

APPENDICES

APPENDIX I**LETTER TO THE EXPERTS**

**CENTRE OF ADVANCED STUDY IN EDUCATION
THE M.S.UNIVERSITY OF BARODA
VADODARA**

Date : 03-10-1994

Respected Sir/Madam,

I am a Ph.D. student in the Centre of Advanced study in Education (Department of Education), M.S.university of Baroda. The title of my study is : "A STUDY OF SCIENTIFIC ATTITUDE AND ITS CORRELATES AMONG SECONDARY SCHOOL STUDENTS OF BARODA."

For the study, I am to construct and standardise a tool to measure scientific attitude of students which demands operationalisation of the construct scientific attitude.

After exploring the available literature and from the experience while I have had during last twelve years of teaching the SCIENCE subject at secondary and higher secondary state in Baroda, I have identified the following ten components of scientific attitude :

1. RATIONALITY
2. CURIOSITY
3. OBJECTIVITY
4. OPENMINDEDNESS
5. CRITICALMINDEDNESS
6. INTELLECTUAL HONESTY
7. OBSERVATION
8. HUMILITY
9. ENVIRONMENTAL AWARENESS
10. COURAGE TO QUESTION.

Under each of these identified components, the behaviours which may be used to describe the particular components are listed here as under :

1. RATIONALITY :

- * The search for plausible solutions is not affected by superstitions explanations.
- * is cautions not to permit decisions to be affected by personal likes or dislikes, fear, anger or ignorance.
- * Belief in cause effect relationship.
- * Aversion to superstition.

2. CURIOSITY :

- * Tendency to know more about events, objects and phenomena which can not be explained by the existing knowledge.
- * Reading to get information.
- * Initiating and carrying out investigations
- * Inclination to observe.

3. OBJECTIVITY :

- * Is not guided by personal feeling.
- * Does not let his feelings interfere with the impersonal judgement needed in collecting and interpreting data.

4. OPENMINDEDNESS :

- * Respect for others point of view.
- * Willingness to change opinion on getting evidence to the contrary.
- * Considering several possible opinions while investigating problems.

5. CRITICALMINDEDNESS :

- * Insists upon evidence to support another person's statement.
- * Questions to the source of information and its reliability.
- * Often asks questions like -
 - What evidence do you have to support your view ?
 - How do you know ?
 - Why do you believe that ?

6. INTELLECTUAL HONESTY :

- * Reporting observations even when they contradict one's hypothesis.
- * Acknowledging work done by others.
- * Expresses a reluctance to compromise with truth.

7. OBSERVATION :

- * Precision in observation.
- * Detailed observation.

8. HUMILITY :

- * Develops a recognition of his own limitations as well as the limitations inherent in science.

9. ENVIRONMENTAL AWARENESS :

- * Judicious use of energy.
- * Acknowledging the fact that threat to environmental equilibrium is more of a threat to human life.

10. COURAGE TO QUESTION :

- * Asks questions without having a fear of what others will think if he does so.

Sir, Now for the purpose stated above, I request you to please kindly opine on the identified components and the behaviours under each component with regard to their appropriateness, relevance and capacity to describe the construct scientific attitude.

Your valuable opinion/suggestion will help me to make the necessary modification in defining scientific attitude.

Thanking you,

Yours sincerely,

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