



# Undergraduate Mathematics: Fear and Relevance

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## **Abstract:**

Mathematics is essential for human development since it explains and solves issues in science, engineering, economics, and other disciplines. Mathematics phobia affects many students. There are ways to overcome this anxiety and improve arithmetic skills. Math is necessary to many fields of study and everyday life, thus overcoming your fear is crucial. Several professions need math. This research addresses mathematics fear and advantages of studying mathematics.

**Introduction** - Mathematicians use abstraction, logic, reasoning, and symbolic manipulation to analyse abstract objects like numbers, figures, functions, and structures. It provides a framework for understanding the universe, from basic laws that govern matter and energy to patterns and structures in natural and manmade systems. Mathematics is utilised to explain and solve problems in science, engineering, economics, and many other fields, making it a crucial tool for human growth [1, 2]. Many students suffer from a genuine and pervasive fear of mathematics. Yet, there are several tactics learners may employ to overcome this phobia and enhance their mathematical ability. Mathematics is necessary to many fields of study and everyday life, thus overcoming your fear is crucial. Mathematics is essential for success in many disciplines. How to overcome a phobia of mathematics and the advantages of mathematics are the topic of the current study.

**Overcoming fear of mathematics**- Mathematics may cause anxiety and avoidance in many students. Overcoming mathematics fear boosts confidence and critical thinking. It is important to overcome the fear of mathematics because it is a subject that is essential to many areas of study and daily life. Mathematics is used in science, engineering, technology, finance, and many other fields. Without a solid mathematical foundation, it might be difficult to flourish in science, engineering, technology, economics, and many other disciplines, as well as to completely comprehend the underlying ideas and principles. The few strategies to overcome a fear of mathematics are as follows:

1. **Regular Practice**- Mathematics is a topic that demands frequent practise, and the more students practise, the more comfortable they will grow with the actual subject. Students will gain confidence in their talents and discover areas in which they need to improve via consistent practise.
2. **Understanding of basic concepts** - Mathematics is based on a set of fundamental ideas and concepts, thus it is essential to have a solid understanding of them. Students that struggle with mathematics often do so due to a lack of comprehension of these fundamental ideas. Before going on to more complicated subjects, it is vital to take the time to examine and grasp the underlying principles.
3. **No hesitation in seeking help** - Many students find mathematics difficult because they are too shy to ask for assistance. Yet, asking assistance from a teacher, tutor, or other student is one of the most effective strategies to overcome a phobia of mathematics. An instructor or tutor may give specialised training and feedback, while a classmate might provide support and encouragement to one another.

4. Affirmative self-talk-Negative self-talk may be a significant barrier to mathematical achievement. Students who believe they are "poor at arithmetic" or "will never comprehend" are more likely to struggle with the subject matter. Conversely, positive self-talk may help students acquire confidence and conquer their fear of arithmetic. Encourage yourself with affirmative statements such as "I can do this" and "I'm becoming better at mathematics every day."
5. Use of resources - There are several tools available to assist students improve their mathematical proficiency. Textbooks, online video lectures, and tutorials, are a few examples of supplementary learning tools that students might use. These materials might give students with extra explanations and illustrations to aid with their comprehension of the content.

**Importance of mathematics at undergraduate level-** Mathematics is an integral part of the undergraduate curriculum and plays a vital role in the education of students. It is not just an area of study, but also a tool utilised extensively in other fields. This article also looks at the significance of mathematics in the undergraduate curriculum and how it prepares students for the challenges of the twenty-first century. Studying mathematics at the college level teaches students how to solve problems, which is one of its primary advantages. Mathematics is the study of problem-solving, and it teaches students a methodical approach to problem-solving. Through the study of mathematics, students gain critical and analytical abilities that are applicable to many aspects of life. Students learn to disassemble big issues into smaller, more manageable parts and to use logic and reason to discover answers. These problem-solving abilities are applicable not just to mathematics, but also to science, engineering, business, and even personal decision making.

In addition to problem-solving abilities, mathematics teaches students quantitative thinking. Quantitative thinking is the capacity to comprehend and manipulate numerical data, and it is crucial in today's data-driven society. Students learn how to make sense of numerical information and analyse and interpret data by studying mathematics. This is crucial in disciplines such as finance, economics, and data analysis, where the ability to comprehend and manipulate numerical data is necessary.

Studying mathematics at the college level also prepares students for further study in other subjects, which is an essential advantage. Several other disciplines, including physics, engineering, computer science, and economics, substantially depend on mathematical ideas and methods. Students will be better equipped for advanced studies in these fields if they study mathematics at the undergraduate level. Students will have a solid understanding of mathematical principles and be able to apply this knowledge to challenges in other disciplines. In addition, mathematics offers students a variety of job prospects. Mathematics is a very adaptable discipline that provides several job options in fields including finance, technology, data analysis, and scientific research. A mathematics degree may lead to several jobs, such as statistician, financial analyst, software engineer, and data scientist. The discipline of mathematics is in great demand, and there is a rising need for quantitative analysis-savvy people.

**Conclusion -** Many approaches, such as frequent practise, comprehending the fundamental principles, positive self-talk, etc., should be adopted by the students to overcome their fear of mathematics. Mathematics is a crucial component of the undergraduate curriculum, and it equips students with several essential abilities and knowledge. Students acquire problem-solving, critical thinking, analytical, and quantitative reasoning abilities via the study of mathematics. They are better equipped for further study in other fields and have access to a vast array of job prospects. The study of mathematics may be a pleasurable experience in and of itself, and it can help students build self-confidence and a greater knowledge of the world.

#### REFERENCES –

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