# Reflections on Making Environmental Science Education More Effective through Classroom Interaction

*Pushkar Ganesh Vaidya[1], Hemal Shah[2], Nehal Shah[3], Mamta Dave[4].*

1. Indian Astrobiology Research Centre (IARC), Mumbai, India; pushkar@astrobiology.co.in
2. Indian Planetary Society (IPS), Mumbai, India; hemalfx@gmail.com
3. Indian Astrobiology Research Centre (IARC), Mumbai, India; shahnishi123@rediffmail.com
4. Thakur Vidya Mandir (TVM), Mumbai, India; apurv_rocks@yahoo.com

## Abstract

It is of great significance that students are made sensitive towards environment for reasons well known. Here we underline that a basic interest in science in general is essential to successfully impart environmental science education. The role of science teachers in making this happen is paramount and thus emphasized. The pointers to impart science education in general are identified. Also establishment of an environment sensitive culture is discussed.

## Keywords

AIDA, culture, environment, science, teaching.

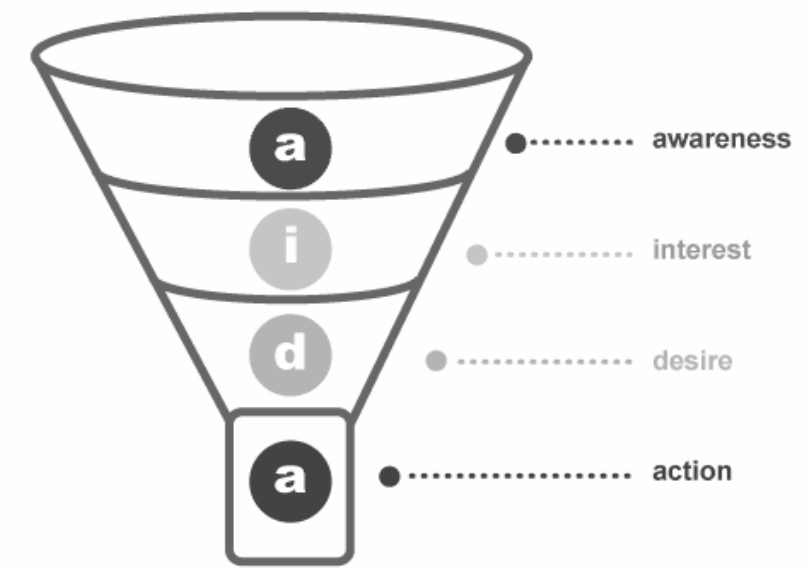
## Note

The authors have explicitly restricted themselves to reflect upon imparting environmental science education in an enclosed classroom environment. Also the reflections are only about non-rural educational institutes with adequate resources. The purpose of this paper is to serve as broad guide.

**Introduction**

No matter how much interactive or simple a subject is made for presentation, the students will not respond unless they have a basic interest in the subject. The challenge lies in igniting a basic interest in science leading to liking of science.

Here in, we can borrow from the AIDA model from the world of advertising. Suggested in 1898 by E. St. Elmo Lewis, it underlines a stage wise funnel-like approach culminating into desired action (http://www.provenmodels.com/547/aida-sales-funnel/lewis) **[1]**




**[1]**

In its science teaching avatar it would involve;

Awareness – Making students aware about the very latest across different fields of science.

Interest – Leading to students finding interest in some branches and aspects of science.

Desire – Leading to a desire to know more.

Action – Leading to a proactive approach whereby students will themselves like to learn science.

In 1911 Sheldon extended the model with a fifth stage, 'permanent satisfaction' **[1]**

This is the stage science teachers would like to lead the students to. This will ensure a permanent appreciation for science in general, way past the student days.

**Empowering science teachers**

It has been found that most students do indeed begin with an interest in science in general however over the years it fades away. Interestingly, the major factor for this decline is the manner in which science is taught. (Seymour, E., & Hewitt, N. M. 1997) as cited in Leslie O. Dickie, Helena Dedic, Steven Rosenfield, Eva Rosenfield & Rebecca A. Simon, 2006).

The onus lies on the teachers to make science more desirable. Often, science teachers are not equipped in terms of knowledge and techniques to impart science education effectively (Samina S. Masood, 2007).

There is a definite need to educate the educators. The empowerment of science teachers can be achieved initially through teacher training colleges and afterwards through efficient science teacher forums.

To begin with there is a need for science teacher’s forum at all geographical levels. The regular forum interactions should involve; current knowledge check, discussions with scientists, brainstorming sessions within forums, best practice sharing sessions across forums, workshop on teaching techniques, creation of an internal rewards and recognition program and implementation of an open feedback mechanism from students.

**The ‘how’ of teaching science**

Science education needs to be innovative, interesting and lively. A few pointers;

The investigative nature of science must be maintained. An environment of asking questions and searching for answers must be created - a mystery solving, engaging approach.

Science teaching must stimulate all five senses as much as possible. Plant and animal specimens, 3dimensional and mechanical models should be made available. Audio-visual presentations and movies should be used.

Exposure to quality science fiction is important. It ensures engagement and amazement. It showcases the power of science and aids innovative thinking.

Students should be encouraged to visualize scientific concepts rather than memorize them. Also proper use of Internet should be taught.

**Environment sensitive culture**

Once there is an inherent inclination towards science in general, environmental science can be driven effectively. The causes of environmental challenges like deforestation, ozone depletion, global warming and others should be made clear. Their adverse effects should be not merely related to environmental and ecological damage but also to how this damage can directly harm our lifestyle.

The efforts taken by the government and the world should be aptly underlined. It should be explained that no matter which profession the students choose in future, environment is everyone’s concern. It should be told that we can make a difference and the different ways we can go about it.

A perpetual effort should be made to set the right culture - a culture sensitive towards environment. Importantly, a sense of pride needs to be attached for being ‘sensitive towards environment’.

## Conclusions

Empowered teachers will be able to impart science education more effectively. Students with basic interest in science in general will respond positively to environmental sciences. The efforts to set a culture sensitive towards environment and appreciative of science at an impressionable age would pay rich dividends for the future of the country and the world.

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