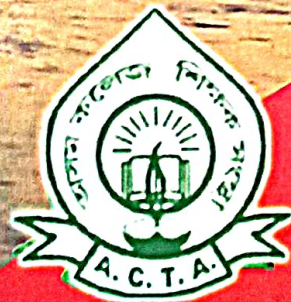
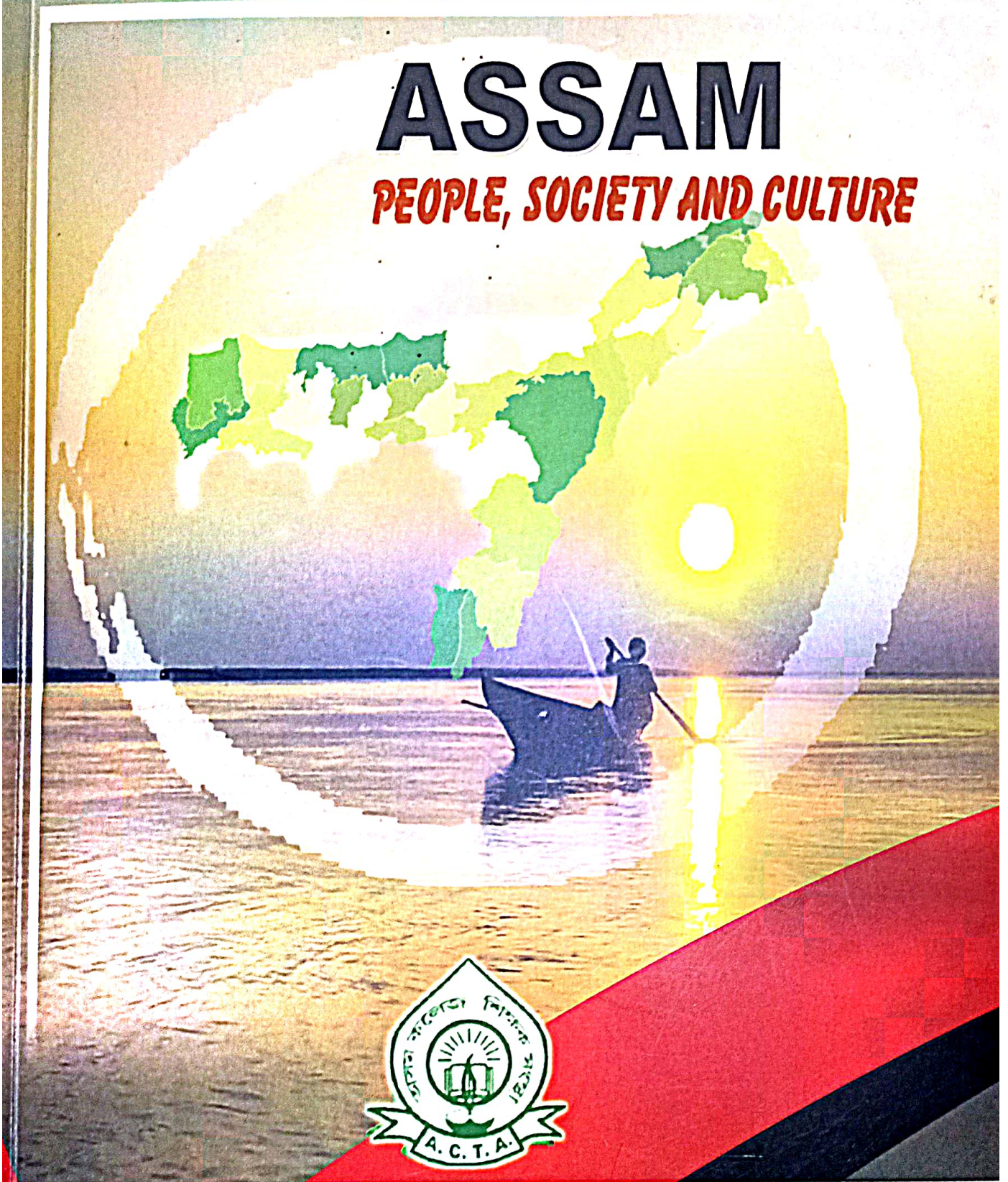


# ASSAM

*PEOPLE, SOCIETY AND CULTURE*



**ASSAM COLLEGE TEACHERS' ASSOCIATION**

Editors  
Dr. Nazrul Islam  
Mr. Hafizur Rahman Khan



**Assam- People, Society and Culture: A collection of Research Papers and Articles, edited by Dr. Nazrul Islam & Mr. Hafizur Rahman Khan, on behalf of Assam College Teachers' Association (ACTA) and Goalpara Zonal Committee & published by Assam College Teachers' Association in association with Panchajanya Books, Bamunimaidan, Guwahati.**

---

ISBN : 978-93-90626-02-1

*All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the publisher.*

*The views expressed in this book are those of authors and not necessary that of the organisation. The publisher is not responsible for the views of the authors and authenticity of the data, in any way whatsoever.*

Published by Sri Himangshu Maral, General Secretary, Assam College Teachers' Association, ACTA House, Solapar, Guwahati-78 1008, Assam  
and  
Panchajanya Books, Bamunimaidan, Guwahati.

Year of Publication: December, 2021

Copyright : Assam College Teachers' Association

Cover Design : Pankaj Bormudoj

Price : Rs. 450.00

Type Setting: Abhinav Printers, Goalpara

Printed at :  
Shri Ganesh Printers, Sankardev Market,  
Noonmati, Guwahati-20, Phone: 9707010889

# A Study in the Status of Achievement in Mathematics of the Secondary Students in Rural- Urban area of Goalpara District, Assam

Dr. Abdul Wahed\*

**Abstract:** This study deals with the status of achievement in mathematics of the Secondary level in rural-urban area of Goalpara District of Assam in association with gender disparities. The study is delimited only to the students in High School Leaving Certificate (HSLC) Examination under SEBA. An attempt was made to assess the rate of achievement in the examination as a whole and in particular to the subject mathematics. The study also investigates the differences in the achievements between rural-urban and male-female categories of the district. The study is based on secondary data and it revealed that there are rural-urban disparities and gender disparities in the achievement level in secondary mathematics in the District.

**Key Words:** Achievement: Passed (obtained 30% and above),  
SEBA: Board of Secondary Education Assam,

## 1. Introduction:

India has a rich heritage in the field of mathematics. It has given birth to the renowned mathematicians like Ramanujan and Harish-

---

\* Assistant Professor, Dept. of Mathematics, Bikali College, Dhapdhara



Chandra. In contrast to the strong mathematical tradition, India fails to produce excellence in mathematics due to endemic poverty prevailing in the country (R. Ramanujam, 2012). The high level mathematical practice can be seen within few elites in the country.

Mathematical knowledge and proficiency of the people is the measure of all round development of a nation. The needs and requirement of the modern civilization based upon computer, sophisticated technology and global commercialization demand for skilled labour with sound mathematical knowledge. The basic knowledge and skills of the people in mathematics are still far below the needs and requirements of the modern society (T. Devi, 2009). Gender and rural-urban disparities in education is also found in various districts of Assam (Ahmed et.al. 2011). The Appraisal Report-Assam in the Project Approval Board (PAB) meeting of Rashtriya Madhyamik Shiksha Abhiyan (RMSA) for the session 2016-17 revealed that in the state "the dropout rate is high and pass percentage of class X is quite low." According to the Report dropout rate is 17.60% in the session 2014-15. Pass percentage of class X stands at 63.80% in 2014 and 65.50% in the year 2015. Again, the Report highlighted the achievement level in mathematics of the students of class X in Assam as per the National Achievement Survey (NAS) conducted by NCERTI. According to the survey report 39% students scored in the range of 0-35% marks, 42% students scored in the range of 36-50% marks, 18% students scored in the range of 51-75% marks and only 1% students reached above 75% mark. The low achievement level in mathematics also accelerates the math-anxiety among the students and they avoid the subject (Wahed, et.al. 2015). The tendency of avoiding mathematics will decrease the skilful labour in the society. This will bring an adverse effect in the economy and overall development of a country (Wahed, et.al. 2013). In view of the above context the researcher felt necessity for the study on achievement level of the secondary students in mathematics in Goalpara District.

-----  
1 Appraisal Report-Assam (2016-17, Pp-20,21), PAB Minutes-RMSA, India, [www.mhrd.gov.in](http://www.mhrd.gov.in)>school Education



the uniform development in rural and urban area of our country still beyond the expectation. In different parts of the country many research studies has already been conducted in rural- urban and gender issue in the field of Education. But there are still scarcities of such studies in Goalpara District. Under this context it is felt necessary to conduct the study in Goalpara District of Assam.

**2. Aims and objectives of the study:**

The study set its aims as follows- (a) To find the achievement level of the secondary students in mathematics. (b) To investigate -whether gender and rural-urban disparities are significant in relation to achievement in HSLC Examination? (c) To investigate -whether gender and rural-urban disparities are significant in relation to achievement in the subject mathematics in HSLC Examination?

**3. Methodology of the study:**

The sampling design of the study is presented in the following table-1. The study is based on secondary data collected by the investigator from Official Record Books of the sample Institutions. The collected data were analyzed using statistical tools such as mean, standard deviation, paired t-test with the help of SPSS software.

Table-1: Sampling Design Institution

Institutions	Total No. of institutions	No. of sample taken	% of sample	
High School	148	10 (U=5, R=5)	6.76	
<b>Students' Participation in the HSLC Examination during the period: 2005- 2015 ( In 10 Numbers of Secondary Schools in 10 years)</b>				
Male	Female	Rural	Urban	Total
3843	2407	3292	2958	6250



#### 4. Discussion and Data Analysis:

##### 4.1 Achievement in Mathematics in Secondary Level:

In this study the achievement level of secondary mathematics were measured by the pass marks (30%) in mathematics in the HSLC examination conducted by the concerned state board (SEBA). The categorical rates of passed, and passed in Math were based on the number of appeared in the respective category in the HSLC examinations in 10 years. The findings of the study presented in the Table-2 revealed that average passed rate in HSLC examination were high for male (62.15%) than the female (50.66%). The average passed rates in the subject mathematics were also high for male (56.03%) than the female (40.85%).

Table-2: Categorical Average Rates of Achievement (From 2005 to 2015)

Mean of the percents (%)				
Passed Rate in HSLC Examination against Categorical Appeared				
Male	Female	Rural	Rural Urban	As a whole
62.15	50.66	45.15	70.53	57.81
Duly Passed Rate in Mathematics against Categorical Appeared				
Male	Female	Rural	Rural Urban	As a whole
56.03	40.85	37.39	64.68	50.10

Moreover, the findings presented in the Table-2 revealed that average rate of passed in HSLC examination was high in urban (70.53%) than the rural (45.15%) and average rate of passed in the subject mathematics was also high in urban (64.68%) than the rural (37.39%).

##### 4.2 Rural-Urban & Gender Disparities:

Under the purview of the study the rural-urban and gender disparities in secondary classes were related to pass in the HSLC examination and passed in the subject mathematics. For more rel-



Want support of the findings the study applied paired samples t-test between the pairs male-female and rural-urban with the help of SPSS.

Table-3: Paired t-Test Results for Rural-Urban & Gender Disparities

HSLC Exam	Pairs	Paired Differences					t	df	Sig. (2tailed) P Values
		Mean	S.D.	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Passed	Male-Female	12.22	17.71	1.80	8.64	15.79	6.794	96	0.000
	Rural-Urban	-13.81	39.58	5.71	-25.30	-2.32	-2.418	47	0.020
Passed in Math	Male-Female	11.91	15.86	1.61	8.71	15.10	7.393	96	0.000
	Rural-Urban	-15.87	37.91	5.530	27.00	-4.74	-2.870	47	0.006

The findings presented in the Table 3 clearly indicated that the rural-urban and gender disparities were significant in the achievement in HSLC Examination in general and in particular to the subject mathematics. The sig 2-tailed calculated p-value  $0.000 < 0.05$  for the pair male-female in the number of passed in the examination. Hence, it can be concluded that there was significant gender difference at 5% level of significance in the numbers of passed in the HSLC examination. Again, for the pair rural-urban in the number of passed in the examination the sig 2-tailed calculated p-value  $0.020 < 0.05$ . It asserted that there were significant difference for the rural-urban pair in the numbers of passed in the HSLC examination at 5% level of significance.

Second, the sig 2-tailed calculated p-value  $0.000 < 0.05$  for the pair male-female in the number of passed in the subject mathematics. It asserted the significant gender difference in the number of passed in mathematics at 5% level of significance. Similarly, the sig 2-tailed calculated p-value  $0.006 < 0.05$  for the pair rural-urban in the number of passed in the subject



mathematics. It can be concluded that the rural-urban difference in the number of passed in mathematics is significant at 5% level of significance.

#### **5. Findings of the study:**

The study reveals that achievement of the secondary students in the subject mathematics is less than the achievement in HSLC Examination. That is, the number of students duly passed in mathematics is less than the number of students passed in the HSLC Examination. Again, achievement of urban students in mathematics is higher than rural students and achievement of male is higher than female in secondary mathematics. Moreover, the differences between the pairs male-female and rural-urban in their achievement in secondary mathematics are significant.

#### **6. Recommendations of the study:**

The Government and concerned authorities should address the issue properly before implementing the National Education Policy-2020 so that its goal can be achieved in the real sense. It's the time for integrated efforts combining students, teachers and guardians for motivation of the students and better achievement in mathematics. The teachers should be innovative in handling the instructions of teaching- learning methods in the subject so that more students can be motivated to study mathematics. Scientific method increases selfconfidence and self-efficacy towards mathematics and prevent fear-psychosis of the students. This leads to the better achievement in mathematics.

#### **7. Conclusion:**

The findings of the study can be expected to be helpful in decision making of the concerned authorities and stakeholders of the subject. From the finding of the study it is clear that a sizable number of students passed HSLC Examination under consideration (in grace marks) in mathematics. Since, achievement in secondary mathematics is lower in both urban and rural area, it may be considered as one of the causes of poor participation and low enrolment in mathematics in senior secondary and higher studies.



**References:**

1. Appraisal Report- Assam (2016), project Approval Board (PAB) meeting for the session 2016-17 held on 3rd March, 2016 for the state of Assam under RMSA, Pp-4, 20, 21, PAB Minutes- Rashtriya Madhyamik Shiksha Abhiyan (RMSA), India Available at: <http://www.mhrd.gov.in> > School Education
2. Ahmed, S. & Bora, A. (2011), "Gender Differences and Achievements in Mathematics among the Students in High School Examination in Diphu Town of Karbi Anglong District of Assam, India." *International Journal of Mathematical Education*. 1(1).Pp 57-62.
3. Census of India 2011, Assam. District Census Handbook, Goalpara, Series-19, Part XII-B. Available at: <http://www.censusindia.gov.in/2011census>
4. Devi, T. (2004), "Study into the failure and achievement in mathematics among Karbi students in HSLC Examination", Unpublished Doctoral thesis, Gauhati University.
5. Ramanujam, R. (2012), "Mathematics Education in India- An Overview", In R. Ramanujam & K. Subramaniam (Eds.), *Mathematics Education in India: Status and Outlook*, A collection of Indian National Presentation at the 12th International Congress on Mathematics Education (ICME\_2012), Published by Homi Bhabha Centre of Science Education, TIFR, 2012, Pp. 110
6. Wahed, A. and Ahmed, S. (2013), "Problems related to Participation in Mathematics in 10+2 Standard of Arts and Science Streams: A comparative Study in Goalpara District of Assam", *Research Analysis and Evaluation, International indexed & Referred Research Journal*, ISSN 0975-3486, Vol- IV, Issue-41, Feb-2013
7. Wahed, A. & Ahmed, S. (2015), "Math Anxiety in Secondary School: An Experimental Study in Dhupdhara Locality of Goalpara District, Assam", In S. Rahman (Ed, 2017), *Recent Trends of Mathematics*, ISBN: 978-93- 83252-62-6, Proceedings of 2nd National Conference-2015, Rajiv Gandhi University, Itanagar.