

TEACHING OF PHYSICS : STUDENTS' POINT OF VIEW – A SURVEY REPORT

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As a sequel to our survey of Physics teachers¹ we present results of an opinion poll on physics teaching administered to forty undergraduate and postgraduate students of Physics Department of G.N.D. University Amritsar. Some of the important conclusions are summarized here.

Historical Introduction

Sixty-five percent of the student respondents reveal that the teachers do not give historical introduction of the subject while teaching. Only ten percent of the students opine that the teachers provide historical introduction, but only "sometimes" and that too very briefly. As regards the reasons for not giving a historical introduction of the subject, a majority attributes it to time limitation. However, forty-two percent of the respondents feel that the teachers (a) lack interest in teaching, and (b) do not seem to

realise its importance. Five percent of the students attribute it to the teachers' lack of knowledge of the historical development of the subject.

Motivation

A large majority of respondents feel that very few teachers bother to motivate their students before starting a new topic. The same holds true about encouraging the students to ask questions and appreciating thought-provoking questions.

Supplementary Materials

The survey shows that very few teachers

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are able to supplement subject matter with variety of sources and experiences beyond the text books. Fifty-eight percent believe that the physics teachers are unable to do justice to the subjects they teach.

Teacher's Personal Qualities

Most respondents observe that a teacher's personality plays a great role in his teaching skill. Ninety percent of them attribute teacher's popularity to his "better performance in the class". The rest attribute the teacher's popularity to (a) Intimacy with the students, (b) Extra help rendered to the students, and other causes.

Laboratory

Ninety percent of the students favour laboratory experiments based on, and relevant to, theory courses. Eighty-seven percent favour an open-ended laboratory system² for the following reasons :

(a) It will encourage independent thinking and help them to learn research methodology;

(b) It will involve a lot of self-study and thus increase their knowledge and give them better insight of the subject.

However thirteen percent of the respondents prefer the conventional type of Laboratory with the added opinion that project work must be introduced along with the conventional system to stimulate interest in higher studies. They feel that open-ended laboratory system is better only for those students with research aptitude; it would not be of much use at the undergraduate due to low intellectual calibre of the students.

Teaching Aids

Not unexpectedly, all the students like the use of teaching aids in the class room as

well as in the laboratory to enhance interest in studies.

Workshop Practice

The survey reveals that majority of the students favour the idea of spending some time (about two hours per week) in the workshop to achieve technical skills, which may prove beneficial in personal and professional life.

References :

1. Amrik Singh and H. S. Virk. *Creative Teaching of Physics—A survey report*. IAPT Bulletin 3 (4), 93 (1986).
2. Nathan S. Washton, *Teaching Science Creatively* : W. B. Saunders Company, Philadelphia, London (1967) p. 147-148.

Appendix : Questionnaire

1. Do the teachers give historical introduction of the subject ?
2. If the answer to the above question is No, then what are the reasons ?
(i) To save time in the class
(i i) They lack sufficient knowledge of the subject.
(i i i) Any other.
3. Do the teachers like to motivate the students before touching the real subject ?
4. Do the Physics teachers encourage the students to ask questions in the class ?
5. Are thought-provoking questions appreciated by the teachers ?
6. Are all the teachers able to supplement subject matter with a variety of sources and experiences in addition to Text books ?
7. Do the teachers do justice to the subject they teach ?
8. What is your opinion about the teachers explanation of the subject matter in the class ?
9. Do you think that a teacher's personality has a role in his teaching skill ?
10. What are the reasons for a teacher's popularity among the students ?

(i) Intimacy with the students.

(ii) Better performance (in teaching) in the class.

(iii) Extra help to the students.

(iv) Any other.

11. Should the laboratory experiments be based on theory courses ?

12. Do you favour the Open-ended laboratory system

or conventional type of laboratory where routine experiments are performed ?

13. Would you like to spend some time (about 2 hrs. per week) in the workshop to achieve technical skills.

14. Do you think audio visual aids (slides, motion pictures, TV programmes) are necessary for better understanding of the subject ?

