

IMPORTANCE OF MATHEMATICS IN THE CURRICULUM: AN OVERVIEW

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Abstract

Mathematics is primarily taught on account of the mental training, it affords and only secondarily account of the knowledge it imparts. In this way, the study of mathematics helps to develop all the mental abilities of students. It provides all the opportunity to the student to develop their observation power, logical power, memory, concentration, originality, power of discovery, thinking power, reasoning power, reliance and hard work etc.



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Introduction

World is filled of broad knowledge which is increasing day by day. It is not so important to achieve knowledge but to learn how to achieve knowledge is more important so that knowledge can be more useful and important. Knowledge can be important for a person only when he utilize the knowledge according to his needs and it depends upon the abilities of the individual.

Mathematics plays an important role in student's career development. Mathematics with Computers software/internet facility is the most powerful device that students can use to learn new skill and more advanced version of current lessons. In present time Mathematicss has become part of life of students in schools as that of pencils and paper.

Arguments in favor of Mathematics

As compulsory subject in school curriculum, mathematics helps in attaining and developing following values among the students:

Practical and Utilitarian Value

Our daily life and behaviour totally dependent on mathematics. We need mathematics in order to classify and understand every fact. There is no single sphere of life which is left by the impact of mathematics. Mathematics has great impact on our daily life routine. We cannot keep our-self alive without the knowledge of mathematics. All of the comforts of life that we are enjoying are due to the mathematics. Mathematics technology is used in communication, transportation, medical science, engineering etc. Railway systems etc..

Develop Scientific Attitude

The knowledge of mathematics trains the pupils to solve problems in a systematic and specific way of solving a problem is called 'scientific method' or problem solving method. The training in scientific method which a pupil receives by the study of mathematics helps in inculcating scientific attitude in him. Scientific attitude refers to open mindness, a desire for correct knowledge confidence in procedure for seeking knowledge, and suspension of judgment till it is verified. Thus the training which a child receives studying mathematics can be applied to solve the problems arising in many situations.

Develops disciplinary Value

Study of mathematics also inculcates disciplinary value among the students. It not only develops the mental abilities of the students but also develops their personality as a whole. It inculcates spirit of enquiry, concentration, seriousness, reasoning power. It helps them to discriminate what is right or wrong thus developing problem solving ability. Study of mathematics develops habit of hard work, patience, punctuality, regularity, Clarity in students. These qualities help the child to lead a disciplined life. Also mathematical knowledge is exact real, and pure so that a special kind of discipline develops in the child's mind.

Developing and preserving Culture

The history of mathematics presents the image of culture of different nations. The culture of every society has its unique characteristics. Culture of any society is reflected in the form of living standards that include food, customs, traditions, art and craft, social, economic, political conditions etc. Since, ancient time, man has been preserving culture. But with the advancement of technology, our way of life has been changed and as a result there is change in our culture. This change in our life style is due to inventions in mathematics and related technology. Mathematics has become backbone of our civilization and culture. Thus to acquaint the future generation with our past culture they must have the knowledge of mathematics.

Developing Psychological Values

Mathematical education is also useful from the point of view of psychological aspects. Mathematics fulfills the psychological needs of the children. In mathematics emphasis is given on operations and drill work so that knowledge becomes more solid as well as durable. Teaching of mathematics is based on the fundamental principles of psychology i.e. learning by doing, learning by observing concrete. Being a practical oriented subject, it helps to satisfy

basic human urges, desires, common instincts such as creativeness, self-satisfaction, constructive tendencies etc.

Create International Integration

Progress in the field of mathematics is neither the achievement of a person, nation, society, cast, or religion followers only nor it is the property of particular nation. Any invention of a nation when crosses its boundaries, it reaches to its international value. Mathematics is playing important role in the international integration through cultural exchange and sharing of information, e-learning. Mathematics has interlinked the individuals and organizations of the world community economically, politically and socio culturally by removing the barriers of distance. So any organization or individual belonging to any part of the globe can establish itself in the foreign market. Besides these, internet has established virtual class rooms where one can share their view, transmit and exchange information.

Inculcate Aesthetic Sense

Mathematics possesses other aesthetic values like truth, beauty, honesty, etc. One can get pleasure in solving mathematics problems. At that moment every child feels satisfaction, confidence and self-reliance. Child also develops the sense of appreciation for the speed, accuracy of the mathematics when it does the work, calculations etc. within fraction of seconds. Moreover day to day changes- beautiful and latest designs of color combinations, animated films, cartoons movies etc. all of these follow the, mathematical knowledge. Infact the mind of the child a feeling of appreciation of mathematical knowledge is developed.

Provide Vocational opportunities

Mathematics is helpful in opening vast vista of professions and vocations which a child can adopt in his future life. As all the aspects of life are influenced with the invention of mathematics, in the similar way all vocations demand mathematically literate. In these days, there are a large number of vocations for which knowledge or skill of mathematics is a primary requirement. Banking, trade, medical sciences, film industry, stock market, teaching etc. require mathematics literate. Mathematics is part and parcel of these jobs. Besides these, knowledge of mathematics helps to be hardware engineers, programmer, computer teacher. Study of mathematics has a great “bread and butter value.” It is thus quite clear that to enter into any above mentioned vocational course or other occupations, an individual must have knowledge of mathematics and so the mathematics must be included in school curriculum. In this age of technology, if we wish to prepare an individual for any vocation, it is essential that he should be given a good education in the field of mathematics. Therefore, it can be said that

each and every person needs mathematical knowledge for the earning and to maintain his living standard.

Inculcate Moral Values

When a child learns mathematics subject he follows scientific method in his pursuit of knowledge because solving the mathematics problems follows systematic approach. Thus qualities such as honesty, truthfulness, punctuality, patience, self control, self confidence, self reliance, loyalty, reality are automatically developed in the child. The habit of lawfulness, the power of discrimination between right and wrong and respect for other's point of view are some other desirable traits of character that are developed through the study of mathematics. Thus mathematics is the only subject which really gives the training of self control to child and gives advance knowledge.

Develop Social Values

Mathematics has also a great social importance. It has turned world society into global society. Global society has removed the barriers of distance or of other nature for bringing the individuals, groups and nations of the world in the form of single family. As a result the whole world has interaction, inter-dependence. The change in the social structure in terms of modern facilities like mode of communication, means of transport etc. is due to computers only. In order to live in such a social structure where whole world is knitted in a single unit, knowledge of mathematics is essential for the give and take process, business, trade and commerce, for developing social, democratic values in the individuals for his welfare and adjustment. In this way mathematics has played an important role in not only understanding the progress of society but also to develop the society. At present our social structure seems to be so scientific and systematic its credit goes to mathematics. In its deficiency, the entire social system will be disturbed.

Development of Mental faculties

The study of mathematics helps in the development of mental faculties like reasoning, imagination power of memorization, observation, concentration and logical thinking. There is no other subject in the curriculum like mathematics that widens the mental horizon of the child. It makes student's brain active and trains the mind, resulting in the development of problem solving ability. A child has to draw a flowchart and write the program accordingly, writing a program means logical written sequence of tasks that enhances constructivism and creativity. In fact mathematics is primarily taught on account of the mental training, it affords and only secondarily on account of the knowledge of facts, it imparts. Every day, new

knowledge is added to old knowledge. It is not important to gain knowledge but to learn to retrieve information is more important. Mathematics has inculcated the information retrieval value among the students. Today, they know which knowledge is important and useful for them. Internet has brought the heap of knowledge at fingertips of the students resulting in intellectual development and mental training.

In developed countries the standard of mathematics in X is just equal to that of XII standard mathematics in India. There the students adapt the easier methods for choosing their career through mathematics. Thus mathematics should have important place in school curriculum.

Hence, from the above discussion that a mathematics is subject which is so closely associated with our daily life and the world as a whole and is so valuable and important to an individual as well as to a community cannot be neglected from the school curriculum rather justifies place in school curriculum. Any approach devoid of mathematical consideration is likely to lead to failure. If anybody wants to get success in his life, he must have recourse of mathematics.

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