



Review Paper

Scientific temper among students

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Available online at: www.isca.in, www.isca.me

Received 2nd October 2022, revised 23rd December 2022, accepted 30th January 2023

Abstract

Fact are not science-as the dictionary is not literature. Science is nothing, but is a systemized and an organized way of thinking-Martin H. Fisher. This article is about lacking scientific theme among students and the best results, India needs trained teachers, also the use of United nations children fund and explanation of religion by Scientific concepts and practical scientific education develop productive, reproductive, constructive, imagination power of students. Our paper presents how to change the science education system of India into a system that not only includes theoretical education but the scientific view with value education. It is very sensitive approach according to Froied, in his four- or fifth-year human being is frequently a finished product and this paper represents what is the importance of scientific theme in students and the understanding cannot be conveyed but it must be developed by the intellectual activation of learning underpins, coeval prospective on scientific learning.

Keywords: Scientific theme, logic, nature, curiosity, invention – innovation.

Introduction

Adult's put up the questions based on their recognized knowledge needs, on the other hand the small children's queries are typically uplifted by the teacher, based on the imagination of teacher of the children's requirement¹. Science develops the self-dependency in students. A better understanding science gives pleasure while doing the activities in day-to-day life².

Teachers in schools have a dispersed acquaintance of science learning and teaching and only in a finite scope they introduced students for query related to science and occurrence and students feels that the science for them is only burden. So, to create interest of students in science is important. School student's education of environment and cosmos phenomena are the theme. School teachers have less concentration on student's emergent skills on scientific learning. There are several main significant factors which seem to lie within the particular professional teaching: The behavior of teacher, conviction, quantity of science subject understanding and learning of the science involved and occurring³⁻⁵.

Initially, school teacher's science knowledge does not change student's misinterpretation or preconception of science phenomena. Nowadays students think that the world is only for entertainment, in this way their understanding of science is characterized by an anthropocentric thinking⁵⁻⁷. This is because of school teacher's method to explain science. School teachers in few respects do not promote student's science knowledge,

there is a requirement to build up a theoretical foundation for science education and preschools^{8,9}.

Associated to learning of science in schools, the school teacher has to play an energetic character. Surely, student's learning is initiated by their capability of thinking, observing, active exploration of science and their own curiosity. However, to attain a higher learning, to go apart the aspects of science, they require a school teacher with understanding of scientific Knowledge in a practical way^{10,11}.

The school teacher plays the main character in the student's science knowledge operations and logical thinking. Student's scientific curiosity is leaded through the teacher's distinct knowledge of the fundamental underlying science approach. Teacher's way of teaching and explaining the concepts and facts enables the student to observe, question and reproduce basic aspects or characteristic of the science phenomenon they are learning and understanding. Various research's suggested that students have a greater potential to understand than previously thought, and that's why initial childhood settings should provide abundant challenging environments for understanding¹²⁻¹⁵.

Real meaning of science

The frame of learning and knowledge is science that represent present knowledge of systems that are natural and the procedures whereby that knowledge's body has been developed and is continuously refined expanded and revised.

Hence, elements are necessary, one cannot be able to make advancement in science without an understanding and knowledge of both likewise, in understanding the knowledge of science one must come to learn both the body of knowledge and the process by which this knowledge is developed expanded filtered and revised⁸.

Science is a logical, experimental and systematic knowledge.

In a progressive forward-looking society, science can play a truly liberating role, helping people escape from the vicious cycle of poverty, ignorance and superstition.

Present Problem's

E – Generation (Electronic Gadgets Dependent Generation):

As time passed the humans generations moved from forest generation to electronic generation. In forest generation humans are close to nature but in electronic generation very far from nature. Today's generation which is E generation is dependent/addicted on virtual world and (electronic gadgets) and web surfing. Students are distracted due to digital devices (smart phones, computers) and they are not using their own thinking, logic, capability, experience and cognitive skills. Student's addiction towards the E – systems and gadgets reduce their learning skill's scientific theme. They are not able to use their intellectual capability and finding the solution of everything on internet. Main factors from which E – generation suffers are isolation, social skills lack, depression, poor sleep habits, stress, loss of hearing and eyesight problems, neck and head pain, more violence and constant distraction. In terms of mental, physical and social, the individuals mainly the youth are affected by technology addiction within the expansion of technology manner which has become widespread and over the globe still continuing to expand. The most important fact is that the due to the advanced technology individuals think that it is impossible to live without technological devices. As we depend more on technology, our skill sets and creativity, logical way of learning, deep thinking and analyzing, and will become more limited or vanishes and we will become less capable to make technological advancements¹⁶.

Significant and Non-Significant Rituals: For example – It is said that we should sleep having our head at north. This is due to the fact that our body and earth both have their own magnetic fields. So, when we rest with our head pointing in north, the magnetic field of our body becomes unsymmetrical to the earth's magnetic field which causes blood pressure problem. Similarly, we apply tilak on forehead according to science by applying the tilak on forehead we can prevent the loss of energy and it controls the various levels of concentration and the head or brain is a major nerve point in the human body. The temples have bells because the bells produce a sharp and enduring sound and the echo of the bell actuate and energies all the seven healing centers in our body and this helps in keeping our full concentration on devotional purpose.

According to Ayurveda the main reason of different diseases are the accumulation of different materials that are toxic, in the digestive system of our body. Therefore, by fasting, the organs of the body that are digestive get relaxed and all body systems are corrected and cleansed. There are also many other rituals and with the advent of science and Today's generation depends on rituals which are non-significant. These non – significant rituals are affecting the scientific theme among students. Students' faith on non – significant rituals is increasing. The parents also play an important role in this. They are teaching their children to follow the rituals which are non-significant without telling them the basic science or logic behind them. The rituals are going on from ancient times and the people are following those rituals blindly till now due to the lack of scientific knowledge but if we think deeply then there is a basic logic and science behind all the rituals. Rituals and science are not opposite; there is a connection between them¹⁷.

Why Scientific theme is important in Students? For everyone, scientific literacy has become a necessity in the universe which is fully filled with product of scientific query. Every day to make solution of problem that arises everyone needs to use scientific information to and to engage intelligently in public discourse everyone needs to be able and question regarding major issues that includes science technology and everybody requires to distribute in the encouragement and personal achievement that can arise from knowledge, and understanding about the world which is natural everyone deserves to share in the personal fulfillment and excitement¹⁸. When we observe the science as a procedure of developing learning and building ideas, in the beginning of childhood program it is a natural focus^{19,20}.

The requirement to give attention to science education and learning in the beginning of childhood classroom is based on various factors, which affects the beginning of childhood community in the present. There are many reasons for developing scientific theme in Students in schools. In science activities student observes, think and explore. They take part in scientific activities with a strong appearance, and are concerned and absorbed in activities that are based on experiments and creativeness. Scientific theme develops student's questions and their curiosity in the surrounding environment^{21,22}. This can give rise to a good understanding of concepts that are scientific. Students need to begin and develop the understanding and observation of fundamental concepts of science and the manner in which they are connected and applied to the world in which they are living. For validating a curriculum of science, the procedure, content, language and practices that are pedagogical of the curriculum are appropriate to age, and within the cognitive and analytic reach of the student^{22,23}. Student requires enlightenment and mechanism to turn their general activity and curiosity into something which is scientific. Scientific theme provides the opportunity for students to build either explicitly or implicitly the wide range of skills to explore several phenomena^{11,14}.

In reference to the Education Standards of National science, “The diverse ways in which scientists study the natural world and propose explanations based on evidence from their work is referred by science inquiry”.

As stated by (Hurlock), Development is not finite to increasing larger instead it includes continuous series of changes towards the goal of maturity, advancements result in new characteristics and new abilities of individual. For the better growth, India needs the trained teachers with an impartial view, sympathy, behavior with leadership and study habits and for teaching it is important to understand the concept of learning which is active. Also, it is necessary for teachers to experience it for themselves and for this reason advocating a large number of workshop activity is important^{18,24}. But the certain standards of teaching in teachers are missing in the education system of India although excellence pockets exist, the teaching quality and the inspiration to teach show a downward and significant trend which is potentially catastrophic. This problem is likely to be aggravated it, as press reports suggest, to meet its own teaching shortfall the US imports major numbers of Indian Science and Math teachers^{25,26}. But ignoring these bad reports the main objective of this scientific approach should be the interest creation towards the area of science, developing habit to understand the use of science, developing lab activity, learning principles and laws of science and application of simple principles and laws in science in daily life. All these objectives are helpful to make scientific extrovert personality of students, old teaching methods like only oral explanation, Narration, oral description, black board study and oral illustration is not enough, instead of that visual audio activity classes are more effective to grab the maximum knowledge and visual study reside for long term then theoretical study^{11,26}.

Science understanding needs the effective use of language. Use of local language and sign to explain small concept of science develop friendly relation and reduce gap between teacher and students. Simple language of textbooks helps in improving the interaction of teacher and student in classrooms and create interest of students in reading and understanding books^{27,28}. Most of the individuals and voluntary groups are developing innovative programmes on science teaching in schools to create activity – based science curricula in schools^{29,30}.

Interactive practical sessions like if the student performs activities in lab with precaution that how chlorine gas in made increases the belief of student on practicality. The NCERT (National council of educational research and training), (UNICEF) United Nations children’s fund in 1970 started a scientific and mathematical kit, it was related to approach which is activity-based at the primary level to the teaching of science and the basic purpose of this kit is to develop scientific view, explanation of religion by scientific concept it helps students to develop the reproductive, productive, constructive and creative imagination power^{29,30}.

To achieve the requirements of science teaching and learning in primary schools regarding existing textbooks curricula and to meet the needs of science teaching in primary schools the primary science kit of United Nations children’s fund was designed. The main justification for this is the central place of the universalization of primary education in meeting the basic needs of people in India³¹. The real learning of science involves these factors: the student, the surrounding – Social, physical and biological (life) in which, the object of science learning is embedded in learner According to National curriculum framework the classrooms in the schools must be converted to locations where students actively and energetically engage with the daily world which is familiar to them – cultural, communal and physical (ethnic) – nearby them exploring, noticing, finding solution of problems, working things out and inventing, and building their basic concepts³².

The objective of NCF is of making school learning closer to student and to familiarize and contextualizing science learning in everyday world of student. On the phrase of students constructing knowledge and learning and NCF approached the premised instructions regarding the concern of the energetic nature of children’s learning in schools^{19,27}.

Discussion

The state of science education in our country and suggestions for improvements: Science is the study of the behavior of nature in practical and applicative manner. It deals with reasoning and breaking up of misconceptions. Dr. Sarabhai a great Indian scientist said, “No nation can progress in science and technology, if it is not applied by the people”.

This is where our country has lost the trick. They ignored the basics. Today though we are progressing in scientific field, especially in information technology and space administration yet we haven’t consolidated our infrastructure. In fact, good and bad people are everywhere, but it’s the status of common men which decides the image of a country.

If we have a thorough vision over the pattern of teaching at basic level, we will find something is going wrong. It is the lack of practical applications at the basic level. It is predominantly the northeast part of India which suffers most in the technological field. Major part of UP and Bihar are affected from the lack of resources and facilities. On the other hand, the southern part is seeing a revolutionary and appropriate technical age, the level of science here is very much equivalent to that of European countries.

The way of teaching science lacks interest, so it often makes it difficult for the students to hold on concentrating. Lack of graphical study may be another reason for the standard of science being low. Some measures should be taken by some educated people to come forward and fight with unawareness of the common men.

To raise the science standards at internationally noticeable level we must bring practical applications come into play and the common men should be provided with facilities and decent faculties. Technologies should be encouraged at every level and rather than dreaming of European countries. Just remind ourselves of the golden era of the great scientists produced by land.

‘Science is an art to access the hidden natural heritages for welfare of our own means.’

Our Proposal for Improvement of Science Education: We would like to bring about some optimistic changes I reckon. If the students are not willing in studying then there must be a weak link in the way of teaching. Thus, to make the students interested we should proceed according to their level. It is appropriate to first understand the mindset of the students and then proceed in such a way so that they may feel it interesting.

Secondly the teaching should be in a demonstrative manner. Every concept should be clarified along with illustrative examples. The pattern has to be such that it helps in practical applications. There should also be a perfect proportion of leniency and strictness wherever necessary. Activities should be done at regular basis and students should make to know the advantages of what they are performing. Use of technology should also be employed to make it more precise.

An inspiration must be taken from other countries. If it is beneficial for the growth of technological standard and awareness should be brought about so as to make the students know what's going on the other part of the world and where they stand among those. At last, we would again lay emphasis over the logical method of teaching and it should be kept simple so as each and every student can attain the knowledge very often the blunders are found to be attached with basics. So, the basic concept should always be clear to put forth a platform for higher study. ‘Ignoring the basics leads to Sufferings’.

Conclusion

These innovative methods of teaching are very helpful in developing scientific views among students. To give a right direction to the students is not a cake walk every student have different mind and to develop scientific approach is difficult and sensitive it needs psychological, social and emotional consideration. At past time the teacher called Guru is main in school and the student do all teaching according to the Guru choice and guidance but in the today's education system students are important and maximum efforts is done to better individuals' basis and explore maximum from each to develop the nations smallest unit i.e., our primary students. The teacher facilitates, motivate and guide student to solve problems and reflect them, analyze and explicate in the procedure of exploring their curiosity and buildup of knowledge. Teaching science in schools inculcate reasoning, problem solving, rationality, scientific temper, methods of science in students. Also teaching

science in schools and scientific theme in students can excessively increase the development of a nation.

Acknowledgment

Thanks to Pragti Yadav for initialization of this paper. We gratefully acknowledge 360° progressive research group members for motivating us.

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