National Seminar on Science Education: A Brief Report

S.V. Sharma
Regional Institute of Education, NCERT, Ajmer
Email: svsriea@yahoo.co.in

Frontiers of knowledge are expanding very fast. Science is no exception. It is a dynamic, expanding body of knowledge, covering ever-new domains of experience. In a progressive society, science can play a truly liberating role, helping people escape from the vicious cycle of poverty, ignorance and superstition. Science is the synergy of content, process and development of attitude. People today are living in an increasingly fast-changing era where the important skills of innovation and creativity are very much needed for sustainable development of the society. These different imperatives have to be kept in mind in shaping new generations through quality Science Education. Good science education is true to the child, true to life and true to science. Also one of the aims of science education is to inculcate scientific temper. There is always a need to plan and work for science for all to develop a scientific and emerging society. This National Seminar on 'Science Education' was planned to provide a common platform to all stakeholders working in the field of science education to share their experiences, researches, innovative practices and their impact in improving the quality of school education. This would help in providing directions to the curricular and pedagogic reforms for developing the emerging Indian society. Keeping above in view a three-day national seminar was organized at this institute with the following objectives:

- To provide a forum to the science education researchers, teachers and teacher educators to share their research work, innovative practices and emerging trends in science education.
- To make recommendations for future course of action for the promotion of quality school education in general and science education in particular.
- To document the best practices and researches in the field of school science education and to disseminate the same with the stakeholders.

Research papers pertaining to the theme 'Science Education' and following sub- themes were invited:

- Recent Trends in Science Education
- Scientific Knowledge and Skill Development
- ICT for Quality Science Education
- Resources for Science Education

- Evaluation in School Science– Past and Present Practices and Future Perspectives
- Learning Outcomes with Special Reference to Science
- Innovative Practices in Science Education
- Constructivist Approaches in Facilitating Learning of Science
- Science Education beyond Constructivism
- Innovative Pedagogies for Effective Teaching Learning of Science
- Alternative Frameworks in Science
- Myths, Facts and Science Education
- Advancement in Science and its Utility for School Education
- Professional Development of Science Teachers
- Ancient Indian Scientific Knowledge and its Relevance in Modern Time
- Science Curriculum for Life-long Learning and Value Development
- Science Education for Sustainable Development
- Science Education for Inclusive Classroom
- Status of Science Education in India and Other Countries
- Science, Technology and Society Perspectives

The Seminar was organized from 21st November, 2017 to 23rd November, 2017 at Regional Institute of Education, NCERT, Ajmer to provide a common platform to all stakeholders working in the field of Science education to share their experiences, researches, innovative practices and their impact in improving the quality of school education. In this national seminar 500 abstracts pertaining to theme and sub themes were received from School Science Teachers, Science Education Researchers and Faculty of DIETs, CTEs, SCERTs, SIERTs, SIEs, IASEs, NCERT, IISERs, NISER, Teacher Training Institutions, Colleges, Universities and NGOs etc. for oral and poster presentation. Review committee selected and recommended 153 abstracts of researchers for making their presentations in different parallel technical sessions. Out of 153 presentations, 127 presenters made their presentation in different technical sessions of the seminar. In addition to these presentations, 3 plenary lectures and 9 keynote addresses were also delivered by the invited speakers of the repute. Editing committee recommended 63 full length papers for publication in the proceedings. Following main recommendations emerged out of the deliberations made during the seminar:

- Flipped classroom should be introduced in science education.
- Technological development should be incorporated for teaching learning Science to realize the access of technology anywhere, anytime and any one.
- Development and availability of open educational resources in digital format be made available free of cost for teaching learning of science.
- Science education beyond constructivism also needs to be encouraged in the classroom situation.

- Science education should be promoted in such a way so as to develop thought processes, thinking skills, scientific temperament and values among students to visualize in new perspective.
- STEM education should be incorporated in school Science curriculum.
- Educational software and DER achievement be made available to the students.
- Data based learning which helps in promoting student's creativity be encouraged.
- Library method and web-browsing method is effective to access global information for Science education is accessible to the students.
- Knowledge of ancient Indian scientific knowledge and its relevance in present Science education should be a part of curriculum.