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# Challenges in Learning Mathematics: A Study from the Perspective of School Student's

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**Abstract**

This study investigates the challenges experienced by school students in learning mathematics and explores their perceptions and experiences. The objectives of the study are to assess students' feelings of sleepiness, boredom, and interest in mathematics, examine teacher-student interactions, identify language barriers, and determine the factors contributing to boredom during mathematics classes. A survey-based research design was used, and a representative sample of students was selected through stratified random sampling. Data were collected using a structured questionnaire and analysed using descriptive statistics, hypothesis testing, and variable importance tests. The study identified that a significant percentage of students reported feeling sleepy, bored, or uninterested towards learning mathematics. The observed proportions deviated significantly from the reference value of 0.5, suggesting distinct experiences among students. Additionally, no significant difference was found in the balance of positive and negative teacher-student interactions. However, variable importance tests identified key factors contributing to students' boredom towards learning mathematics, including teaching style, subject matter confusion, and workload.

Based on the findings, several implications for mathematics education are suggested. It is vital to employ engaging and interactive teaching methods to address students' feelings of sleepiness and boredom. Creating a positive classroom environment that nurtures student interest and motivation is essential. Additionally, reducing workload and providing clear explanations for challenging concepts can reduce confusion and enhance students' understanding of mathematics. Efforts should also be made to overcome language barriers and ensure effective communication between teachers and students.

In conclusion, this study highlights the challenges faced by students in mathematics learning. The findings underscore the importance of establishing aencouraging and supportive learning environment to promote student engagement and interest in mathematics. By addressing the identified factors contributing to boredom, educators and policymakers can enhance the quality of mathematics education, leading to improved learning experiences and outcomes for students.

**Keywords:** Mathematics Learning, Student Perceptions, Teacher-Student Interactions, Boredom, Teaching Style, Workload

## 1. Introduction

The field of education is constantly developing, and understanding students' perceptions and involvements is fundamental for improving the teaching and learning process. In this context, a recent survey was conducted among school students to gain insights into their views about mathematics. Mathematics, being a fundamental subject with its own unique challenges, can meaningfully impact students' attitudes and academic performance. By exploring students' perceptions of various aspects related to mathematics, such as their level of interest, engagement, and interactions with teachers, valuable information can be gathered to inform educational practices and interventions.

The survey data presented in this analysis cover a wide range of variables, including students' feelings of sleepiness, boredom, and lack of interest during mathematics classes, as well as their opinions on teaching methods, teacher-student interactions, and

the overall classroom environment. Additionally, the survey explores specific issues such as students' struggle with understanding the language of mathematics, difficulties in retaining and applying mathematical methods, and their perceptions of the teaching style and expectations. By examining these factors, educators, policymakers, and researchers can gain a deeper understanding of the challenges faced by students and identify areas for improvement within the mathematics education system.

This analysis aims to present the major findings of the survey and provide real-world suggestions to address the identified issues. The findings offer valuable direction for educators to enhance their instructional practices, refine the classroom environment, and create a more engaging and supportive learning atmosphere for students. Moreover, the recommendations and implications provided in this analysis serve as a starting point for developing effective strategies and interventions to improve students' attitudes towards mathematics and increase their overall learning outcomes.

By prioritizing student perspectives and incorporating their feedback into educational decision-making processes will create a positive environment towards learning mathematics, encourages active learning, and supports students in achieving their full potential in this beautiful natural subject.

## 2. Need for the Study

The need for this study arises from the recognition of the importance of understanding students' perspectives and experiences in mathematics education. By gaining understandings into students' views about mathematics, educators and policymakers can make well-versed decisions and implement effective strategies to address the challenges faced by students and enhance their learning outcomes. The following are the key reasons highlighting the need for this study:

**1.) Enhancing Student Engagement:** Mathematics is often perceived as a challenging and intellectual subject, leading to disengagement and lack of interest among students. By exploring students' feelings of sleepiness, boredom, and interest, this study can provide valuable insights into the factors that influence student engagement. Understanding these factors can help educators design instructional approaches that foster interest, motivation, and active participation in mathematics classes.

**2.) Improving Teacher-Student Interactions:** The teacher-student relationship plays a vital role in students' learning experiences. By investigating students' perceptions of teacher behaviour, such as entering class late, teaching style, and expectations, this study can identify areas for improvement in teacher-student interactions. Addressing these areas can promote positive relationships, effective communication, and a supportive learning environment, leading to better student engagement and achievement in mathematics.

**3.) Addressing Language Barriers:** Mathematics has its own language and terminology, which can pose challenges for students, particularly those who are not fluent in the language of instruction. By examining students' difficulties in understanding the language of mathematics, this study can inform the development of language support strategies and resources. These measures can help students overcome language barriers, improve comprehension, and enhance their overall mathematical learning experience.

**4.) Identifying Learning Challenges:** Students may face specific difficulties in mathematics, such as struggling to retain and apply mathematical methods or finding certain concepts confusing. By exploring these challenges, the study can shed light on areas that require additional support and intervention. This understanding can guide educators in providing targeted assistance, reinforcement, and clarification, enabling students to overcome learning obstacles and develop a deeper understanding of mathematical concepts.

**5.) Informing Educational Practices:** The findings of this study can provide valuable insights for educators and policymakers in developing evidence-based strategies and interventions in mathematics education. By aligning instructional methods, curriculum design, and assessment practices with students' needs and preferences, educational stakeholders can create a more inclusive, engaging, and effective mathematics learning environment.

Overall, the study's significance lies in its potential to contribute to the improvement of mathematics education by addressing the challenges faced by students and promoting a positive and supportive learning environment. The findings and recommendations can inform educational policies, teacher training programs, and curriculum development initiatives, ultimately leading to enhanced student engagement, comprehension, and achievement in mathematics.

## 3. Objectives

1. To assess students' perceptions and experiences related to mathematics education, including their levels of sleepiness, boredom, interest, teacher-student interactions, language barriers, and learning challenges.
2. To examine the extent of students' agreement or disagreement with various statements related to mathematics education, such as the teaching style, workload, teacher expectations, and classroom environment.
3. To determine the relative importance of various factors contributing to students feeling bored during their mathematics period, with the aim of identifying key areas for intervention and improvement in mathematics education.

## 4. Hypotheses

1. There is no significant difference between the observed proportions of students feeling sleepy, bored, or uninterested in mathematics and a reference value of 0.5.
2. There is no significant difference between the observed proportions of positive and negative teacher-student interactions and a reference value of 0.5.
3. There is a significant relationship between the identified factors contributing to students feeling bored during their mathematics period and their overall experience of mathematics education.

## 5. Methodology

**1.) Study Design:** This study utilizes a survey-based research design to collect data on students' perceptions and

experiences in mathematics education. A structured questionnaire was developed to capture information on various variables, including students' feelings of sleepiness, boredom, interest, teacher-student interactions, language barriers, and learning challenges.

**2.) Sample Selection:** A representative sample of school students was selected using a stratified random sampling technique. The sample included students from different grade levels and diverse backgrounds to ensure the study's findings are applicable to a wide range of students.

**3.) Data Collection:** The survey questionnaire was administered to the selected students during regular school hours. Ethical considerations, such as informed consent and confidentiality, were followed throughout the data collection process. The survey was conducted in a standardized manner to maintain consistency and minimize bias.

**4.) Variables and Measures:** The survey questionnaire included items related to various variables of issues, such as sleepiness, boredom, interest, teacher-student interactions, language barriers, and learning challenges in mathematics. Likert scale items were used to measure students' perceptions and experiences, allowing for quantitative analysis of the data.

**5.) Data Analysis:** The collected data were subjected to statistical analysis using appropriate methods with the support of Statistical Package for the Social Sciences (SPSS V2). Descriptive statistics, such as frequencies and proportions, were computed to summarize the students' responses for each variable. Hypothesis testing, such as the binomial test, was conducted to compare the observed proportions with a reference value of 0.5. Statistical significance was determined using an alpha level of 0.05.

**6.) Interpretation of Findings:** The analysis of the survey data yielded key findings regarding students' perceptions and experiences in mathematics education. The results were interpreted by considering the proportions, significance levels, and patterns observed across different variables. The findings were then compared with existing literature and educational theories to provide a comprehensive understanding of the students' perspectives.

**7.) Limitations:** Any potential limitations of the study were acknowledged. These may include sample bias, self-reporting biases, and the generalizability of findings to other educational contexts. Steps were taken to mitigate these limitations, such as using a representative sample and maintaining anonymity and confidentiality in the survey.

**8.) Ethical Considerations:** The study followed ethical guidelines to ensure the rights and well-being of the participating students. Permission was obtained from the students who participated in the survey, and measures were taken to protect their privacy and confidentiality throughout the study.

The methodology employed in this study provides a systematic approach to collect and analyse data on students' perceptions and experiences in mathematics education. The use of a survey instrument allows for efficient data collection from a large sample, enabling a comprehensive understanding of students' views. The findings derived from this methodology contribute valuable insights that can be useful to design educational practices, policy decisions, and interventions aimed at enhancing students' engagement and learning outcomes in mathematics.

**9.) Sample and Sample Technique:** The data was collected from 12th standard students studying in selected government schools, government-aided schools, and private schools located in Tiruchirappalli city. The population for the study consisted of schools with more than 100 students in the 12th standard, specifically focusing on mathematics as one of their subjects. A sample was selected based on students who scored below 70% in their mathematics exams, resulting in the identification of 342 students. The purpose of the study was explained to the respondents, and questionnaires were distributed to collect data. Out of the 342 questionnaires distributed, 256 were returned, and among those, 215 questionnaires were fully completed and considered for data analysis. Hence, a purposive sampling technique was employed for this study.

## 6. Results and Discussion

**Table 1:** Binomial Test

| Variable | Level | Counts | Total | Proportion | p |
|---|---|---|---|---|---|
| Feeling Sleepy | No | 129 | 215 | 0.600 | 0.004 |
| | Yes | 86 | 215 | 0.400 | 0.004 |
| Feeling Bored | No | 118 | 215 | 0.549 | 0.172 |
| | Yes | 97 | 215 | 0.451 | 0.172 |
| No Interest | No | 128 | 215 | 0.595 | 0.006 |
| | Yes | 87 | 215 | 0.405 | 0.006 |
| Lazy | No | 113 | 215 | 0.526 | 0.495 |
| | Yes | 102 | 215 | 0.474 | 0.495 |
| Very Confusing | No | 45 | 215 | 0.209 | <.001 |
| | Yes | 170 | 215 | 0.791 | <.001 |
| Forget Methods | No | 54 | 215 | 0.251 | <.001 |
| | Yes | 161 | 215 | 0.749 | <.001 |
| Don’t Like Math Teacher | No | 176 | 215 | 0.819 | <.001 |
| | Yes | 39 | 215 | 0.181 | <.001 |
| Scold | No | 100 | 215 | 0.465 | 0.340 |
| | Yes | 115 | 215 | 0.535 | 0.340 |
| Clever students are focused | No | 91 | 215 | 0.423 | 0.029 |
| | Yes | 124 | 215 | 0.577 | 0.029 |
| Teacher Enters Class Late | No | 184 | 215 | 0.856 | <.001 |
| | Yes | 31 | 215 | 0.144 | <.001 |
| Teaching Style too Fast | No | 87 | 215 | 0.405 | 0.006 |
| | Yes | 128 | 215 | 0.595 | 0.006 |
| Too Much Writing and Home Work | No | 66 | 215 | 0.307 | <.001 |
| | Yes | 149 | 215 | 0.693 | <.001 |
| Doubts Cleared | No | 67 | 215 | 0.312 | <.001 |
| | Yes | 148 | 215 | 0.688 | <.001 |
| Difficult questions explained | No | 50 | 215 | 0.233 | <.001 |
| | Yes | 165 | 215 | 0.767 | <.001 |
| Don’t Understand Language | No | 170 | 215 | 0.791 | <.001 |
| | Yes | 45 | 215 | 0.209 | <.001 |
| Teaching in Boring Way | No | 134 | 215 | 0.623 | <.001 |
| | Yes | 81 | 215 | 0.377 | <.001 |
| Teacher Expects too Much | No | 48 | 215 | 0.223 | <.001 |
| | Yes | 167 | 215 | 0.777 | <.001 |
| Always Scold Us | No | 115 | 215 | 0.535 | 0.340 |
| | Yes | 100 | 215 | 0.465 | 0.340 |
| No Humor No Jokes | No | 116 | 215 | 0.540 | 0.275 |
| | Yes | 99 | 215 | 0.460 | 0.275 |
| Insult in the Class | No | 116 | 215 | 0.540 | 0.275 |
| | Yes | 99 | 215 | 0.460 | 0.275 |

**Note:** Proportions tested against value: 0.5.

### Interpretation

**Feeling Sleepy:** Approximately 60% of students reported feeling sleepy during mathematics classes, while 40% did not. The observed proportions significantly deviate from the expected 50/50 split ($p = 0.004$), indicating a notable bias toward feeling sleepy.

**Feeling Bored:** Around 55% of students indicated feeling bored during mathematics classes, while 45% did not. The observed proportions do not significantly differ from the expected split ($p = 0.172$), suggesting a relatively balanced distribution.

**No Interest:** Roughly 60% of students expressed having no interest in mathematics, whereas 40% reported having an interest. The observed proportions significantly deviate from the expected 50/50 split ($p = 0.006$), suggesting a notable lack of interest among students.

Lazy: About 47% of students considered themselves lazy, while 53% did not. The observed proportions do not significantly differ from the expected split ($p = 0.495$), indicating a relatively balanced distribution.

**Very Confusing:** A substantial majority (around 79%) of students found mathematics very confusing, whereas only 21% did not. The observed proportions significantly deviate from the expected 50/50 split ($p < 0.001$), indicating a strong perception of mathematics being highly confusing.

**Forget Methods:** Nearly 75% of students reported frequently forgetting methods in mathematics, while 25% did not. The observed proportions significantly deviate from the expected 50/50 split ($p < 0.001$), indicating a notable tendency among students to forget methods.

**Don't Like Math Teacher:** A significant majority (approximately 82%) of students did not like their math teacher, while 18% did. The observed proportions significantly deviate from the expected 50/50 split ($p < 0.001$), indicating a strong disapproval of the math teacher.

**Scold:** The distribution of students who were scolded and those who were not scolded during math classes is relatively balanced, with 47% being scolded and 53% not being scolded. The observed proportions do not significantly differ from the expected split ($p = 0.34$), suggesting a relatively equal occurrence of scolding.

**Clever students are focused:** Approximately 58% of students perceived that clever students are focused, while 42% did not. The observed proportions significantly deviate from the expected 50/50 split ($p = 0.029$), suggesting a bias toward perceiving a connection between cleverness and focus.

**Teacher Enters Class Late:** The vast majority (around 86%) of students reported that their teacher entered the class late, while only 14% did not. The observed proportions significantly deviate from the expected 50/50 split ($p < 0.001$), indicating a prevalent occurrence of the teacher entering class late.

**Teaching Style too Fast:** About 60% of students perceived the teaching style in mathematics to be too fast, while 40% did not. The observed proportions significantly deviate from the expected 50/50 split ($p = 0.006$), indicating a notable perception of the teaching style being too fast.

**Too Much Writing and Homework:** A significant majority (around 69%) of students felt overwhelmed by the amount of writing and homework in mathematics, while 31% did not. The observed proportions significantly deviate from the expected 50/50 split ($p < 0.001$), suggesting a strong perception of excessive writing and homework.

**Doubts Cleared:** Nearly 69% of students reported that their doubts were not adequately cleared in mathematics classes, while 31% felt their doubts were cleared. The observed proportions significantly deviate from the expected 50/50 split ($p < 0.001$), indicating a notable dissatisfaction regarding doubt clarification.

**Difficult Questions Explained:** A significant majority (around 77%) of students felt that difficult questions were not explained well, while 23% believed they were explained adequately. The observed proportions significantly deviate from the expected 50/50 split ($p < 0.001$), indicating a strong perception of insufficient explanation for challenging questions.

**Don't Understand Language:** Approximately 79% of students expressed difficulty in understanding the language used in mathematics, while 21% did not. The observed proportions significantly deviate from the expected 50/50 split ($p < 0.001$), suggesting a notable struggle in comprehending the language.

**Teaching in Boring Way:** About 62% of students found the teaching in mathematics to be boring, while 38% did not. The observed proportions significantly deviate from the expected 50/50 split ($p < 0.001$), indicating a prevalent perception of the teaching being monotonous.

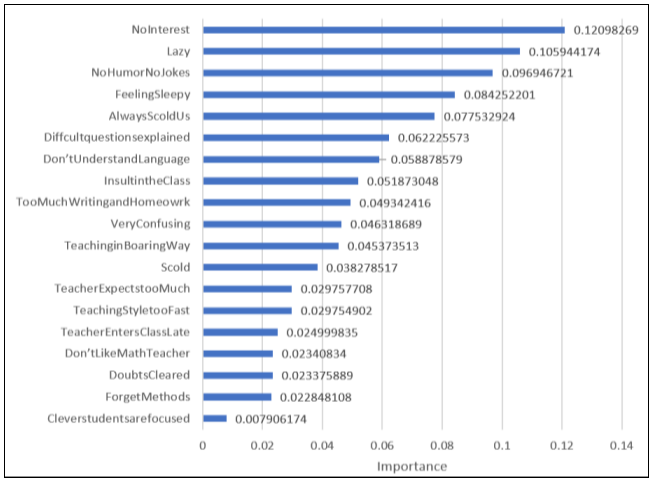
**Teacher Expects too Much:** A significant majority (around 78%) of students felt that their teacher had excessively high expectations, while 22% did not. The observed proportions significantly deviate from the expected 50/50 split ($p < 0.001$), indicating a strong perception of demanding expectations from the teacher.

**Always Scold Us:** Around 47% of students reported being scolded by the teacher frequently, while 53% did not. The observed proportions do not significantly differ from the expected split ($p = 0.34$), suggesting a relatively equal occurrence of frequent scolding.

**No Humor No Jokes:** Roughly 46% of students felt that there was no humor or jokes in mathematics classes, while 54% believed otherwise. The observed proportions do not significantly differ from the expected split ($p = 0.275$), indicating a relatively balanced perception regarding the presence of humor and jokes.

**Insult in the Class:** Approximately 46% of students experienced insults in the mathematics class, while 54% did not. The observed proportions do not significantly differ from the expected split ($p = 0.275$), suggesting a relatively equal occurrence of insults in the class.

### 7. Variable Importance Test




The variable importance test reveals the relative importance of different factors contributing to students feeling bored during their mathematics period. Among the factors examined, "No interest in Mathematics" emerges as the

most influential factor, with a high importance score of 0.12098269. This suggests that when students lack interest in the subject, they are more prone to experiencing boredom during their mathematics classes.

Additionally, the variable "Lazy in doing maths" holds significance, with an importance score of 0.105944174. This indicates that students who exhibit laziness or a lack of effort in their mathematical tasks are more likely to report feeling bored during the lessons.

The teaching style also plays a role, as indicated by the variable "Too serious while teaching, no humor, no jokes, no stories" with an importance score of 0.096946721. When teachers fail to incorporate humor, jokes, or engaging stories into their instructional approach, students may find the mathematics period less interesting, contributing to their boredom.

Other factors that contribute to students feeling bored in mathematics include feeling sleepy during study (importance score: 0.084252201) and teachers who frequently scold students (importance score: 0.077532924).

While less influential, the difficulty of the questions being explained, language barriers, insults in the class, excessive writing and homework, and a confusing learning environment also contribute to students' experience of boredom during their mathematics period.

Based on these findings, it is crucial for educators to address students' lack of interest in mathematics, promote active engagement, and create a positive and stimulating classroom environment. Strategies that make mathematics more relatable, incorporate interactive teaching methods, and provide support and encouragement can help alleviate feelings of boredom and enhance students' overall learning experience.

Educators should also consider the impact of their teaching style, aiming to strike a balance between rigor and incorporating elements of humour, relatable examples, and varied instructional techniques. By catering to students' interests and actively involving them in the learning process, educators can create a more engaging mathematics period and reduce the occurrence of boredom.

Overall, by understanding and addressing the factors identified in this variable importance test, educators can work towards fostering a more enjoyable and meaningful mathematics learning experience, promoting student engagement, and mitigating boredom.

## 8. Major Findings

1. The majority of students reported feeling sleepy, bored, and having no interest in mathematics. This indicates a lack of engagement and enthusiasm among students towards the subject.
2. Students expressed difficulties in understanding the language used in mathematics and found the subject very confusing. This highlights the need for effective language support and clearer explanations to enhance comprehension.
3. A significant proportion of students reported forgetting methods and struggling with difficult questions. This suggests the importance of reinforcing and reviewing mathematical concepts to improve retention and problem-solving skills.
4. Many students expressed dissatisfaction with their math teacher, citing issues such as the teacher entering class late, a teaching style perceived as too fast, and high expectations. This highlights the need for teacher improvement and addressing student concerns.
5. Excessive writing and homework were identified as a challenge for students. Balancing the workload and providing support to manage assignments could alleviate student stress and enhance learning experiences.
6. The most important factors contributing to students feeling bored during their mathematics period were identified as "No interest in Mathematics" and "Lazy in doing maths."
7. The teaching style lacking humour, jokes, or stories was also found to significantly contribute to students' boredom during mathematics classes.
8. Other factors that contributed to students' boredom included feeling sleepy while studying mathematics, experiencing constant scolding from teachers, and encountering difficult questions that were not adequately explained.
9. Language barriers, insults in the class, excessive writing and homework, and a confusing learning environment were additional factors associated with students' boredom in mathematics, although to a lesser extent.

## 9. Suggestions

1. **Enhance student engagement:** Implement teaching strategies that actively involve students in the learning process, such as interactive activities, hands-on exercises, and real-life applications of mathematics concepts.
2. **Improve teacher-student interaction:** Encourage teachers to create a positive and supportive learning environment, address student concerns promptly, and establish open lines of communication to foster better teacher-student relationships.
3. **Provide language support:** Offer additional resources and language assistance to help students better understand mathematical terminology and concepts. Use visual aids, examples, and practical applications to enhance comprehension.
4. **Reinforce and review concepts:** Implement regular review sessions and practice exercises to reinforce mathematical methods and problem-solving techniques. Provide additional support, such as tutoring or peer-assisted learning, for students struggling with specific topics.
5. **Personalize teaching approaches:** Recognize and accommodate diverse learning styles and pace. Adjust teaching methods to cater to individual student needs and provide differentiated instruction when necessary.
6. **Balance workload:** Evaluate and revise the amount of writing and homework assigned to students to ensure it is reasonable and aligned with learning objectives. Consider alternative assessment methods that promote critical thinking and creativity.
7. **Continuous professional development for teachers:** Offer training programs and workshops to improve teaching skills and strategies. Provide resources and support for teachers to stay updated with the latest pedagogical approaches and address student concerns effectively.
8. **Foster a positive classroom environment:** Encourage a classroom atmosphere that promotes collaboration, respect, and positive interactions among students.

Celebrate student achievements and create opportunities for peer learning and support.

9. **Seek student feedback:** Regularly collect feedback from students to understand their needs, concerns, and suggestions for improving the teaching and learning experience. Incorporate student input into decision-making processes to create a student-centered approach.
10. **Enhance Teacher-Student Interactions:** Encourage positive teacher-student interactions by fostering a supportive and encouraging classroom atmosphere. Providing constructive feedback, praising student efforts, and avoiding excessive scolding can help create a positive learning environment.
11. **Improve Clarity in Explanation:** Ensure that teachers explain difficult questions and concepts clearly, breaking them down into understandable steps. Offering additional support, such as one-on-one assistance or peer tutoring, can help students overcome challenges and reduce boredom stemming from confusion.
12. **Manage Workload:** Monitor and adjust the amount of writing and homework assigned, ensuring it is reasonable and aligned with the learning objectives. Reducing excessive workload can prevent students from becoming overwhelmed and bored.
13. **Create an Inclusive Environment:** Address language barriers by providing additional language support or resources for students who struggle to understand the language of instruction. Promote inclusivity and cultural sensitivity within the classroom to foster a sense of belonging and engagement.
14. **Professional Development for Teachers:** Offer professional development opportunities for mathematics teachers to enhance their instructional techniques, including strategies for creating an engaging and dynamic learning environment.
15. By implementing these suggestions, schools can strive to create a more engaging and supportive learning environment for students, fostering a positive attitude towards mathematics and enhancing overall learning outcomes.

## 10. Implications

1. **Enhancing Student Engagement:** Implement strategies to enhance student engagement, such as incorporating interactive activities, real-life examples, and technology-based learning tools, to create a dynamic and captivating learning environment. This can lead to increased student participation, motivation, and a deeper understanding of mathematical concepts.
2. **Creative and Inclusive Teaching Approaches:** Adopt creative and inclusive approaches by incorporating diverse teaching methods, project-based learning, collaborative activities, and students' interests and cultural backgrounds. This fosters a positive classroom atmosphere, promotes active participation, and mitigates boredom.
3. **Personalized Instruction and Differentiation:** Strive for personalized instruction and differentiation to cater to students' unique needs, learning styles, and interests. Adapt instructional strategies, provide individualized support, and offer opportunities for self-paced learning to create an inclusive and engaging learning environment.
4. **Continuous Professional Development:** Prioritize ongoing professional development opportunities for mathematics teachers, focusing on enhancing pedagogical skills, incorporating innovative teaching methods, and staying updated with research-based practices. This empowers teachers to effectively engage students, address their individual needs, and create a stimulating mathematics learning experience.
5. **Collaborative Learning Communities:** Foster collaborative learning communities among teachers, providing opportunities for sharing best practices, discussing challenges, and co-designing engaging mathematics lessons. Encourage peer observation and feedback to promote a culture of continuous improvement and innovation in teaching practices.
6. **Emphasizing Student Well-being:** Promote a positive school climate, foster supportive relationships between teachers and students, and integrate social-emotional learning into the curriculum. Provide resources for students who may be struggling with boredom or disengagement, such as academic support or counselling services, to support their overall well-being and academic success.
7. **Transforming Mathematics Education:** It is crucial to revamp the syllabus of mathematics school books with a student-centered approach. The syllabi should be designed to facilitate easy and step-by-step understanding of the subject from Standard I to Standard XII, rather than overwhelming students with an excessive load of theories and exercises. Concepts should be presented with clarity, supported by live examples and real-life applications, enabling students to connect theory with practical scenarios.
8. **Balancing Class Room Engagement:** The current syllabus overload has led to challenges in the classroom, as solving all problems during class time becomes difficult and time-consuming. Consequently, teachers often assign exercises as homework, which can leave some students struggling and disengaged. To address this issue, it is recommended to allocate time for solving diverse types of problems in the classroom itself. By doing so, students can actively participate, gain confidence, and develop a genuine interest in mathematics.
9. By implementing these implications, educators and schools can create an inclusive, engaging, and supportive mathematics learning environment that fosters active student participation, promotes a positive attitude towards mathematics, and supports students' overall well-being and academic growth.

## 11. Conclusion

In conclusion, the results of students' views on mathematics and their experiences in the classroom highlights important factors that contribute to feelings of boredom during the mathematics period. The findings from the binomial test reveal a notable amount of students feeling sleepy, bored, and disinterested in mathematics, underlining the need for targeted developments in the teaching and learning environment.

The variable importance test identified key factors that significantly influence students' boredom, including their lack of interest in mathematics, laziness in doing math, and the absence of humor, jokes, or engaging stories in the teaching style. These findings highlight the importance of

addressing these factors to effectively reduce boredom and enhance students' engagement and interest in mathematics.

To address these challenges, several evidence-based suggestions have been proposed. These include implementing strategies to foster student engagement through interactive activities, real-life examples, and practical applications of mathematics. Integratinghumour, jokes, and storytelling into the teaching approach can create a more enjoyable and lively classroom atmosphere. Additionally, efforts should be made to address students' lack of interest by highlighting the importance of mathematics and its connections to their everyday lives.

Constructing positive teacher-student interactions and providing clear explanations of difficult concepts are essential for reducing confusion and creating a supportive learning environment. Additionally, managing the workload by assigning reasonable amounts of writing and homework and offering language support for students facing language barriers can contribute to reducing boredom and promoting inclusivity.

It is also important to invest in professional development opportunities for mathematics teachers, enabling them to increase their instructional techniques and create an engaging learning environment that caters to diverse student needs.

By implementing these evidence-based suggestions and implications, educators can effectively address the factors contributing to students' boredom in mathematics, adopting a positive learning experience. This can lead to increased student engagement, motivation, and achievement in mathematics, ultimately supporting their long-term academic success and positive attitudes towards the subject.

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