

Issues and Challenges in Science Education in India



Three main fundamental issues

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- Still far from achieving the goal of equity,
- Develops competence but not inventiveness and creativity ,
- Overpowering examination system,

Lets start from some day to day problems

- Lack of teachers – qualified teachers, and competent teachers’
- Lack of time for teachers to prepare for experimental work's preparation.
- Lack of time within the classroom periods.
- Lack of laboratory assistants.

Content specific problem

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- Gap between the science subjects,
- Some of the contents does not exist in some of the publications, if exists, the last chapter when not much time.
- Such topics may be handled by giving the project work in this area to the students at the inception of the course after a brief introduction.

Instruments problems..

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- Insufficient physical conditions of schools (less laboratory opportunities),
- Lack of equipments,
- Expensive equipment,
- Very sophisticated equipments,
- Fear to touch the instruments,
- less number of instruments, Old instruments, Out of order instruments.

Problems while Science Teaching

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- Students are interested to work on the equipments but not to know how these equipments are made and are working.
- This is because not enough time is allotted in the timetable .
- Problem worsen with the division of science.
- A common problem of not using the scientific terms in place of common language is observed.

Some more classroom problems

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- Academic backwardness of the child hampers learning with the science subject that is dependent upon logic and reasoning.
- Phobia of Science- reason may be personal, by teacher and by school.
- Lack of confidence and/or willingness to approach difficult topics of science.
- Paucity of resources and/or funding.
- Varied ability to deal with abstraction of ideas.
- Focus on grades rather than on learning.

Some more psychological problems

- Non interesting image of science .(poor image).
- Perceived as too difficult.
- Difficult to integrate "hands-on", issues are finding adequate time, money and technical resources.
- Non availability of learning teachers.
- Relevance of science to students lives.

Problems/Issues of Science Education with teachers

- Inadequate policy to attract science teachers for the compensation and for their professional development to attract, prepare and retain high-quality teachers,
- True learning and active teachers' not participating in the science and technology programs of science education,
- The insufficient in-service training of the science teacher in the transition state of a new program,
- Compartmentalized subjects taught by teachers isolated within and across departments,

Infrastructural and Instructional problems

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- The huge numbers of the students in the class,
- The orienting of students towards only exam achievement and competitions,
- Student passive -teacher traditional.
- The broken link with other lessons,

Lack of Infrastructure



Huge number of students



Solution for improvement of Science Education

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- Efforts are needed to develop links between science and other subjects,
- Research is needed to establish clear links between curriculum goals and the assessment methods used in science education
- Assessment tools with valid and reliable items needs to be developed so that they can be used in formative and the summative assessment in science education.

Solution for improvement of Science Education

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- Research based efforts are to be made to increase the use of out-of-school activity in the learning of science.
- Action research based on the classroom problem of science teaching be conducted and the results are to shared at the national platforms so that such improvements can be used with possible improvements.

Thank you....