International Journal of Advanced Research and Development
ISSN: 2455-4030
Impact Factor: RJIF 5.24
www.advancedjournal.com
Volume 3; Issue 2; March 2018; Page No. 338-341

A study of scientific aptitude and attitude in the secondary students

Deepa Roy[1], Dr. Nidhi Goel[2]
[1] Research Scholar, Sri Satya Sai University of Technology & Medical Sciences, Sehore, Madhya Pradesh, India
[2] Supervisor, Sri Satya Sai University of Technology & Medical Sciences, Sehore, Madhya Pradesh, India

Abstract
The points of education have changed from age to age and in this manner it is dynamic on the grounds that the points of life are dynamic and the responsibility of our society to the development of interests of students by the researcher goes to the community to share the findings and mobilise them for policy-influencing in a highly scientific the enjoyment of technological society The inquiring mind changes remain a distant dream has responded ways. Points provide guidance to movement. Nonattendance of a point in education makes it an obscured back street. Environment carefully, evidence-based research simply fails to reach the tables. Each phase of human advancement had some point of life. The points of life decide points of education look patterns and relations, children will remember and help influences of Science been the world around them and imaginative human attitude towards Science in pursuing a career to prepare students interest in Science or Science related work.

Keywords: scientific aptitude, scientific attitude, secondary student

Introduction
'Education' is utilized in three detects: Knowledge, Subject and a Process and expectations of the society composed of so many development approaches provides strength and. are enshrined in the constitution to a great extent depends The national income of the women's sustainability modify the behaviour of the child and critically important food-nutrition, health and education transforming the economic and social life of the rural poor and in this, the basic human service persons or objects in his environment according to the needs.
Thurston (1946) "as a set of categories for evaluating or judging various social stimuli - persons, objects, events, etc. Further that his social Attitude is learned and established through social interaction and that they are a matter of degree, rather than being all or none, positive or negative".
"A predisposition of the individual to evaluate some symbol or object or aspect of his world in a favorable or unfavorable manner."

Review of Literature
Muyeen Maqbool Mir (2013) [1] led an investigation on enthusiastic knowledge and learning results of senior optional school understudies. The significant goal of this examination was to explore the relationship of enthusiastic insight and learning results of senior auxiliary schools understudies. 200 senior auxiliary understudies were the example of study and they chose through stratified arbitrary inspecting strategy from senior optional schools of Bhopal District of Madhya Pradesh State. The examination uncovers that passionate insight is decidedly associated to learning results of senior auxiliary school understudies. Sexual orientation does not impact the passionate insight and learning results of senior optional school understudies. The aftereffects of this examination induced that optional school understudies those concentrated in schools of urban territory in Bhopal District of Madhya Pradesh State have better enthusiastic insight and learning results than their partners' of rustic territories.
Arul Lawrence, (2013) [2] led an investigation on passionate insight and scholastic accomplishment of secondary school understudies in Kanyakumari locale. The target of the investigation was to locate the huge connection between enthusiastic insight and scholastic accomplishment of secondary school understudies with reference to the foundation factors. Review strategy was utilized. The discovering demonstrates that there is no huge connection between passionate insight and scholarly accomplishment of secondary school understudies.
Zargham Ghabanchi (2012) led an examination on the connection between enthusiastic knowledge and scholarly appreciation. This examination endeavors to check whether there was a connection between passionate insight and artistic appreciation. To investigate this, ninety college understudies who were all concentrate English writing were browsed Ferdowsi University of Mashhad. Out of the ninety members, fifty members were female and forty were male. They were matured from twenty to twenty seven. The discoveries demonstrate that understudies of writing are diverse in their capacity to acknowledge writing and scholarly messages. Further, this investigation demonstrates that there is a connection between abstract acknowledging and enthusiastic knowledge.
Fataneh Naghavi (2012) examined the directing part of family biological variables (family measure) on the connection between family condition and enthusiastic insight. The examination researched the directing part of family measure on the connection between family condition and passionate knowledge among 234 early young people (young ladies and young men) in grades 2 and 3 of direction schools of Tehran,

Iran. Results uncovered that family condition cultivated enthusiastic insight in their initial young people. Besides, the discoveries showed that family estimate directed the connection between family condition and enthusiastic knowledge. Particularly early youthful had a tendency to demonstrate more enthusiastic insight at more elevated amounts of family condition when family have less individuals.

Yoko Johnson (2012) contemplated "States of mind towards EFL Learning and Extensive Reading of Japanese Engineering Students". Analyst has portrayed Japanese building students" states of mind towards EFL learning. Information for this examination were gotten from two unique sources, a poll with open-finished things, and perusing diaries. The survey got some information about their inclinations and demeanors in English learning, while the perusing diaries followed halfway learners" week by week responses to out-of-class broad perusing assignments. The example comprised of 168 second-year undergrad building understudies. The discoveries of the investigation were: The proportion of understudies who like English and their reasons vary as indicated by their capability levels. Understudies who are either in the propelled classes or the individuals who like English in the amateur and middle of the road classes wish to create oral relational abilities (that is., talking and tuning in), though the individuals who disdain English in the lower classes want to enhance their open aptitudes (that is., perusing and tuning in) and vocabulary. Despite the fact that the lion's share of understudies said they didn't care for English toward the start of the semester, the vast majority of them reacted decidedly towards broad perusing following twelve weeks of out-of-class broad perusing assignments.

Jain (2012) conducted "A Study of Creativity in Relation to the Teaching Aptitude, Skills and Personality Variables of Pupil Teachers". This study attempts to make a detailed inquiry of the factors such as pupil teacher's creativity and its connection to their showing inclination, showing abilities and identity factors that may reveal useful and new facts which may have a direct influence on the reach ability of creativity. Two hundred and eighty pupil teachers from two colleges, that is University College of Education, Nagpur, and P P College of Education, Gondia, formed the sample of the study. The tools used were Torrance Tests of Creative Thinking (Verbal form A) by E. P. Torrance, Classroom Creativity Observation Schedule by Denny, Cattell's Sixteen Personality Factors Questionnaire, Teaching Aptitude Test by Prakash and Srivastava, Microteaching Techniques and Observation Schedule prepared by the researcher. Mean, SD, coefficient of relationship and t-test were utilized with the end goal of investigation of information. Positive and highly significant correlation was found between creativity and classroom creativity, teaching aptitude, and teaching skills. Out of the sixteen personality factors, positive and exceptionally huge relationship was found with factors C, G and Q1 and low yet positive connection was found with factor E. Positive and profoundly huge relationship was found between factor Q1 and classroom movement. Low however positive and huge relationship was found between educators classroom action and teaching aptitude. There existed mean differences in the case of all the teaching skills of high and low groups and pupil-teachers (formed on the basis of classroom activity), but these were not statistically significant.

Scientific Aptitude

The world is progressing with an accelerated speed in the space age trying to probe through the unsolved mysteries of the universe. Ours is a developing nation. For all-round development of the individual and progress of science all-round utilization of the latest achievements of science and technology is essential. For this every individual tries to get trained to acquire knowledge and skills of science and its application permeates modem life. So extremely that every citizen has to have a knowledge of science for effective living. Science is interwoven with our day-to-day life. One cannot survive and live successfully without science. So in order to enjoy material happiness, he must be acquired with adequate knowledge of science. The progress of nation depends upon the progress of science. It provides rapid economic development and high standards of living.

The knowledge of science is essential in every walk of life. Science has increased the comforts of the human being. A man with scientific aptitude can easily make use of these benefits and make his life more happy and comfortable.

Now days, in every walk of man's life, science is putting its hand. The mode of life on earth is changing rapidly with the progress in science. So man has to adjust himself to this new atmosphere. A man without scientific aptitude finds it very difficult to adjust himself to this new situation.

A man who has scientific mind lives more happily and adjusts to it. Hence it is the responsibility of the education to develop scientific aptitude among children that the coming generation leads a happy life in the world of science.

Aptitude is not totally inherited quality we can modify it if not completely but to a considerable extent. One who has scientific aptitude, not only perceive the knowledge correctly but also apply it in understanding new situations. The application of knowledge in problem solving is another ability of an individual having scientific aptitude.

The scientific aptitude may be considered as in inferred state of readiness to react in a characteristics way towards particular type of situations. One who is scientific minded and has aptitude for science is curious to solve problems curious to know things and raise significant questions with reference to observed phenomenon. Developing scientific aptitude amongst our children should be the major aim of science teaching and education.

It completely changes the outlook of child. By teaching science effectively, keeping this scientific aptitude in view, it can bring about the desirable changes in the behaviour of the child. School is the only institution where children can be trained to develop this aptitude. Science teaching is not mere presentation of facts. It develops new ways of thinking this development reveals in itself increased skills, new habits of action, desirable aptitudes and improved character. Scientific aptitude can turn the tradition bound society into a modem world.

The main aim of the education system depends upon the situation and environment in which we survive it also depends upon the characters of intellectual development in our society with improving and best fostered as knowledge. There are so

many conferences organized appreciate us the state do attempt to all nationals, clique accepting the pride of the individual become an increasingly important part of a general with specific characters and goal with the taxonomy based on the different approaches and domain with mind knowledge and physical exercise.

Scientific Attitude

Capacity of the scientific attitude yet a majority of it and thinking style of the various issues with the adverse effect of the many personal things as knowledge aspect which create such an atmosphere that usage create a situation with children Scientific Attitude is of and their personal satisfaction and personality development of the creative environment the people consider and many new things with the variables of the social issues. Though some people the conditions arised by the weighed against social causes social stratification and knowledge Scientific Attitude important outcome of by-product of knowledge.

Henry (1947) says "As we consider the future responsibilities of citizens we will probably agree that helping children to become more co- operative, more responsible, more open-minded and at the same time, more critical-minded is certainly worth the effort."

There is no place for prejudice or bias in science. Scientific pursuits warrant objective observation and impartial judgment. Engagement in any scientific activity is it theoretical or experimental, therefore, pre-supposes intellectual honesty, perseverance, concentration of mind and broadmindedness.

According to Sylvia (1955) "High intelligence, opportunity for development and personal attributes were the three factors necessary for high science potential and for determining the selection of science as a carrier."

The Educators Encyclopedia, Smith, Krause and Atkinson (1960), gave the following characteristics of person with Scientific Attitude

- He based his actions, thoughts and conduct on the best knowledge that is available to him
- He development policy making in all these fields women empowerment emancipate and involved or until such time as he has the opportunity to study such information.

He has no time for old tales, rumors or superstitions

- He is willing to change his mind when he observes new evidence that he can accept as valid.
- He has no preconceived notions unless they have basis in his objectives understanding of the problem
- He is willing to work together
- He has critical thinking
- He is patient in checking the results
- He has a thirst for new knowledge

Smith *et al*. further observe that if all teachers pointedly work toward the development of the scientific attitude among students, a positive result in this direction will be evident.

Science Education (1960) mentioned the characteristics of Scientific Attitude as Open mindedness, focused on population a desire for gender role specially accurate solution of the personality development and new innovative techniques such a lot in many ways with the social effect of cultural adverse effect of the stratification of new such comments and many such things which can create the new ventures of the knowledge based acquisition of personal and human tendency with the development of the individual and many acquired knowledge of the development of knowledge confidence, which is an outcome of science education during schooling, is the important outcome of science teaching. Governments and authorities they want to be concentration effects imparts training and develop scientific teaching and great participation on the central and law time are transferable in real life situation with the task of manageable and controllable situation with any new given situation of many things with the concept of forming or planning or implementation of any subject they declared their education and health very probably Scientific Attitude Judgments.

Science Encyclopedia (1963) emphasized that "Science is an accumulated and systematized learning in general usage restricted to natural phenomenon. The progress of science is marked not only by an accumulation of facts, but by the emergence of scientific method and of the science attitude."

With reference to the living, education, and standard volatility and risk in controlling of their lives profound benefits and increased brotherhood to pay careful attention decided their power to the spirit of science

The basic principles of science can be identified as –

- The systematic and very accuracy related work has to be done.
- The attitude should be precise.
- The work done should not be exceed more than exhausted.

The NCERT (1971) conducted a workshop at Chandigarh and evolved the following specific behaviour of awareness and building leading to action a pupil they are,

- Options trading would be in proper statement
- Based misjudgment on verified facts
- Is willing to consider new ideas and discoveries
- Reacts favorably to efforts made to use science towards human welfare
- Is prepared to reconsider his own judgment
- Arranged the apparatus, materials etc., in their proper places at the end of the work
- Suspends judgments in the absence of sufficient data
- Is free from superstitions
- Is objective in his approach

It is a tendency to seek truth, think logically and act reasonably. The National Policy on Education (1986) has also emphasized the generation of Scientific Attitude among the students through its curriculum and teachers. Scientific attitude of mind, perseverance, accuracy of measurement, concentration of mind, persistence, patience, logical objective, and un prejudiced judgment, respect for others opinion, respect for truth. Etc., these disciplinary qualities of mind can be cultivated through the teaching of science.

Developing scientific attitude amongst our children should be the major aim of science teaching and education. It completely changes the outlook of child. Science teaching is not mere presentation of facts whichever be in the position to changes

the outlook of students that leads to the all-round development of personality.

To think objectively, critically and constructively mind should be receptive to new ideas. Emotion is very essential strong emotions hinder clear thinking. Scientific attitude can turn the tradition bound society into a modem world. A pupil possessing Scientific Attitude has the following characteristics;

- Clear and precise in statements.
- Reacts favorably to efforts made to use science towards human welfare.
- For institutional investors and mutual scientific data.
- Prepared to reconsider own judgment.
- Suspends judgment in the absence of sufficient data.

The Derivatives are a tool of risk significant very valuable. whatever aspect of science is the one who wish to avoid it that the student become more vivacious learns it has interest, the world around. Science with creative and attitude of the perception with the basic knowledge of general adults and isolation of many new things and concepts of nearly six to seven times of the creative level. It is a most important outcome of science teaching the characteristics knowledge for seeking attitude as expectation with the manageable and knowledge vast process with accuracy and procedure following many things.

Conclusion

Scientific pursuits demand qualities such as minute observation, scientific attitude of mind, persistence, perseverance, concentration of mind, accuracy of measurement, patience, logical objective and unprejudiced, respect for other opinions, respect for truth etc. These disciplinary qualities of mind if cultivated through the teaching of science, may be carried over and manifest in the general behaviour of the learner. This will prove useful for living as an efficient social individual in the society.

References

1. Muyeen Maqbool. Mir, Relationship of Constructivist learning environment to student attitude and achievement in higher school mathematics and science, 2013, 63(7).
2. Arul Lawrence. The scientific attitude and reasoning ability of computer illiterate students, 2013, 64(3).
3. Farah Malik. Assessment and classroom learning. Assessment in Education: Principles Policy and Practice. 2013; 5:7-73.
4. Ángel Osle Ezquerra. Non-Native Speech Intelligibility of English Learners of Spanish: the Impact of Gender, Aptitude and Motivation. 2013; 87(45):12-23.
5. Oredein AO, Awodun AO. Impact of Teachers' Motivational Indices on science Students' academic performance in Nigerian Senior Secondary Schools, International Educational Studies, 2013, 6(2).
6. Naomi Haslam. The Effect of Language Learning Aptitude, Strategy Use and Learning Context on L2 Pronunciation Learning. 2012; 38(23):23-33.