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A study on academic achievement motivation and academic achievement of the class X students of Dibrugarh district, Assam

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Abstract: The pursuit of academic achievement is an important feature of educational endeavours worldwide, serving as a crucial marker of success and progress for students, educators, and society at large. The problem addressed by the study on Academic Achievement Motivation and Academic Achievement of the Class X Students of Dibrugarh District, Assam lies in the need to comprehensively understand the factors influencing academic performance in this specific demographic context. The study explores academic achievement motivation and academic achievement of the class X students of Dibrugarh District, Assam and compares it on the grounds of gender differences. It helps to prevent a serious breakdown in the personal and educational life of students. The research focuses on the Class X students of the Dibrugarh District, Assam and examines gender differences in academic achievement motivation and academic achievement. The study utilizes a method of descriptive research and Academic Achievement Motivation Test (1984) developed by Dr.T. R Sharma to gather data from the 386 class X Dibrugarh District students which were selected by multiphase sampling method to measure their Academic Achievement Motivation. The student's academic achievement is determined by their percentage of marks in the class IX board examination. To find out more about the relationship between academic achievement motivation and academic achievement, statistical analysis is used, particularly product moment coefficient of correlation. These results highlight the significance of identifying and encouraging students' motivation for academic achievement. The future scope for several avenues of research and practical interventions to further enhance understanding and address the complex dynamics of academic achievement motivation and academic performance among Dibrugarh district, Assam Class X students.

Keywords: Academic achievement motivation, Academic achievement, Class X students, Descriptive research method, Dibrugarh district, Incidental sampling method, Quantitative approach.

1. Introduction

Global education systems aim to equip students from various social backgrounds with the skills essential to attain their full potential in life [Kumar et al., 2018; Kim and Seo, 2018]. A student's motivation is crucial to his or her academic achievement [Phukan, 2020]. The study on academic achievement motivation and academic achievement among Dibrugarh district, Assam Class X students, is anchored in an exploration of the intricate interplay between various variables shaping students' educational experiences and outcomes [Engin, 2020]. Academic achievement motivation, encompassing factors such as intrinsic interest in learning, extrinsic rewards, goal orientation, self-efficacy beliefs, and social influences, serves as a central variable under investigation [Kizkapan and Bektas, 2017]. Understanding the levels and determinants of academic achievement motivation among Class X students in this specific geographical context is pivotal for informing educational policies and interventions aimed at fostering a conducive learning environment [Yildirim, 2017]. Moreover, the academic achievement

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itself, measured through standardized test scores, grades, and overall academic performance, stands as another critical variable in this study, reflecting the tangible outcomes of students' educational endeavours [Northey et al., 2018]. By looking at the connection between academic achievement and also motivation for academic success, the research seeks to elucidate the factors contributing to students' academic success and identify avenues for enhancing educational practices and outcomes [Doménech-Betoret et al., 2017]. Students' test achievement results determine their academic success [Ahmad et al., 2022].

Motivation is considered to be a significant factor in academic success because its energies and directs behaviour toward achievement [Suldo et al., 2018; Steinmayr et al., 2019]. Classroom grades, external achievement exams, and classroom examinations are used to quantify academic achievement [Dunn and Kennedy, 2019]. The class X students' academic achievement is very essential because class X students have to face the first external examination i.e., the H.S.L.C examination. In the education system of India, the career of a student begins with the achievement of the H.S.L.C examination [Jahan, 2020].

The balance of the essay is organized as follows: section 2 shows the literature survey of the revision, and Section 3 demonstrates the problem statement and motivation of the research. Section 4 illustrates the research methodology, section 5 reveals the result and discussion of the revision, and finally, the research conclusion is depicted in Section 6.

2. Literature Survey

[Liou et al., 2021] examined whether there were any notable differences in the motivational beliefs of students about learning science between genders and grade levels. The study's conclusions draw attention to variations in motivational beliefs regarding learning science by gender and grade level as fit as how these differences relate to scientific achievement. By gender and grade level, the study also looked at the links between students' motivation to learn science and their accomplishments in it. From the Trends in International Mathematics and Science Study, data are included from Taiwanese children in grades 4 and 8 [Kataky et al., 2020]. Motivational ideas about education science and also their links to science achievement, femininity, and ranking level are highlighted by the study's findings [Bücker et al., 2018]. When r = 0.164 SWB had a small to medium size relationship that was statistically important. Across different SWB domains multiple levels and different theoretical accomplishments or SWB assessments, the correlation was consistent. The results suggest, in general, that both high achievers and low achievers do not always report consistently high and low levels of well-being, respectively.

Conducted research to determine: (1) The degree to which children from middle-class and the theoretical presentation of students from low-class homes vary in three key topics; (2), between the two groups, child engagement, parental involvement, and the differences in parental expectations; and (3) in explaining how SES affects academic achievement, the mediating role of child engagement, parental involvement, and their expectation. Results imply that child appointment, parental involvement, and expectations may all play significant roles as relationship mediators between SES and academic achievement [Poon et al., 2020]. From Hong Kong's mainstream primary schools, the sample included 165 middle-income primary students and 184 low-income primary pupils. Among the middle-class and low-class groups, Chinese and English subjects' academic achievement, and also the substantial disparities in child engagement, parental involvement, and parental expectations, are revealed in the results \(\Gamma\) Suna et al., 2020\(\Gamma\). The data were taken only from students who took these exams and their national test was presented for each of the three transition systems. The students' socioeconomic status effect was controlled after that the average results for both private schools and the public were compared utilizing covariance analysis. The outcomes were stable across all three transition systems, and they discovered that students in private schools had considerably superior academic achievement levels in language, mathematics, and science assessments.

[Venkataraman and Manivannan, 2023] indicated that the incentive for achievement was higher among secondary school pupils. 200 higher secondary students from Tamil Nadu's higher secondary

schools, India's Nagappattinam District are participating in the study. The outcomes show that pupils enrolled in upper secondary schools possess a moderate level of inspiration for attainment. A total of 30 pupil participants in this study were all students in grade VII Junior High School 1 Namlea. Questionnaires and datasheets are the students' motivational tools, as well as student achievement data gathered using sheet documentation tools, and the data collection techniques were utilized. The regular standard abnormality of 4.31104, the mean is 849.0333, the model is 83.00, and the median is 85.0000, are revealed in these results [Karaman et al., 2017]. The variables are analyzed based on MANOVA and descriptive statistics. The amount to which academic stress, focus of control with life satisfaction impacted success motivation was determined using hierarchical multiple regression. In achievement motivation between international students and Americans, the results show a statistically significant distinction.

[Wibrowski et al., 2017] stated longitudinal study's goal was to assess the consequences of the Skills Learning Support Program (SLSP), which supported the academic achievement, self-regulation practices, and motivational beliefs of first-generation college students. The outcomes demonstrated that from the valuations, scholars who contributed to the SLSP conveyed advanced levels of incentive and study skills. A wide range of ethnic and cultural backgrounds who needed financial, counselling and academic assistance were in this study which comprised 137 individuals. From the 739 admitted students, For comparison with those who did not take part in the program, academic data is gathered. Based on the conclusions, scholars who contributed to SLSP reported greater levels of incentive and study services on the post-test evaluations. A meta-analysis comprising 69 separate studies with a total of 16,473 participants provides definitive proof to settle this dispute presented by [Lei et al., 2018].

[Korkmaz et al., 2020] examined how educational games affected students' attitudes regarding the course, academic performance, and cooperative learning abilities. Therefore, gamified social studies education greatly influences students' attitudes toward social studies courses more than traditional methods do. With a pretest-posttest control group, the study used a semi-experimental research design. A total of 60 pupils from a secondary school in the fifth grade contributed to the study. The Academic Achievement Scale Attitude Scale for Social Studies Courses (kr-20=0.78), and Cooperative Learning Scale $(\alpha=0.80)$ were used to collect data for the study. As a consequence, the following analyses were carried out: mean, standard deviation, and also ANOVA. Gamification-enhanced social studies education has a substantially greater impact on students' views about social studies classes than traditional methods. To predict adolescent students' math achievement and academic motivation, explored the

carried out: mean, standard deviation, and also ANOVA. Gamification-enhanced social studies education has a substantially greater impact on students' views about social studies classes than traditional methods. To predict adolescent students' math achievement and academic motivation, explored the possible benefits of using an expectancy-value-cost approach [Jiang et al., 2018]. They discovered that cost could effectively explain the additional variance in a wide range of factors that are connected to academic progress and motivation, beyond what might be predicted from expectancy, using datasets (N = 637 and N = 211) for middle and high school students.

2.1. Hypotheses of the Study

- The Academic Achievement Motivation does not differ significantly among boys and girls Class X students of Dibrugarh District, Assam.
- In Dibrugarh District, Assam, there is no discernible Academic Achievement gap between class X boys and girls students.
- The Class X students of Dibrugarh District, Assam show no discernible relationship between Academic Achievement Motivation and Academic Achievement.

3. Problem Statement and Motivation

In many educational systems, pupils' academic accomplishment levels are compared between public and private institutions. Private school students had much greater academic achievement levels than public school pupils, according to this "school effect" and findings from the research. In many nations,

due to the concentration of pupils from low socioeconomic backgrounds and lower academic attainment levels, vocational education suffers from a significant disadvantage. One of the greatest critical metrics for evaluating students' performance and level of education is academic accomplishment. Test results or teacher-assigned grades measure the academic topics, the academic achievement is defined as the knowledge gained or abilities acquired. With the aptitude to adjust to the current external and internal environment, every student wants to do healthy in school and receive good grades, but this desire is inextricably linked. Academic achievement, often known as academic performance, refers to how far a student or institution has progressed toward their degree, either short- or long-term objectives. There is no consensus on how it should be evaluated or whether components of declarative knowledge are less significant than procedural knowledge, such as skills., such as facts but academic accomplishment is routinely measured through exams or continuous assessments. In recent decades, an increasing number of people have been absorbed in learning the characteristics that are linked to achievement in academics, as an improved empathy in this field may help to reduce the high rates of academic failure. However, just a few research has looked at the link between academic achievement motivation and adolescents' academic achievement. Furthermore, while many studies have observed the correlation between academic success and personality traits, intelligence, or basic cognitive processes, few have looked at all of them at that time. Students must study optimally and brand the greatest of their opportunities to attain high achievement. One-on-one assistance from academic advisers is suitable for facilities and services as well as, and students must also be provided with a favourable environment on campus.

3.1. Objectives of the Research Study

Examining academic achievement levels and motivation for academic success, and their comparison among boys and girls are given. The purposes of the present work are demonstrated as follows,

- To educate the level of academic achievement motivation of the class X students of Dibrugarh District, Assam.
- To educate the level of academic achievement of the Class X students of Dibrugarh District, Assam.
- To compare the academic achievement motivation of boys and girls class X students of Dibrugarh District, Assam.
- To compare the academic achievement of boys and girls class X students of Dibrugarh District, Assam.
- To study the association of academic achievement motivation and academic achievement of the Class X students of Dibrugarh District, Assam.

3.2. The Operational Definitions (OD) for the Variables are Given Below-

- Academic Achievement Motivation: Measured by self-reported levels of intrinsic interest in learning, perceived external rewards, goal orientation, and self-efficacy beliefs.
- Academic Achievement: Assessed through students' marks, consistent test scores, and overall academic performance records.
- Demographic Variables: Include gender, socioeconomic status, and educational background, determined through self-reporting and school records.

4. Methodology

With a greater and growing prompting the theoretical attainment in today's world, in the field of academic achievement, the influence of motivation has become noteworthy towards goal orientation and scholastic adjustment of a student. Academic achievement motivation is a significant factor which can reflect educational efficacy and the perception of the ability of students to their academic regards. The present study has attempted to highlight the position of academic achievement motivation that should be realized by the teacher, parents and educational planner deeply. It helps to prevent serious breaks in the personal and educational life of students.

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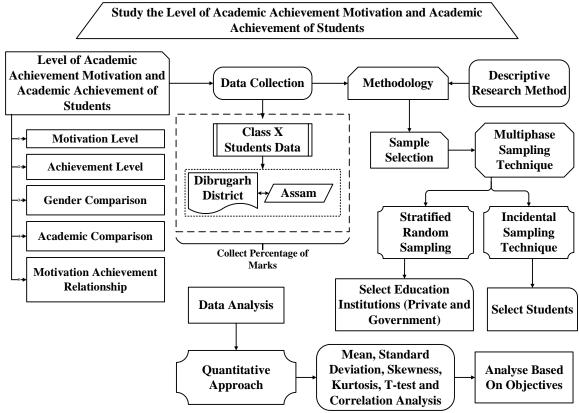


Figure 1. Block diagram of the research work.

Figure 1 depicts the block diagram of the research method. Here data collected from the class X students of Dibrugarh District, Assam. A combination of stratified random sampling method and incidental sampling method are adopted to select the samples. This study uses a descriptive research design. It measures academic achievement motivation. For analysis of the data, the quantitative approach is introduced, which measures the level of academic achievement motivation and academic achievement. Then it compares the academic achievement motivation and academic achievement of boys and girls. The study took the variables academic achievement motivation and academic achievement for correlation analysis.

Academic Achievement Motivation: Academic achievement motivation refers to a complex feeling of self-determination for academic success. The current investigation defines academic achievement motivation as the result of a person's performance on the Academic Achievement Motivation Test (1984) developed by Dr.T. R Sharma. A high-test score indicates that the respondent is highly motivated to achieve.

Academic Achievement: Academic achievement can be distinct as the information reached or skills established in theoretical subjects usually designed by the scores or by marks or both assigned by teachers. The marks/percentage received in the class IX Board examination in 2018 is used in this study to indicate the achievement in academics of the class X students of Dibrugarh District, Assam.

Class X Students: Class X students refer to students who are studying in class X in different educational institutions. Class X is the end class of the 10-year schooling system in India. Within the framework of the current study, class X students refer to all students studying in class X in the government and private schools in Dibrugarh District, Assam, in the year 2019.

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4.1 Method

This study employs descriptive research as a methodology to gather and analyse data to describe and understand academic achievement motivation and academic achievement among Class X Dibrugarh District students, in Assam. The investigators collected the percentage of marks of the respondents in the class IX board examination from school record books to determine their achievement in academic. In this case, the investigation used a descriptive methodology approach to measure academic achievement motivation and academic achievement and compare them based on gender differences among the selected students.

4.2 Sample

The sample for this study was chosen using a multiphase sampling technique. Fifty-six (56) educational institutions of the Dibrugarh District, Assam that offer high and higher secondary level education were chosen for the current investigation by using proportionate stratified random sampling. Both private and government high and higher secondary schools were included in the sample. After that, 386 pupils were chosen to serve as sample pupils for this study from these fifty-six (56) schools by using an incidental sampling technique. Thus, the sample of the existing study comprises 184 boys and 202 girls class X students who were enrolled during the 2018–19 academic year in various high and higher secondary schools in the Dibrugarh District of Assam.

4.3. Quantitative Approach

The research conducted in this study adopts a quantitative approach. This approach involves analyzing the collected data and examining either the entire population or a specific sample using quantitative methods, specifically statistical analysis, to test the formulated hypotheses and determine whether they support or reject the underlying theory. This approach encompasses various research methods such as experiments, quasi-experiments, and correlation studies. This study's principal goal is to look into the relationship between variables, specifically examining the impact of academic achievement motivation on the student's academic performance in state high schools or higher secondary schools. By utilizing a quantitative approach, this study aims to provide numerical evidence and statistical support for the link between academic performance and motivation on academic achievement. The use of statistical analysis techniques and tests for normality enhances the rigour and validity of the findings, providing insights into the nature of the variables under investigation.

4.4. Tools

Taking into account the study's goal, the researchers used the standardised Academic Achievement Motivation Test (1984) developed by Dr T. R Sharma to measure the sampled students' academic achievement motivation.

- The levels of academic achievement motivation and academic achievement were examined using the following metrics: mean, standard deviation, kurtosis and skewness.
- 't' test was used to study the difference between girls and boys class X students of Assam in their academic achievement motivation and academic achievement.
- The relationship between students' academic achievement motivation and academic achievement was examined using the correlation coefficient of the product moment.

5. Results

Every class X student studying at different high and higher secondary schools of Dibrugarh District of Assam,in the academic session 2018-2019 is the population of the study.

5.1. Analysis of Paradigm

The study aims to investigate the influence of academic achievement motivation on the achievement in academics of students in State High schools or higher secondary schools. To evaluate the hypothesis, a test for normality is conducted individually on each variable. The normality test is employed to determine whether each variable exhibits a normal distribution or deviates from it. The account of the data collection process provides details on the sample size, composition, and the schools involved. Furthermore, the usage of a quantitative research approach is explained, highlighting its suitability for hypothesis testing and statistical analysis. The mention of normality testing indicates the intention to assess the distributional properties of the variables under investigation.

- Following the study's objective, the researchers employed the standardized Academic Achievement Motivation Test (1984) developed by Dr T. R Sharma to assess the academic achievement motivation of the sample students. To ascertain their level of academic success, the investigators collected the marks/percentages obtained by the students in their class IX Board examination of 2018 from their school record books.
- To know the level of academic achievement motivation and academic achievement, descriptive statistics such as mean, standard deviation, kurtosis and skewness were utilized. These statistical measures provided insights into the central tendency, variability, and distribution data characteristics.
- To examine the implication of the difference between girls and boys in terms of academic achievement motivation and academic achievement among Class X students, the researchers employed the t-test. This statistical test allowed for the comparison of means between two groups, shedding light on potential gender-based variations in academic achievement motivation and academic achievement.
- To investigate the connection between academic achievement motivation and academic achievement, the researchers employed the product-moment coefficient of correlation. This statistical method facilitated the inspection of the gradation and course of the association between these two variables, providing insights into their interdependence.
- By utilizing these statistical techniques, the study aimed to gain a complete understanding of
 academic achievement motivation and its connection to students' academic achievement among
 Class X students. The results obtained through these analyses contribute to the existing
 knowledge and shed light on the factors influencing student's academic achievement and academic
 achievement motivation.

Mean: The mean is the average value for the most common value in a collection of numbers data. It is a measurement of a probability distribution's central tendency along median and mode. It is also referred to as an expected value.

$$x = \frac{\sum a_i}{n} \tag{1}$$

Where x is the mean of the population, $\sum a_i$ is the amount of the academic achievement or sum of academic achievement values, and n is the amount of sample data

Standard Deviation: The amount of how much a set of data varies or is dispersed is the standard deviation. A high standard of deviation suggests that the standards are dispersed throughout a larger range, whereas a low standard of deviation suggests that the standards tend to be near the mean of the gathered data.

$$\sigma = \sqrt{\frac{\sum (p_i - \mu)^2}{N}} \tag{2}$$

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Where σ is the standard deviation of the population, p_i is each value from the sample, μ is the sample's mean, and N is the sample's size

Skewness: An alteration or irregularity that leaves from a set of data's normal distribution, or symmetrical bell curve, is mentioned as skewness.

$$\widetilde{\mu}_3 = \frac{\sum_{i}^{N} \left(X_i - \overline{X} \right)^3}{\left(N - 1 \right) \sigma^3} \tag{3}$$

Where $\tilde{\mu}_3$ is the skewness of the distribution, X_i is the random variables and \overline{X} is the mean of the distribution.

Objective 1: Academic Achievement Motivation Levels of the class X students of Dibrugarh District, Assam.

Table 1.
Academic achievement motivation levels.

Category	Academic achievement motivation score	No. of class x students
High motivation	Boys-33 or above	74 (19.17%)
	Girls-34 or above	
Average	Boys- between 26-32	191 (49.48%)
motivation	Girls- between 27-33	, , ,
Low motivation	Boys- 25 or above	121 (31.35%)
	Girls- 26 or above	, , ,
Total		386

Table 1 presents the Academic Achievement Motivation scores of Class X students, categorized by different levels of motivation. For boys, a score of 33 or above indicates high motivation, while for girls, a score of 34 or above represents high motivation. A total of 74 students achieved high motivation, which accounts for 19.17% of the student population. The average motivation level for boys falls within the variety of 26 to 32, while for girls, it lies between 27 and 33. Approximately 49.48% of students, totaling 191 students, achieved an average level of motivation. In terms of low motivation, boys with a score of 25 or above and girls with a score of 26 or above are classified in this category. A total of 121 students, corresponding to 31.35% of the student population, exhibited low motivation. This breakdown of motivation levels provides valuable insights into the distribution of academic achievement motivation among Class X students, highlighting the proportion of students falling into each category. Empathetic to the occurrence of different motivation levels can inform efforts to address and enhance student motivation in academic pursuits.

Table 2.Academic achievement motivation levels of the class x students.

Variable	Mean	Standard deviation	Skewness	Kurtosis
Academic achievement motivation	27.54	4.70	- 0.88	1.55

Table 2 presents the descriptive statistics of academic achievement motivation, including the mean, standard deviation, kurtosis and skewness. The mean value for academic achievement motivation is 27.54, indicating the average level of motivation among the students. The standard deviation of 4.70 reflects the extent of variability in the academic motivation scores across the sample. The calculated skewness indicates that the desire for academic achievement motivation is negatively skewed or skewed to the left. This indicates that the popular scores are concentrated towards the advanced conclusion of the scale, suggesting a great equal of academic achievement among the students. The kurtosis value

indicates the distribution of academic achievement motivation scores is platykurtic. This means the distribution is flatter and less peaked than a normal distribution. The scores are distributed more evenly, indicating a relatively balanced distribution of motivation levels among the students. These descriptive statistics provide valuable insights into the central tendency, variability, and shape of the distribution of academic achievement motivation scores. Understanding these characteristics helps in interpreting the overall pattern and distribution of motivation levels among the students in the study. *Objective 2:* Academic achievement Levels of the Class X students of Dibrugarh District, Assam

Table 3. Levels of academic achievement.

Category	No. of students
High (Persons scored 60% and above)	217 (56.22%)
Medium (Persons scored 45% and above)	124 (32.12%)
Low (Persons scored 44% and below)	45 (11.66%)
Total	386

Table 3 reveals the academic achievement of class X students in Dibrugarh District, Assam. The categories of academic achievement scores are high, medium and low. There, 56.22% of students (217 students) out of 386 students achieved a high score, which achieves a score of 60% or above. Then the medium scores are represented as the scores who achieve 45% or above is 124 students, i.e., 32.12%. Finally, 45 students that are 11.66% students achieved low scores, the low score is denoted as the students who scored 44% or below.

Table 4.
Academic achievement levels.

Variable	Mean	Standard deviation	Skewness	Kurtosis
Academic achievement	77.16	14.48	-1.05	0.34

The mean, standard deviation, kurtosis and skewness of the academic achievement scores for Class X pupils are included in Table 4's descriptive statistics. The average level of achievement among the pupils is represented by the mean academic score, which is 77.16. The sample-wide degree of score variability is shown by the standard deviation of 14.48. According to the calculated value of skewness, the academic achievement scores are negatively skewed. This suggests that the mainstream of results is focused at the advanced end of the curve, indicating that the students have achieved more academically. The academic score distribution is platykurtic, indicated by the kurtosis value. The distribution of scores is hence flatter and has fewer peaks. The scores are more equally distributed, pointing to a fairly even range of student academic achievement levels.

Objective 3: Comparison of the Academic Achievement Motivation of Boys and Girls Class X students of Dibrugarh District, Assam:

Table 5.

Comparision of academic achievement motivation of boys and girls class X students.

Gender	N	Mean	Standard deviation	Standard error of mean	Degrees of freedom	t- value	Significance
Girl	202	25.19	4.81	0.94			Not noteworthy
Boy	184	25.92	4.64	0.95	384	0.54	at 0.05 level

The Comparison of the Academic Achievement Motivation of Boys and Girls Class X students of Dibrugarh District, Assam is shown in Table 5. Girls and boys have respective mean values of 25.19 and 25.92, while their respective standard deviations are 4.81 and 4.64. The degrees of freedom are 384, and

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DOI: 10.55214/25768484.v8i5.1929 © 2024 by the authors; licensee Learning Gate the Standard Error of Mean is 0.94 and 0.95. The non-significant t value displays no significant variation in the Academic Achievement Motivation between boys and girls class X students of the Dibrugarh district, Assam. In light of this, the statement "The Academic Achievement Motivation does not differ significantly among boys' and girls' Class X students of Dibrugarh District, Assam" may be accepted.

Objective 4: Comparison of the academic achievement of Boys and Girls Class X students of Dibrugarh District, Assam.

Table 6.Comparision of the academic achievement of boys and girls class X students.

Gender	N	Mean	Standard deviation	Standard error of mean	Degrees of freedom	t-value	Significance
Girl	202	74.88	15.21	2.98	ireedom		Not significant at
Boy	184	79.63	13.53	2.76	384	1.16	0.05 level

Table 6 depicts the difference in academic achievement between boys and girls. The mean values for girls and boys are 74.88 and 79.63, and the standard deviation for girls and boys are 15.21 and 13.53. Then the Standard Error of Mean is 2.98 and 2.76, and the Degrees of Freedom are 384. Then the non-significant t value implies that there is no significant difference among boys and girls class X students of the Dibrugarh district, Assam concerning their Academic Achievement. So, the statement "In Dibrugarh District, Assam, there is no discernible academic achievement gap between class X boys' and girls' students.

" May be accepted.

Objective 5: Relationship between Academic Achievement Motivation of the class X students of Dibrugarh District, Assam, and their Academic Achievement

Table 7.

Correlation between academic achievement motivation and academic achievement.

Variable	Product-moment coefficient of correlation (r)	Significance
Academic achievement motivation and academic achievement	0.31	Significant at 0.05 level

The relationship between Academic Achievement Motivation and Academic Achievement is exposed in Table 7. It can be shown that the Class X pupils in the Dibrugarh district of Assam have a 0.31 value for the product-moment coefficient of correlation between academic Achievement Motivation and Academic Achievement, which is significant at 0.05 equal. It indicates that Academic Achievement Motivation and Academic Achievement have a strong relationship. Thus, the statement ,the Class X students of Dibrugarh District, Assam show no discernible relationship between academic achievement motivation and academic achievement is rejected.

6. Discussion

- The present study reveals that the class X students have an average level of academic achievement motivation as 49.48% belong to this category. Moreover, it is seen that 19.17% and 31.35% of sampled students fit in the high academic achievement motivation and low academic achievement motivation categories respectively.
- The result of the study regarding academic achievement level reveals that the achievement in academics of class X students is high as the mainstream of the students counted 60% and above.
- The study reveals that Academic Achievement Motivation does not differ significantly among boys and girls Class X students of Dibrugarh District, Assam.

- The study found that in Dibrugarh District, Assam, there is no discernible academic achievement gap between class X boys and girls students.
- This study finds an important optimistic association between academic achievement motivation and the academic achievement of the class X students of Dibrugarh district, Assam. This result is complimentary with the result of Robbi, P.K.et al. (2020), Kumar, D (2021) etc.

6.1. Implications in Education

The implications of this study are significant and can inform various stakeholders in the field of education, including educators, policymakers, and researchers.

- Understanding the levels of academic achievement motivation of Class X students of Dibrugarh district, Assam is crucial for educators. It provides insights into the psychological factors influencing students' academic performance. Educators can use this information to design targeted interventions to enhance students' motivation, particularly those in the low motivation category. Such interventions may include counselling, mentor ship programs, or motivational workshops.
- Policymakers can use the findings of this study to make learned decisions about educational
 policies and resource allocation. For instance, if a significant number of students exhibit low
 academic achievement motivation, policymakers may consider implementing policies to improve
 the overall learning environment and support structures in schools.
- The study's results indicate that the Academic Achievement Motivation does not differ significantly among boys and girls Class X students of Dibrugarh District, Assam. This highlights the importance of promoting gender equity in education. Politicians and educators should continue to work towards creating an inclusive and equitable learning environment for all students.
- The important optimistic association between academic achievement motivation and academic achievement underscores the importance of fostering motivation in students. Educators can employ strategies to boost students' motivation, such as recognizing and rewarding their achievements, setting clear goals, and providing engaging and relevant learning experiences.
- This study donates to the current knowledge base on academic achievement motivation and academic achievement among Class X students. Researchers in the field of education can use this study as a foundation for further investigations into the factors influencing motivation and achievement. Future research may explore the impact of specific interventions on inspiration and theoretical performance or delve deeper into the reasons behind variations in motivation levels.
- The study's focus on both motivation and achievement provides a more holistic understanding of students' academic experiences. It encourages educators and policymakers to consider not only academic outcomes but also the underlying factors that contribute to those outcomes. A holistic approach to education may lead to more effective interventions and support systems.

7. Conclusion

The teaching organization in India attempts to improve the excellence of teaching right from the foundation level i.e., primary level by making the teachers trained enough to impart proper education to students. It is education that can create a strong backbone for a nation. Quality education is sure to produce quality human resources. As secondary stage is an important stage of education, the students at this level must be emphasized to perform better in academic achievement. The students would achieve better and develop productivity only when they are properly adjusted to their school environment. To conclude it can be said that, the investigators of this study made a small effort to ensure the correlation between academic achievement motivation and academic achievement of the Class X students of Dibrugarh District, Assam, and found a significant optimistic association among these two variables.

- The present study reveals that the Class X students have an average level of academic achievement motivation as 49.48% of the students belong to this category. Moreover, it is seen that 19.17% and 31.35% of sampled students fit in the high academic achievement motivation and low academic achievement motivation categories respectively.
- Academic achievement level reveals that the achievement in academics of the Class X students is high as the majority of the students scored 60% and above.
- The study reveals that Academic Achievement Motivation does not differ significantly among boys and girls Class X students of Dibrugarh District, Assam.
- The study found that in Dibrugarh District, Assam, there is no discernible academic achievement gap between class X boys' and girls' students.
- This study finds an important optimistic association between academic achievement motivation and the academic achievement of the class X students of Dibrugarh district, Assam.
- Academic achievement motivation reflects educational determination and perception of the ability of a student which brings better academic achievement to their life. It helps to get better human resources for society. The investigators conclude this study with the hope that the result of the study encourages planners, teachers, and parents to promote adequate strategy so that it can strengthen the academic achievement motivation level of the students.

7.1. Delimitation of the Present Work

The study described academic achievement motivation and academic achievement of Class X students of Dibrugarh District, Assam and appears to be comprehensive and insightful. However, like any research, it may have some limitations. The study's sample size consisted of 386 Class X students from Dibrugarh District, Assam. While this is a reasonable sample, the representativeness of the sample might be a concern. If the sample is not well-balanced in terms of gender, socio-economic background, or other relevant factors, the findings may not generalize well to the broader population. Academic achievement is assessed primarily based on students' percentage of marks in the Class IX board examination. This measure may not capture the full spectrum of academic achievement or issues that contribute to it, such as extracurricular activities, teacher influence, or personal circumstances. The study is specific to Dibrugarh District, Assam. Therefore, the findings may not apply to students in other regions with different educational systems, socio-economic conditions, or cultural backgrounds. The study primarily focuses on the association between academic achievement motivation and academic achievement. Other potentially relevant variables, such as parental involvement, school quality, or teaching methods, are not considered. A broader set of variables could deliver a more widespread image. It's important to acknowledge these limitations to provide the setting for the study's findings and to guide future research in addressing these potential gaps in understanding academic achievement motivation and academic achievement among Class X students of Dibrugarh district, Assam

7.2. Ethical Consideration

In conducting this study on academic achievement motivation and academic achievement among Class X students of Dibrugarh District, Assam, several ethical considerations were taken into account, aligning with the key philosophies outlined in the Belmont Report: respect for people, generosity, and justice. Respect for persons emphasizes treating individuals as autonomous agents capable of making informed decisions. In this study, a knowledgeable agreement was obtained from the participating scholars, as thriving as from their parents or guardians, before data collection. The confidentiality of participants' information was strictly maintained, ensuring their privacy and protecting their data. Beneficence involves maximizing potential benefits while minimizing potential risks to the participants. In this study, the researcher aimed to shed light on the significance of academic achievement motivation for academic accomplishment and its positive impact on student's personal and educational lives. The findings contribute to the empathy of factors influencing student achievement and inform educational

practices for fostering inspiration and performance. Measures were taken to ensure that the research procedures and data collection were conducted in a method that minimized any potential harm or discomfort to the participants.

Justice pertains to the fair distribution of research burdens and benefits. The study aimed to include an illustrative sample of Class X scholars from various schools in Assam, regardless of gender. By employing an incidental sampling technique, efforts were made to ensure equal opportunities for students of all backgrounds to contribute to the study. The analysis of gender differences aimed to address potential disparities and promote equality in academic achievement motivation and academic success. By considering these ethical principles, the study prioritized the well-being and autonomy of the participants, sought to maximize benefits while minimizing risks, and aimed for fairness and inclusivity in the investigation process. The findings contribute to the broader understanding of academic achievement motivation and provide insights that can inform educational policies and practices aimed at supporting students' success and well-being.

7.3. Recommendations

Implementing personalized learning programs tailored to individual student needs can greatly boost academic achievement motivation and academic achievement. These agendas can involve distinguished instruction, adaptive learning technologies, and student-centred approaches to cater to diverse learning styles and abilities. Providing comprehensive counselling and guidance services to students can play an energetic role in enhancing their academic achievement motivation and academic achievement. Counselling sessions focused on goal setting, time management, study skills, and career planning can empower students to take ownership of their learning journey and strive for excellence. Furthermore, the development of a positive and kind learning environment within schools is essential. This includes promoting a culture of academic excellence, encouraging peer collaboration and support, and recognizing and celebrating student achievements to boost their self-esteem and motivation. Incorporating innovative teaching methodologies and interactive learning experiences can make the learning process more engaging and meaningful for students. Integrating technology, project-based learning, and real-world applications into the curriculum can stimulate curiosity, creativity, and intrinsic motivation among students. Continuous monitoring and evaluation of student progress and feedback mechanisms can help identify areas for improvement and provide timely interventions to support struggling students and reinforce positive behaviours and academic achievements.

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References

- [1] Ahmad, S. Sharma, R. Singh, A. Gehlot, N. Priyadarshi, B. Twala, "MOOC 5.0: A Roadmap to the Future of Learning," Sustainability, 14(18), p.11199, 2022. https://doi.org/10.3390/su141811199
- [2] S. Bal-Taştan, S.M.M. Davoudi, A.R. Masalimova, A.S. Bersanov, R.A. Kurbanov, A.V. Boiarchuk and A.A. Pavlushin, "The impacts of teacher's efficacy and motivation on student's academic achievement in science education among secondary and high school students," EURASIA Journal of Mathematics, Science and Technology Education, 14(6), pp.2353-2366, 2018. https://doi.org/10.26710/reads.v5i2.540.
- Bonia, Nipshikha and Kankana Moran, "A Study-on-Study Habit and Educational Aspiration of the Class X Students of Jorhat District, Assam," *Palarch's Journal of Archaeology of Egypt/Egyptology*, 17(7), pp.16109-16116, 2020.
- [4] S. Bücker, S. Nuraydin, B.A. Simonsmeier, M. Schneider and M. Luhmann, "Subjective well-being and academic achievement: A meta-analysis," *Journal of Research in Personality*, 74, pp.83-94, 2018.
- [5] D. Cvencek, S.A. Fryberg, R. Covarrubias and A.N. Meltzoff, "Self-concepts, self-esteem, and academic achievement of minority and majority North American elementary school children," *Child Development*, 89(4), pp.1099-1109, 2018.
- Doménech-Betoret, Fernando, Laura Abellán-Roselló and Amparo Gómez-Artiga, "Self-efficacy, satisfaction, and academic achievement: the mediator role of Students' expectancy-value beliefs," Frontiers in Psychology, 8, p.1193. 2017.

- [7] T.J. Dunn and M. Kennedy, "Technology Enhanced Learning in higher education; Motivations, engagement, and academic achievement," *Computers & Education*, 137, pp.104-113, 2018.
- [8] G. Engin, "An Examination of Primary School Students' Academic Achievements and Motivation in Terms of Parents' Attitudes, Teacher Motivation, Teacher Self-Efficacy, and Leadership Approach," *International journal of progressive education*, 16(1), pp.257-276, 2020.
- [9] M. Imran, F. Hasan, F. Ahmad, M. Shahid, "A Workflow Allocation Strategy Using Elitist Teaching-Learning-Based Optimization Algorithm in Cloud Computing," *International Conference on Innovative Computing and Communications*. *ICICC 2023. Lecture Notes in Networks and Systems, Springer, Singapore, 537*, 2023.
- [10] M.S. Jahan, "A Study on Adjustment, Anxiety and Academic Achievement of School Students of South Assam," International Journal of Management, 11(10), 2020.
- [11] Y. Jiang, E.Q. Rosenzweig and H. Gaspard, "An expectancy-value-cost approach in predicting adolescent students' academic motivation and achievement," *Contemporary Educational Psychology*, 54, pp. 139-152, 2018.
- [12] M.A. Karaman and J.C. Watson, "Examining associations among achievement motivation, locus of control, academic stress, and life satisfaction: A comparison of US and international undergraduate students," *Personality and Individual Differences*, 111, pp.106-110, 2017.
- [13] B.D. Kataky, N. Bonia and K. Moran, "Self-Concept and Academic Achievement: A Study on the 11th Grade Students of Lakhimpur District, Assam," 2020.
- [14] K.R. Kim and E.H. Seo, "The relationship between teacher efficacy and students' academic achievement: A metaanalysis," *Social Behavior and Personality: an international journal*, 46(4), pp.529-540, 2018.
- [15] O. Kizkapan and O. Bektas, "The Effect of Project-Based Learning on Seventh Grade Students' Academic Achievement," *International Journal of Instruction*, 10(1), pp.37-54, 2017.
- [16] Ö. Korkmaz and Ç. Öztürk, "The effect of gamification activities on students' academic achievements in social studies courses, attitudes towards the course and cooperative learning skills," *Participatory Educational Research*, 7(1), pp.1-15, 2020.
- [17] R. Kumar, A. Zusho and R. Bondie, "Weaving cultural relevance and achievement motivation into inclusive classroom cultures," *Educational Psychologist*, 53(2), pp.78-96, 2018.
- [18] H. Lei, Y. Cui and W. Zhou, "Relationships between student engagement and academic achievement: A metaanalysis," *Social Behavior and Personality: an international journal*, 46(3), pp.517-528, 2018.
- [19] P.Y. Liou, C.L. Wang, J.J. Lin and S. Areepattamannil, "Assessing students' motivational beliefs about learning science across grade level and gender," *The Journal of Experimental Education*, 89(4), pp.605-624, 2021.
- [20] G. Northey, R. Govind, T. Bucic, M. Chylinski, R. Dolan and P. van Esch, "The effect of here-and-now learning on student engagement and academic achievement," *British Journal of Educational Technology*, 49(2), pp.321-333, 2018.
- [21] S.R. Phukan, "Construction and Standardization of Academic Motivation Scale," 2, 2020.
- [22] K. Poon, "The impact of socioeconomic status on parental factors in promoting academic achievement in Chinese children," *International Journal of Educational Development*, 75, p.102175, 2020.
- [23] R. Steinmayr, A.F. Weidinger, M. Schwinger and B. Spinath, "The importance of students' motivation for their academic achievement-replicating and extending previous findings," Frontiers in Psychology, 10, p.1730, 2018.
- [24] S.M. Suldo, E. Shaunessy-Dedrick, J. Ferron and R.F. Dedrick, "Predictors of success among high school students in advanced placement and international baccalaureate programs," Gifted Child Quarterly, 62(4), pp.350-373, 2018.
- [25] H.E. Suna, H. Tanberkan, G.Ü.R. Bekir, P.E.R.C. Matjaz and Ö.Z.E.R. Mahmut, "Socioeconomic status and school type as predictors of academic achievement," *Journal of Economy Culture and Society*, 61, pp.41-64, 2020.
- [26] S. Venkataraman and S. Manivannan, "A Study on Achievement Motivation of Higher Secondary Students," 2023.
- C.R. Wibrowski, W.K. Matthews and A. Kitsantas, "The role of skills learning support program on first-generation college students' self-regulation, motivation, and academic achievement: A longitudinal study," Journal of College Student Retention: Research, Theory & Practice, 19(3), pp.317-332, 2017.
- [28] I Yildirim, "The effects of gamification-based teaching practices on student achievement and students' attitudes toward lessons," The Internet and Higher Education, 33, pp.86-92, 2017.
- [29] V.V. Kumar and G. Tankha, "Influence of achievement motivation and psychological adjustment on academic achievement: A cross-sectional study of school students," *Humanities & Social Sciences Reviews*, 8(1), pp.532-538, 2020.
- [30] A.A. Robbi, G. Gusnardi and S. Sumarno, "Analysis of the Effect of Learning Motivation on Learning Achievement," *Journal of Educational Sciences*, 4(1), p.106, 2020.