls at upper primary to Sr. Secondary levels were set up in the Educationally Backward Block (EBB)s, which are identified by the SSA. In identification of the EBB, due consideration was given to the state government views. Under the KGBV scheme, girls children between 10-18 years of age group of SC, ST, OBC, Minority Community and BLP community get the change of free quality education.

21st century is the age of education and knowledge. The students having knowledge and skill can get better opportunity compared to other less knowledgeable person. Thus now a day's every education system provide significant amount of importance on performance based learning i.e. learning achievement of the students. Many literatures has already proved that the education system which have a better poll of students with quality learning achievement carries better job opportunities than their other counterpart. Better job opportunities means they can contribute more for their country's socio- economic development. The children learning (academic achievement) plays an crucial responsibility in producing the best quality graduates who will become great leaders and human resource for the country, thus helping the country's economic and social development (Ali, et.al , 2009).

In the academic session 2007-2008, the state of Assam implemented the scheme i.e. KGBV. There are 81 nos. of KGBV opened all together in Assam. Most of the KGBV are either situated in ST area or areas having SC and minority population. At present the total numbers of students admitted in the KGBV are 7688 Nos. of children. In type-II KGBV, classes from VI-X covered with 100 seat capacity on the other hand in KGBV-III, classes from VI-XII covered with 150 seal capacity. In all the KGBV same type of facilities are available.

Type-II: At present in the state of Assam, there are 14 KGBVs operationalized in ranted premises. The total enrollment in those KGBV was 978 children out of total seat capacity of 1400. It is worth mentioning that out of those KGBVs, in 5 KGBVs Class IX started from the session 2022-23.

Type-III: The total KGBV sanction for the state of Assam is 67. Out of which 57 KGBVs are functionalized in its own building and 10 nos. in rented premises. At present a total of 6710 children enrolled out of total seat capacity of 10050. In 57 KGBVs Class: XI started in the year 2022-23.

The main objective of the KGBV is to provide educational facilities to the disadvantage groups of the society. Under the scheme of KGBV, emphasis is on the slightly older girls at the primary level, who are out of school and were unable to complete their elementary schooling at proper age. But same principle is not applicable at the remote and disadvantage area. In the remote and underprivileged areas more specially in tribal and minority areas of Assam, where educational facilities are not easily availabl, younger girls are targeted under the scheme. At the upper primary level, emphasis is to enroll girls, especially adolescent girls who are unable to go to regular schools due to different socio-economic factors. Under this scheme, focus has been made to provide free and quality education to the girl's children of disadvantage group residing in the rural and remote areas of the country. The present status of KGBV in Assam shown in the table No. 1 below

Table No.1: Present status KGBV in Assam

#	District	Total KGBV	#	District	Total KGBV
1	Baksa	2	15	Hojai	1
2	Barpeta	7	16	KamrupRural	2
3	Biswanath	3	17	KarbiAnglong	5
4	Bongaigaon	1	18	Karimganj	1
5	Cachar	1	19	Kokrajhar	4
6	Charaideo	1	20	Lakhimpur	1
7	Chirang	2	21	Morigaon	2
8	Darrang	3	22	Nagaon	5
9	Dhemaji	2	23	Nalbari	1
10	Dhubri	10	24	Sonitpur	3
11	Dibrugarh	2	25	S. S. Mankachar	3
12	DimaHasao	3	26	Tinsukia	4
13	Goalpara	4	27	Udalguri	3
14	Hailakandi	1	28	W.K. Anglong	4
	Total				**81**

Source: SSA, Assam

Significance of the Study

The main objective of Kasturba Gandhi Balika Vidyalaya (KGBV) Scheme is to make education system friendlier to the needs of disadvantage group of the society and to improve their access and retention. Through government affirmative actions make it possible to some extent in providing educational facilities to the marginalized section of the society, but still need to work hard to achieve the main goal of the KGBV. Dropout/ over aged students are identified and enrolled in KGBVs, but whether they are learning in school or not? The students who are studying in these schools are either first generation learner or do not have proper educational facilities / conditions in their home for education. Their motivation for education is less compared to the other schools students as they have faced the dark side of the life, which affected them badly mentally and physically. Leaning achievement of the girls students studying in KGBV is a field where very less research have been conducted. Considering this laying behind, we intended to study the possible factors that affect the learning achievement of the girl students of KGBV in the subject of mathematics.

Statement of the Problem

KGBV is a scheme which was implemented by the Government of India mainly for the marginalized section of the people. The girl students who are enrolled in KGBV are mostly either dropout or over aged belong to disadvantage group of Assam (tribal, tea garden or minority). Their socio-economic condition is very poor and also their parent have less motivated for their wards education.

Learning achievement of the students depends on different family, school, teacher and student factors. As our study is conducted targeting the students belongs from poor socio-economic condition, we will not consider the

socio-economic condition of the students. We only consider the school, teacher and students expectation in this study.

Objectives
1. To study the present status of KGBV in Assam.
2. To study the possible factors that effect the learning achievement of the girl's students studying in KGBVs in Nagaon district of Assam.

Delimitations
1. This study only covers the girl's students studying in class IX in KGBV.
2. This study was conducted in Nagaon district of Assam only.

Review of literature

Kavithakiran and Devi (2015) conducted a research study on the academic achievement of Girls studying in KGBVs. The study was conducted to look the learning achievement of the girls studying in class X. In their study they find that very few i.e. approximately 10 percent KGBV girls were good in their studies achieving scoring between A to A+ grade. On the other hand, 90 percent girls were found to be average and low in their studies. In English it was found that many girls were performing poorly than in mathematics. Many suggestions were given by the researchers for the improvement of the girl's performance.

Singh and Singh (2017) conducted a study on Hindi language competency of KGBV Students in Bihar. In this study, the research found that students of minority group performed poorly as compared to state average. The state average performance was 39.85 compared to the minority group performance was 32 percent. Performance of ST students was better than that of SC and OBC students. The performance of ST, SC and OBC students was 37.9, 37.1 and 36.9 respectively. It is worth mentioning that only four students of general category were available, their performance was better than the remaining groups.

The efficacy of KGBV on academic performance of children in Assam was studied by Gogoi and Goswami (2015). A total of 529 numbers of the girls were selected as sample students for this study. All had appeared in the term end evaluation at KGBVs. Out of them, 12.29 per cent earned A grade, 27.98 per cent B grade, 40.45 per cent C grade and 19.28 percent D grade in the selected KGBVs. As the class eight girls had studied for three years in the KGBVs, a significant difference among the girls achievement in marks at all the subjects at entry level and exit level was observed. The researchers provided many suggestions and recommendation for the improvement of the student's performance.

Shukla and Sanyal (2008) conducted a comparative research on achievement levels of the girls of KGBV and girls of Parishadiya upper primary schools and found that the achievement scores of girls of Kasturba Gandhi Balika Vidyalaya (total as well in terms of their social categorization) was significantly higher than those of the girls of Parishadiya upper primary schools, in all the three subjects i.e. languages, mathematics, and social sciences. In this study they also analysis the possible factors that can be the responsible for this differences. Regression analysis was used for that purpose.

From the literature review we can see that there are some studies that are conducted on KGBV and more specially on the learning achievement of the students. We also observed that a study was conducted in Assam on the leaning achievement of the girls' students in which the researcher tried to find out the problems associated with their poor level of scholastic achievement and not find out the factors responsible for it. Moreover, there is not a single study that was conducted in the district of Nagaon which tried to find out the learning achievement of the students in KGBV specially in the subject of mathematics. Keeping in view this lagging, the present study tried to fill this gap.

Methodology

Research is an academic activity as well as real problem solving activities which help the mankind to live a peaceful and healthy life. The purpose of research is to discover answers to question through the application of scientific procedure. The main aim of research is to find out the hidden truth.

The required data for the study has been collected from both primary and secondary sources. In case of generation of primary data, we had adopted non-probability sampling method (in selecting sample students for learning achievement test) instead of probability sampling method. Though the probability sampling method gives better accuracy in terms of confidence level of the inferences of the study, there are many practical

difficulties in fully executing probability sampling methods. For example, while drawing a sample using probability sampling methods, say, random sampling technique, the frequency of occurrence of a particular category over others may frustrate the objective of the study. Keeping this issue in mind, the judgment sampling or non-probability sampling method had been followed. The primary data has been collected through conducting learning achievement test in mathematics. The learning achievement test in mathematics was conducted in 3 nos, of KGBV out of 5 nos. of KGBV under Nagaon district of Assam. All the students of class IX who are studying in the said three schools are considered as sample students.

Secondary data will be collected from different government publications, books, journals, e-journals, publications of semi government organizations and institutions, universities, research institutions, World Bank, UNESCO, UNICEF and NGOs and reports of different committees and commissions on various educational aspects.

The total KGBV in Nagaon district is 5 nos., out of which 3 nos. are selected as sample KGBV. The name of the KGBVs which are taken as sample for this study are: Batardrava, Juria and Mairabari. The total numbers of students studying in class IX in 5 nos. of KGBV are 93. There are 69 students studying in class IX in the KGBVs which are selected as sample for the present study.

Table No. 2

Sl No	District	Location	DISE code	type	Sanctioned year	Seat capacity	Students in class IX
1	Nagaon	Lumding	18300832307	III	2017-18	150	14
2	Nagaon	Batardrava	18101105711	III	2010-11	150	17
3	Nagaon	Lowkhowa	18100903608	III	2011-12	150	12
4	Nagaon	Pachim Kaliabar	18100620201	III	2011-12	150	14
5	Nagaon	Juria	18100207913	III	2017-18	150	17
6	Nagaon	Mairabari pt	18101106303	III	2017-18	150	19
	Total						93

Source: SSA office, Nagaon

The study was conducted in the study in Nagaon district of Assam. We had selected three KGBVs, where we had administrated our learning achievement tests (mathematics). All the students studying in class IX in the said KGBVs are selected as sample students for this study. Different statistical techniques like average, mean, percentage were used in this study to interpret the data keeping in view the objective. The Research Tools of the Study are:

1. Learning achievement test of mathematics.
2. Structure schedule consisting different aspects.

Data Analysis and Interpretation

Before going to data analysis section it is wise to have a glance on the sampling and scoring part of the study which will help us to understand the tables and interpretations without any doubts. We have collected the primary data for this study from 3 schools covering 69 sample students. The test items are taken from school text book. In preparing the test items the researcher has taken the help of the subject teachers working in KGBV of Juria block. In preparing the test proper steps were followed as per the guideline of educational psychology. In the process of item analysis, the most difficult and most easy items are eliminated in the final formation of the test. All the sample students are having Assamese as medium of instruction.

Mean Performance of Rural and Urban Students

Table below shows the mean achievement of the students in the learning achievement test of mathematics. From the table we observed that the mean performance of the students were 47.93 percentages i.e. 47.93 percentages of the test items were answered correctly by the students.

Table no.3: Mean Performance of the Students (in percentage)

Study Area	Mean performance of the students
Nagaon, Assam	47.93%

Source: Field Study

## Mean Performance of students of different schools

Table below shows the mean achievement of the students of different KGBVs. The full mark for the mathematics leaning achievement test was 100. From the table it is observed that the Students of Batardrava KGBV (49.7) are performed well compared to KGBVs of Juria (48.6) and Mairabari (45.9).

Table no.4: Mean performance of the students school management wise

School location	School Name	Mean Achievement in percentage (out of 100)
Batardrava	KGBV	49.7
Juria	KGBV	48.6
Mairabari.	KGBV	45.9

Source: Field Study

Figures: Learning achievement of the students school wise
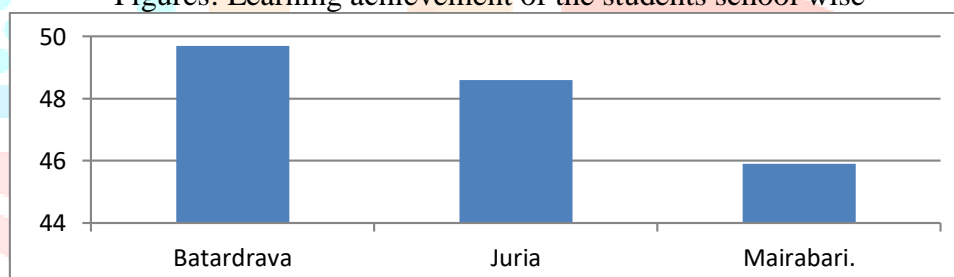
Source: Field Study

Mean Performance of Boys and Girls

Table below shows the mean performance of boys and girls in the mathematics achievement test. Boys were performed better in the achievement test compared to their female counterpart. The mean performance of the boys was 49.34 per cent and the mean performance of the girls was 48.33 per cent.

Table no.5: Mean Performance of Boys and Girls (in percentage)

Study Area	Mean performance of the students	Mean performance of Boys	Mean performance of Girls
Nagaon, Assam	48.9%	49.34%	48.33%

Source: Field Study

Figure: Mean Performance of Boys and Girls (in percentage)
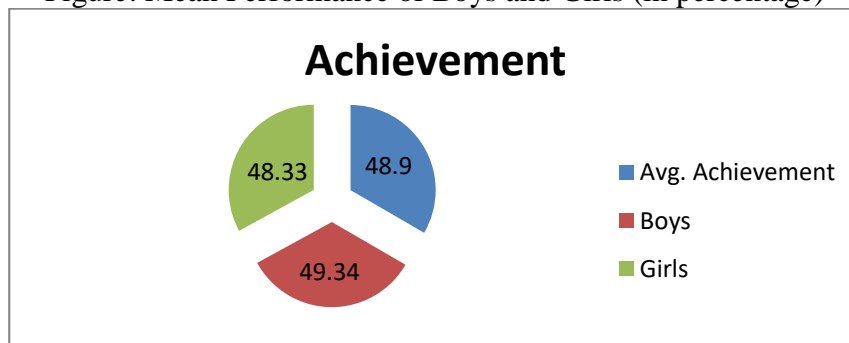
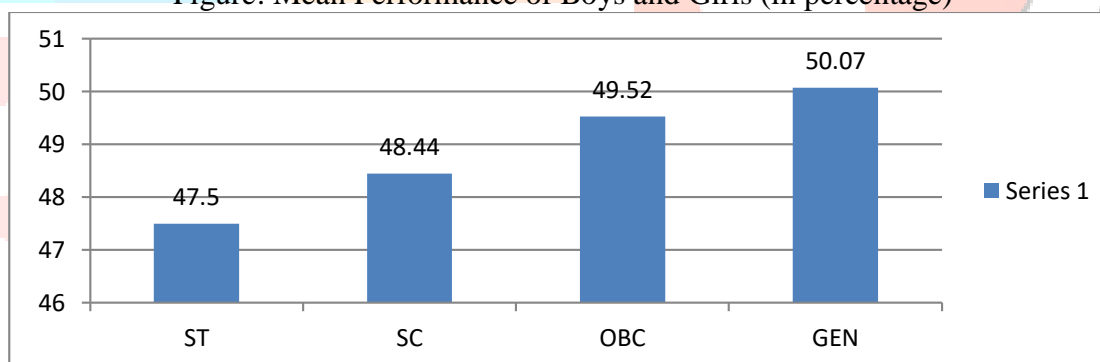Source: Field Study

Caste Wise Performance of the Students

We have calculated the overall performance of the students by their caste of all the districts. It seems from the table that the overall performance of the ST, SC, OBC and General were 47.5%, 48.44%, 49.52% and 50.07% respectively. Scheduled Tribe students were performed poorly in the achievement test followed by Scheduled Caste category.

Table no.6: Mean Performance of Boys and Girls (in percentage)

Study Area	Mean performance ST	Mean performance SC	Mean performance OBC	Mean performance GEN
Nagaon, Assam	47.5%	48.44%	49.52%	50.07%

Source: Field Study

Figure: Mean Performance of Boys and Girls (in percentage)

Source: Field Study

## Religion Wise Performance of the Students

We have calculated the performances of the students by their religion. The mean performances of the major religions were 49.87%, 47.27%, 48.08 and 50.33 respectively for Hindu, Muslim, Christen and Others.

Table no.7: Mean Performance of Boys and Girls (in percentage)

Study Area	Mean performance Hindu	Mean performance Muslim	Mean performance Christen	Mean performance other
Nagaon, Assam	49.87	47.27	48.08	50.33

Source: Field Study

Figure: Mean Performance of Boys and Girls (in percentage)
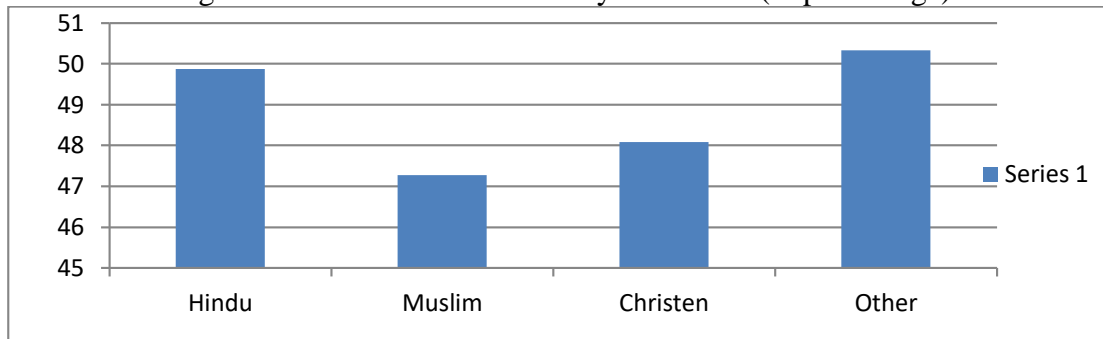
Source: Field Study

Determinants of Academic Achievements

Measuring the factors which influences academic performance of students is challenging since student performance is the product of socio-economic, psychological and environmental factors (Hijazi and Naqvi: 2006).

Findings

1. The overall performance of students of class X in learning achievement test was very poor. The mean performance of the students in learning achievement of mathematics was 48.90 per cent.
2. Mean performance of boys in learning achievement test was 49.34 and mean performance of girls was 48.33 per cent.
3. Boy students were performed better compared to their female counterpart.
4. In the learning achievement test of mathematics, General category students were performed better than SC, ST and OBC category. On the other ST category students were performed very poorly in the learning achievement test of mathematics.
5. As far as the religion of the students are concerned, Other religion students were performed better compared to Hindu, Muslim and Christen students. Hindu students were performed better than Muslim and Christen.
6. Mother education and Private Tuition in Home have a positive impact on learning achievement of the students.

Causes of Low Achievement of the Students

The present study find out that learning achievement of the students of secondary schools in mathematics is very poor. When we conducted interview with Head masters, parents and students to find out the cause of low learning achievement of the students, we got some alarming points or views expressed by teachers, parents and students. Low learning achievement might be due to the combination of the following factors:

1. The schools are having insufficient accommodation for standard teaching learning process.
2. Teaching aids are very old. Information and communication Technology (ICT) is still not used for teaching of mathematics.
3. Teachers often participate in political activity/government or other allied activities rather than concentrating in teaching the pupils.
4. Appointment of teachers on the basis of political connection is largely responsible for poor quality of teaching.
5. Resource materials are never provided in time and adequate quantity.
6. Inspection of schools became a ritual in school education system. As most of the officers not look the academic affairs of the schools. They only concerned with financial and administrative works of the school.
7. Curriculum is hardly matches the surrounding of the students. So, they do not feel interest in the contents.
8. Proper training programs for the teachers are not arranged by the government.
9. Lack of mathematical laboratory in the school.

Reference

Ali, Norhidayah, Jusoff, Kamaruzaman, Ali, Syukriah, Mokhtar, Najah and Salamt, Azni Syafena Andin (2009). 'The Factors Influencing Students' Performance at University Teknologi MARA Kedah, Malaysia'. Canadian Research & Development Center of Sciences and Cultures: 3(4), 81-90.

Devi, U. L.; Mayuri, K. & Kavithakiran,V. (2014). Learning outcomes of girl children studying in KGBVs. Retrieved from: ssa.tg.nic.in./research/Abstract2012-2014 on dated 12-05- 2016.

Gogoi, S. & Goswami, U. (2015). Efficacy of Kasturba Gandhi Balika Vidyalaya (KGBV) in Assam on academic performance of children. AJSH-Asian Journal of Home Science. 10 (1),161-167.

Good, C. V. (1973). Dictionary of Education. New York: McGraw Hill Company.

Hawes, G. R. & Hawes, L. S. (1982). The Concise Dictionary of Education. New York: Van Nostrand Reinhold Company.

Shukla, A. & Sanyal, R (2008). A comparative study of achievement levels of Kasturba Gandhi Balika Vidyalayas and girls of Parishadiya upper primary schools. Abstracts of Research Studies in Elementary Education (2003-2009). New Delhi: Research, Evaluation and Studies Unit Technical Support for SSA EdCIL (India) Ltd. 2010, 340-341.

Steinberger, E. D. (1993) Improving student achievement, Virginia: American Association of School Administrators, 1801 N. Moore Street, Arlington, VA 22209-9988 (Stock No. 21-00308).

Steinmayr, R., Meißner, A., Weidinger, & F.A., Wirthwein, L. (2014). Academic Achievement, Retrieved from https://www.oxfordbibliographies.com/view/document/obo9780199756810/obo- 9780199756810-0108.xml on dated 6-24-2019.

Umadevi, L. & Kavithakiran V. (2015). A Study of Academic Achievement of Girls Studying in KGBVs. PARIPEX- Indian Journal of Research, ISSN - 2250-19916, 4(3), 69.

Verma, R. R. ((2008). As quoted in the Proceedings of the National Consultation on Kasturba Gandhi Balika Vidyalaya Scheme (KGBV): A Visionary Initiative. August 11-12, 2008 Report. New Delhi: Department of Women Studies, NCERT.,