

REVITALIZATION OF SCIENCE TEACHER EDUCATION

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Abstract

The present educational scenario of the 21st century has become prone to stress more on Quality than on Quantity. The primary aim of every educational institution is to provide a good and quality education to the students. Unless we built a strong base we cannot think over and strength of the premise. Similarly the country which shows keen interest in providing the quality based education will surely empower the knowledge of the students and in turn it will lead to the development of the Nation. Moreover this century is known for the drastic development of Science and Technology. Day by day numbers of innovations are keeping on growing. It is the duty of the teacher to incorporate recent developments to the students that occur across the world. With an increased availability of the knowledge centers and a rapid rise in the enrolment of the students the responsibilities of the teachers also have increased many folds. In case of science teacher, the responsibility becomes more than the others. Meanwhile if the teacher has enough capability to maintain the larger group of students, then he/she becomes the successful teacher. For this, it is mandatory for the Science teacher to equip, empower, and update the knowledge every day. In this connection the author of this paper has planned to discuss the present status of the Science teacher education and tries to give some suggestions that can improve the quality of the science education in India.

Key words: *Quality, Science Education and Science Teacher.*

Introduction

A few decades back the science was given a step-motherly treatment and was considered to be a subject meant for less important subject. Science has now established its claim to be placed in a school curriculum. Due to its utilitarian, intellectual, vocational, cultural moral and aesthetic values it has been placed in the curriculum with due prestige. The training, the student receives in science during his study days can be applied to solve other problems in future life. Moreover the results of the science are generalizable and it does not give any room for superstitions and other facts without proofs. Teacher education is the vital for the development of the country and this is the age of science and technology. Proper science education is must for the advancement of the nation. Several committees have forwarded their suggestions for the development of the teacher education in general and science education in particular, but the standard of science education in

India is still to come up to international standard. Unfortunately the present day of teaching science is far from being satisfactory. The education of science teachers is the main concern to be geared up, organized, revitalized and improved in order to shape the science education in the light of the present changing scenario of the educational world.

Problems in Science Teacher Education

In the present science teacher education system the following problems have been identified.

- (a) Problems in selection of the candidates
- (b) Poor knowledge in preparing lesson plans
- (c) Lack of knowledge in preparing and handling teaching aids
- (d) Problems in supervision during practice teaching

Problems in Selection of the Candidates

In present condition, the selection of the candidates for B.Ed program are being done on the basis of their academic marks scored in the graduation level. It is not actually valid and reliable. In order to select the qualified candidates, the exclusive selection procedures have to be done through entrance examination. For example, the theory examination may be conducted for 50 marks and the other 50 marks can be allotted for the interview. The theory exam can comprise of general mental ability test, aptitude test, attitude test and general awareness. The interview can be of checking the personality of the candidate, interest of the candidate towards science subject and etc., this kind of selection will ensure the quality of science education and prevent the unwanted entry of the incapable or uninterested candidate into the program.

Poor Knowledge in Preparing Lesson Plans

Due to the short period of the B.Ed program, the student teachers gain inadequate knowledge in preparing the lesson plans. This will lead to the poor performance of the candidate during teaching practice. As a good science teacher, it is must to know the procedure of writing the lesson plan in effective manner. To overcome this problem, the special classes can be handled by the subject experts to provide adequate knowledge in preparing good lesson plans. Copying from the previous year's record books has to be avoided. The concerned faculty member has to look into this concern strictly to avoid such malpractices.

Lack of Knowledge in Preparing and Handling Teaching Aids

As we know that audio-visual aids promote the teaching learning process so that every science teacher must possess good capability in preparing and handling the teaching aids wherever necessary. Unfortunately, considerable number of student teachers are interested in buying the readymade teaching aids available in markets or prepared by the third person. This will lead to the financial burden as well as poor knowledge in preparing teaching aids. The subject teacher should not entertain this practices and he can ask the student teachers to prepare such teaching aids by their own. Teaching aids can be effectively prepared with the help of available low cost materials. Moreover the student teachers have to be trained to utilize the teaching aids in effective manner.

Problems in Supervision During Practice Teaching

Every student teacher undergoes for practice teaching for at least 45 days in B.Ed Program. During practice teaching, the subject teacher must supervise the candidate's way of motivating the students, way of delivering the concepts, way of giving necessary examples, way of using teaching aids and etc., Mistakes done by the student teacher can be corrected with the necessary instructions given by the subject teacher. But unfortunately, during practice teaching, the subject teachers could not find enough time to supervise each and every student teacher's teaching. In some institutions, during the practice teaching the subject teachers are assigned some official works or they take leave. This kind of thing should not be entertained. The authorities of institution should make strict measures in this concern.

Suggestions to Improve Science Teacher Education

- The present one year B.Ed., program should be made of two years
- Internship should be of six months instead of 45 days in practice teaching.
- Scientific activities such as science fair, science club, museum, and exhibition can be encouraged.
- College of education should be equipped with scientific materials and scientific instruments.
- Seminars, conferences sand workshops related to science education can be organized every year by the institutions /colleges.
- Job security should be provided to the selected and passed candidates by the government
- Revision of curriculum should be made at a regular interval of time.
- Suggestions from school science teacher and science teacher educators should be received in order to improve the system.

- The teachers have to undergo for orientation programs, refresher courses every year in order to balance their ability with the recent developments.
- The science teaching can be done with the help of innovative technologies like CAI, Video Packages etc., during the practice teaching.
- Monitoring and evaluation should be made an integral part of teacher training program to know the strength, weakness, opportunities and Outcomes of the program.
- All the existing college of educations should be accredited by NAAC.

Conclusion

In order to maintain the quality, the environment of the teacher education institutions should be improved. The science teacher educators should be given freedom to work. If there is any lacuna found in the system of such privately managed college of educations, their affiliations should be cancelled. NCTE is doing lot of commendable developments to improve the quality over nationwide. The relationship between the institution and the workers should be transparent and everyone should work to the betterment of the quality of education. In order to compete with the global knowledge market, the quality of education in our nation needs more betterment. This is becoming crucial for survival. So there is an urgent need to reform and revitalize the present education system for ensuring and creation of the quality of intellectual infrastructure in India.

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