

# Development of Values through Science Teaching

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## ABSTRACT:

*Values are the guiding principles of our lives. They are essential for positive human behaviour and actions in our daily lives. They are formed on the basis of interest, choices, need, desire and preferences. They have played important role in not only sociology, but also psychology, anthropology and related disciplines.*

*Development of values is pivotal which shape human personality. Which provide identify of an individual in the society and in the surroundings.*

*Core values are thoroughly imparted to the students through science teaching which shape students personality. It is equally important to ensure that the youth are equipped with core values needed to live as responsible citizens in complex democratic societies.*

*Under the lust of greediness, the people in the world became self-centered and exploited their associates causing flux in world fiscal and public order .To come out of this confusion and strengthen the social fabric, are following all types of values which are common world over and are basic and relevant for all times through science teaching.*

*The need for value education has been stressed by all the commissions set up for educational development viz., Radha Krishna commission (1948), Sri prakasa committee on religious and moral instructions , Kothari commission (1964-66), National policy on education(1986).The programme of Action (1992) emphasized, value education as an integral part of school curriculum.*

*According to Plato the outstanding eternal values are Truth, Goodness and Beauty. These values are three areas of education .All these three aspects if practiced would make students value conscious.*

*The parliamentary standing committee on human resource development in its 81st report on the value based education (1999) has highlighted that Truth, Righteous conduct, peace, love and non-violence as the core universal values , which need to be identified as the foundation stone on which the value based education programme can be built up .so this paper discusses the need of value education, how science infuses the values in the students.*

*Various activities those help to inculcate each value in students are also discussed .Among the science lessons selected, emphasis was given to environment related topics , keeping in view, the position given to environmental values and sustainable development in human values education.*

*The main aim of the paper is to illustrate how development of values through science teaching.*

## INTRODUCTION:

Value education is an interdisciplinary field of study with rich content. Value education removes impurities in mind which is essential for character development with absence of

pride and free from hypocrisy. The philosophy about value is that, value should help anyone to seek the real knowledge and goal of life in a righteous manner. It is equally important to ensure that the youth are equipped with core values needed to live as responsible citizens in complex democratic societies. The responsibility of making tomorrows citizens equip with core values is on the shoulders of architects of nation, the teachers and also educational institutions.

S. H. Schwartz, defined 'values' as "conceptions of the desirable that influence the way people select action and evaluate events" He hypothesized that universal values would relate to three different types of human need:

1. Biological needs,
2. Social co-ordination needs, and
3. Needs related to the welfare and survival of groups.

Schwartz's suggest fifty-six specific universal values and ten types of universal value. Schwartz's ten types of universal value are: power, achievement, hedonism, stimulation, self-direction, universalism, benevolence, tradition, conformity, and security. Below is each of the value types, with the specific related values alongside:

Teaching of science signifies progress, rational thinking and true knowledge. Similarly, a social sign is given to science teaching.

Few good qualities of science teacher is that the teacher has to engages students at a high level, understands students learning styles to remediate with the new knowledge, brings science lessons to life with real-world applications connected students initially to the immediate environment, also understand student sensitivities and differences, one of the professional who Is committed to continual professional improvement and adjusts science lesson plans based on students' assessment evaluations.

The true values the science teaching inculcates in the students are given bellow.

They are

1. The power and authority by giving empirical knowledge of the world world and also the world of values which bridges with the social values of leadership.
2. Through the science teaching the teacher can inculcate the values of achievement which is prerequisite for the further development. That is the success in the subject matter and the intelligence brings self-respect to him or her.
3. Hedonism: the sciences drives the pleasure factor as the students involve in the learning of science subject or experiment if it is successfully done student got pleasures where direct the students to enjoying life as he involves in it.
4. Stimulating : one concept of science learning has direct effect on learning of other concept which agreeable mode. One learning of science concepts works as stimulating agent to pursue other knowledge in the science. It displayed the varied life and do daring activities in the science experiments which exciting the life.
5. Self-direction: once the learning of science provides greater opportunity to interact with the real life situation in and around the surroundings through creativity it generate the curiosity of the student and got freedom to take decisions and manipulate on his / her own, which make them independent person in decision making and choose own goals in future.

6. Universalism : is another great quality through science teaching one can generate. The students develop to thing in a broadmindedness to acquire greater wisdom, understand the means of social justice by participate and conduct the experiment in the social set up. Knows the values of equality among the living being keep efforts for making the world at peace by making unity with nature. Take steps to protect the environment and make inner harmony.
7. Benevolence: Through science teaching teacher can inculcate the value of helpfulness, honesty, forgiveness, loyalty, responsibility and on the whole the friendship with the friends.
8. Tradition: it is the basic acquisition of knowledge where we accept one's portion in life, Humanity is basic element in it and respect for the tradition also one of the main factor with the hope of moderation in the tradition according to the acceptance of the society and present day technological advancement.
9. Conformity: science teaching shows great value of conformity by acquiring self-discipline, obedience towards the nature.
10. Security, cleanliness: science teaching advocates cleanliness is next to Godliness in a thorough manner by inculcate the knowledge to the pupils who to be secure in the day today world where human should live securely by not harming natures resources and to live healthily in harmony with the nature. It inculcate how to struggle for family security and importantly the national security, fight for the stability of social order, fight against the reciprocation of favors, have consciousness towards the health and generate sense of belongingness.

The values are needed as we encounter several circumstances every day which test our patience, our character and peace of mind. We have to make tough decisions each day. What guide us in these circumstances are our values. Our values serve as markers to tell if life is heading in the right direction.

Teaching of science generate the values to self-direct our self in right path, provides to learn the importance of certainty, goodness and beauty of life which provided by the nature, give direction to life and bring joy to the lives. Teaching of science will bring the knowledge of how to learn satisfaction towards life though practice. Science teaching development how to attain peace in life and how to develop character, one of the greater virtues of teaching of science is that it preserves our culture and heritage. Also provides greater opportunities to bring changes in behavior towards positive thoughts and promote the peace and harmony in the society.

The science teachers have to take interest in the development of personality of students as most of the students are indulged in activities which are not acceptable in a healthy society. The curriculum driven value education has given broad scope for the science teachers to teach the value education through the science. But in the present day scenario the educational institutions are engulfed by materialistic values ignoring the development of Childs personality. Under the desire of materialism, the people in the world became selfish and exploited their members causing imbalance in world economic and social edict .To come out of this disorder and support the social fabric, is following all types of values which are common world over and are basic and relevant for all times. Values which lead to plain living and high thinking are considered out dated (R.T.Deopurkar) but values can only put ceiling

on desires which is a solution. John C. Maxwell the great Educationist expressed strongly in favour of values to strengthen the social fabric of the society by saying that “when values, thoughts, feelings and actions are in alignment, a person become focused and character is strengthened.” National policy on education (1986): “The growing concern over the erosion of essential values and an increasing cynicism in society has brought to focus the Need for readjustments in the Curriculum in order to make education a forceful tool for the civilization of social and moral values.” According to Plato the eternal values are Truth, Goodness and Beauty. They are exactly similar to the attributes of God as expressed by the sages and seers of ancient India in the words, Sathyam, Shivam and Sundaram. These values are three areas of education .All these three aspects if practiced would make students value conscious.

The parliamentary standing committee on human resource development in its 81st report on the value based education (1999) has highlighted that Truth, Righteous conduct , peace , love and non-violence as the core universal values ,which need to be identified as the foundation stone on which the value based education programme can be built up. Through teaching of science the teacher can inculcate the value of the truth in the children and said that how the righteous conduct will beneficiary in the life in a student to progress in positive direction to make his life comfort and generate confidence in them.

Let us take an example topic “matter around us.” Will give the information how the small and big particles are associated in harmony with one another and some particles which are very tiny and beyond imagination are intertwined with one another without confusion said about the value of hedonism that speaks about pleasure and enjoying life by being in various situations.

In another topic of 7<sup>th</sup> class science topic “Food components” if the student explains the experiment through authority he got the confidence in him, and if he gathered the absentees students and teacher them he got special quality called as leadership quality which will inculcated by the science teacher.

The science teacher can inculcate the idea of self-respect by giving proper stimulus at the time of the proper response when teacher ask in the classroom situation so the student got the honour of achievement that is success in front of the his own classroom. Teacher will appreciate the capacity and intelligence of the students so he is not disappointed by his teacher’s behaviors and encourage the students to provide various opportunities to do experimentation by making modification in the subject matter.

In the color changing observation experiment if the teacher properly encouraged the students he stimulates properly and dare to do many activates.

If the science teacher give freedom to the children to manipulate the experiment to by given proper feedback they got confidence and they have grown into self-directed, creative student. If the teacher the lesson of 7<sup>th</sup> class Physical science of “Animal Fibre” students can understand how many types of the animal fibres and developed a wisdom of not using the animal fibre for not effecting their extinction and they feel world at peace, a world of beauty and unity with nature where every tiny part of the universe if important and should be protected.

Through the topic of physical science of class seventh third topic if one student does not know how to connect the wires and prepare the circuit to create own cell. The science teacher asks the student to help their classmates to get the result. That makes them how to cooperate with the students and how helpfulness help the students to generate honesty, forgiveness, loyalty, responsibility, friendship where in this experiment we can observe.

In the physical science lesson 16 “Forest our Life” the science teacher can instill the conformity of the forest with the human life and they are not separable and having thick relation. This development of conformity is very essential that one should have to show the obedience with other living being whether it is moveable or immovable.

Value of cleanliness is one of the great values where the physical science teacher specifically will generate in the students so it should reflect on the health of the nation.

### **RECOMMENDATIONS:**

1. Students given freedom to take responsibility of showing accountability of the event conducted at the school level.
2. A special period will be engaged to the student assign the job and see the things are going to be finished up by the students with the guidance of the peer students on the basis of developing a concept of association of responses to the students.
3. Every teacher of the institution will shoulder the responsibility to modify unsocial behavior of the students and take the chance whenever it is possible.
4. Government will have to come with the project works like working in public private partnership in true sense of developing wellbeing in the students.
5. There is a need to understand what the means of values is first for that it is better if the education officials provide good integrated in-service program which infuses the true sense of values in the teachers through practical exposure.
6. Practice before preach is vital quote where it is needed for all human being so be like a model is an idle quote for every teacher who proclaimed true values through the deeds.

### **CONCLUSION:**

Even if government come with the revolutionary revamp in the syllabus which encourages for the humans to be wellbeing we are not follow them properly in true sense of achievement even if we have seen that human values help to lead peaceful and value oriented life. Values to be inculcated may not be in school syllabus but it is the responsibility of the any subject teacher to inculcate values through the lessons taught by them. Especially a science teacher can use some of the time allocated for practicals in inculcating values. So Inculcation of values through curriculum may help tomorrow’s citizens to lead value based lives in the society in better harmony of the world.

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