Factors Affecting Secondary School Student's Interest in Mathematics Learning

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ABSTRACT

Mathematics is an important skill that all students should have the opportunity to learn. Mathematics, often perceived as a challenging subject, is essential in cultivating problem-solving skills and logical thinking among students. However, the extent to which students are engaged and interested in mathematics significantly influences their learning outcomes. Thus, conducting an action research project to explore the relationship between student interest and mathematics learning is imperative for several reasons. The present study attempted to study the factors affecting student's interest in Mathematics learning. Data was collected from 74 secondary school students. Findings indicate that student's performance in Mathematics tests affects their liking in the subject. The expectations of parent's influence student's interest in the subject Mathematics. Concepts taught with the help of ICT makes Mathematics interesting.

Key words: Interest, Mathematics Learning

INTRODUCTION:

In the realm of education, the significance of student interest in shaping learning outcomes has garnered considerable attention. Among the array of subjects that students engage with, mathematics often emerges as a pivotal domain, one that elicits a wide spectrum of sentiments ranging from enthusiasm to apprehension Mathematics, often perceived as a challenging subject, is essential in cultivating problem-solving skills and logical thinking among students. However, the extent to which students are engaged and interested in mathematics significantly influences their learning outcomes. Mathematics, with its intricate concepts and problem-solving methodologies, has long been perceived as a quintessential academic pursuit, essential for cognitive development and foundational to numerous disciplines. However, the conventional approach to teaching mathematics often overlooks the diverse interests and learning styles of students, leading to a disconnection between the subject matter and the learner. This dissonance may result in diminished engagement, hindered comprehension, and a lack of enthusiasm among students, ultimately impeding their academic progress and proficiency in mathematics. Against this backdrop, this action research project seeks to interrogate the multifaceted dimensions of student interest in mathematics and its consequential impact on learning outcomes Through a comprehensive exploration

of existing literature, theoretical frameworks, and empirical studies, this research endeavors to establish a conceptual foundation for understanding the intricate relationship between student interest and mathematics learning. In essence, this action research project embarks on a journey to unravel the intricate tapestry of student interest and mathematics learning, illuminating pathways towards fostering a culture of curiosity, empowerment, and proficiency in one of the most fundamental domains of human knowledge.

The traditional approach to teaching mathematics often neglects the importance of student interest and engagement. There is a need to bridge the gap between pedagogical practices and student needs. Understanding what ignites students' interest in mathematics can lead to the development of more relevant and effective teaching strategies. Student interest in mathematics may vary based on diverse factors such as socio-economic background, cultural influences, and individual learning styles. It is necessary to identify potential disparities in interest levels among different student groups. Addressing these disparities can contribute to creating inclusive learning environments that cater to the diverse needs of all students.

AIM OF THE STUDY

To study factors affecting students' interest on Mathematics learning.

OBJECTIVES OF THE STUDY

To assess the factors affecting students' interest on Mathematics learning.

OPERATIONAL DEFINITION OF THE TERMS:

Impact: The term generally refers to the effect or influence that something has on a person, thing, situation, or event. It can be positive, negative, or neutral, and it can manifest in various ways depending on the context.

Interest: The term typically refers to a state of engagement or involvement, or concern with regard to something, whether it's financial, intellectual, personal, or otherwise.

Learning: It is a process of acquiring new knowledge, skills, or behaviors through experience, study, or instruction.

METHODOLOGY OF THE STUDY

The researcher in this study has used the Descriptive and Survey method to carry out the study.

SAMPLING TECHNIQUE

Convenience sampling technique was used for the present study.

TOOLS OF THE STUDY

The questionnaire was prepared by the researcher consisting 10 items. It was administered on 74 students of class VII of Don Bosco High School Borivali (west).

DATA ANALYSIS

The researcher has used the Descriptive Analysis. Percentage was used to represent the data.

FINDINGS AND CONCLUSION:

- 85% students agreed that they are interested in learning the subject Mathematics whereas 15% students did not. This shows that maximum students are interested in learning Mathematics although there is skepticism among many middle school students about the subject. The reasons for this can be factors like the student's personal interest in the subject, engaging Mathematics teacher who are enthusiastic and skilled, the use of technology, such as computer programs, apps, or interactive whiteboards, tutoring, extra help sessions, practical outlook of the school towards the subject, applications that relate to real-world scenarios. Thus, any student who is genuinely interested in Mathematics develops a positive attitude towards the subject.

- 75% students agreed that they feel motivated to enjoy the subject due to their interest in the subject whereas 25% students did not. The number of students who agree with the statement are greater than the number of students who disagree. Students feel motivated to learn mathematics when they develop an interest in the subject. Such as sense of achievement, the practical utility of mastering the subject, relevance to real-world scenarios, academic and career aspirations, logical thinking and problem-solving skills, deciphering complex problems, recognition of their efforts and achievements in mathematics through grades, praise, awards, or competitions, a supportive learning environment, use of technology, games, or group projects, etc

- 92.5% students agreed that they believe that the concepts learnt in Mathematics can be applied in daily life whereas 7.5% students did not. The curriculum is transacted in such a manner which enables students to acknowledge that the mathematical concepts taught in school are frequently utilized in everyday life and teachers play a pivotal role in this realization by actively connecting classroom mathematics to real-world applications. This approach not only makes math more relatable and interesting but also emphasizes the practical value of mathematical literacy, encouraging students to appreciate and apply these skills beyond the classroom. Thus, the mathematics teacher plays a significant role in developing the interest and maintaining it by teaching students the practical applications of mathematics in the world around us.

- 90% students agreed with the statement that higher level mathematical concepts are difficult to understand where as 10% students did not. Higher-level mathematical concepts, often perceived as abstract and challenging, should be taught by teachers through a structured, incremental approach that builds on foundational knowledge. Effective teaching should include diverse instructional methods, such as using

visual aids, real-life applications and interactive technologies to make complex ideas more accessible. Simultaneously, students play a crucial role in this learning process.

- 42.5% students agreed that their performance in Mathematics tests affects their liking in the subject whereas 57.5% students did not agree. In situations where students' attitudes and interest toward mathematics are influenced by their test performance, the teacher's role becomes crucial in promoting a supportive learning environment. Teachers should focus on making mathematics engaging and accessible to all students, regardless of their test scores through personalized feedback, and offering additional support and resources to those struggling. On the other hand, students should be encouraged to adopt a growth mindset, seeing challenges as opportunities to improve rather than as barriers.

- 85% students agreed that the teacher's styles of the teaching influences their liking for the subject whereas 15% students did not. The mathematics teacher plays a great role in influencing the students liking for the subject through their teaching styles. To enhance this interest, teachers should employ a variety of engaging methods such as interactive lessons, practical examples, and technology like educational apps and games. They should encourage questions, allow students to explore concepts in creative ways, and relate math to real-world scenarios that resonate with students' everyday experiences.

- 50% students agreed that their desire to excel academically motivates them to be interested in Mathematics whereas 50% students did not. In cases where student interest in mathematics is evenly split between those motivated by academic excellence and those who are not, both teachers and students have roles to play in enhancing engagement. Teachers can diversify their approach by integrating both intrinsic and extrinsic motivators. e.g. through competitions and rewards for high achievers. Students, on the other hand, should be encouraged to explore their own reasons for studying math. Mathematics teacher can restore and deepen interest by making lessons more relevant to students' lives by using technology and collaborative learning to make the subject more interactive and enjoyable.

- 75 % students agreed that the concepts taught with the help of ICT makes Mathematics interesting whereas 25% students did not. Since majority of students find that integrating Information and Communication Technology (ICT) makes mathematics more interesting, mathematics teachers should actively incorporate technology into their teaching methods. This can include using interactive software that allows for hands-on manipulation of mathematical concepts, presenting problems through digital games, quizzes, assignments that provide instant feedback, or employing virtual manipulatives to visualize complex geometric shapes and algebraic functions. Technology can make learning more dynamic and accessible, sparking student curiosity and engagement.

- 35% students agreed that the expectations of parents influence their interest in the subject Mathematics whereas 65% students did not. In situations where parental expectations do not majorly influence student interest in mathematics, teachers, parents, and students each have a role to ensure sustained interest in the subject. Teachers should make math lessons engaging and relevant, using diverse methods that cater to various learning styles and interests. Parents can support by providing a positive learning environment at home, showing interest in the subject, and encouraging their children without pressuring them.

- 60% students agreed that they are comfortable asking questions in Mathematics class whereas 40% students did not. Both teachers and students have important roles to play to enhance classroom dynamics and foster interest. Teachers should create a welcoming and supportive environment where all students feel safe to express their curiosity and uncertainties. Methods could include encouraging participation by asking open-ended questions, acknowledging all contributions positively, and setting aside dedicated time for students to ask questions. Students, on their part, should be encouraged to engage actively and ask questions without fear of judgment, understanding that this process deepens understanding and enhances interest in the subject.

CONCULSION

Therefore, by promoting a culture of open communication and curiosity, teachers can help sustain and increase student interest in mathematics. In conclusion, this action research project has effectively highlighted the significant impact that student interest has on learning mathematics. Findings confirm that interest in mathematics directly improves students' engagement and achievement in the subject. Furthermore, a clear correlation was identified between students' interest levels and their learning outcomes in mathematics. To sustain and enhance this interest, teachers can employ strategies such as incorporating real-life applications of mathematics, utilizing interactive and technology-based tools, and adapting teaching methods to cater to diverse learning styles. For students who initially show less interest, teachers can focus on creating a supportive and encouraging learning environment, offer positive reinforcements, and gradually introduce elements of mathematics that connect with their personal interests or everyday experiences. By employing these strategies, teachers can promote a lasting enthusiasm for mathematics among all students, enhancing both their academic success and their appreciation for the subject.

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