

# Impact of Stem Education on Academic Achievement of Elementary School Students' of Delhi

Megha Chaudhary, Gyanendra Nath Tiwari, Sujeet Kumar

**Abstract:** *STEM education does not follow traditional teaching methods but is based on interesting and critical thinking activities. It is important to increase students' interest and awareness of STEM educational activities to encourage them to learn STEM. STEM-based education can help students or children learn and participate in activities based on real-life experiences. We need to let them know that what they learned in STEM today is not only building their own future, but also the cornerstone of the country.*

*Since no study has been done to know the difference in the academic achievement and basic attitude of the students towards this approach based on gender school types (government and private); before and after the conduction of STEM programme this study will give STEM practitioners strategies to design and integrate STEM content purposefully for the students ; so that students can develop a positive attitude towards STEM programme which will in turn help them to acquire higher academic achievement and make study more effective. This study will also through light on the teachers to make STEM programme more effective. This study will also be of immense help to the school authorities while opting for better STEM programme.*

**Index Term:** *Blended learning, effective teaching, motivational skills, engaging classroom, better learning environment, STEM approach.*

## I. INTRODUCTION

STEM is an new and popular approach combining difficult concepts of academics with day to day life teachings; as students use STEM to connect between schools, communities, jobs, and global businesses. STEM literacy increases the tendency to stand in the fast-changing economy. (Tsupros, 2009)

STEM-based education is very important because it is evident and perceptible from all other perspectives in our lives. We are surrounded by scientific advertisements that touch every part of our lives in some way or another. Increasing use of technology has also become an integral part of our lives. Engineering is a broad area of designing bridges to roads and from the environment to houses. Mathematics exists in every department, business or industry, and even plays a vital role in our lives. STEM touches on all aspects of our economic and social life. By teaching STEM education and its concepts to students, there will be many opportunities for students from different industries.

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**Megha chaudhary**, Research Scholar (Ph.D), STEM Education, Amity University, Noida, India.

**Dr. Gyanendra Nath Tiwari**, Associate Professor, Amity University, Noida, India.

**Dr. Sujeet Kumar**, Associate Professor, department of education, Guru Ghasidas Vishwavidyalya, Bilaspur, Chhattisgarh, India.

There is a myth, STEM is difficult to learn, but if you teach passionately, you will succeed. STEM-based education can help students improve and enhance their analytical and reasoning skills because of their real-life experience and circumstances.

It combines multiple concepts into one to solve problems, helping them to see problems from a 360-degree perspective, find alternative solutions, and ultimately choose the most appropriate solution. This is also a brilliant career opportunity. It not only provides hands-on experience, but also opens up ideas for solving problems from different angles. It involves not only learning but also interesting learning.

## II. RESEARCH GAP

From the global and local aspect many researches related to STEM program has been done but a research gap still exist as because literature review shows that no study has been done to know the difference in the academic achievement and basic attitude of the students towards this approach based on gender and school types (government and private) .A research gap has also been noticed related to the location of the study as because no studies has so far been done to access the effect of STEM on academic achievement of the elementary students of New Delhi. Hence a sincere attempt has been made by the researcher to fill the gap in these areas related to STEM.

## III. OBJECTIVES OF THE STUDY

1. To know how STEM program, effect the attitude of elementary grade students differently for boys and girls.
2. To understand and calculate the variation in the academic achievement of Delhi students towards STEM program.
3. To calculate the significant distinctiveness in the attitude of elementary students towards STEM curriculum based on school types i.e private and government schools.
4. To know the difference in the academic and overall achievement of school students towards STEM pedagogy.

## IV. HYPOTHESIS

1. It can be stated that there is no remarkable distinctiveness in the attitude of students after the completion of the STEM programme in schools.
2. There is no variation in the achievement of elementary grade students towards this new STEM program based on gender of the students.
3. There is no significant distinctiveness in attitude of elementary students towards STEM curriculum based on school types i.e private and government schools.