

Jyoti B.Ed College, Rampura, Fazilka

Subject :- Pedagogy of Science

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Teacher's Name

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Topic :- Professional Development (Need, Importance, Professional Competencies and Programmes for Science Teacher)

Introduction :-

"Teachers are the Builders of Nation".

For an effective and efficient teaching of science. We need well equipped science laboratories and more important than this we need well qualified science teachers. Quality of education depends mainly upon the quality of the teacher and not on the material facilities only. An efficient and resourceful science teacher can carry on his work quite efficiently even with inadequate science facilities.

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* ~~Meaning~~

* Definitions :

In the view of Kothari Commission, "of all the different factors which influence the quality of education and its contribution to national development, the quality competence and characters of teachers are undoubtedly the most significant."

In the words of R.N. Tagore, "A teacher can never truly teach unless he is still learning himself. A lamp cannot light another lamp unless it continues to burn its own flame."

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Meaning of the term Professional Growth

Professional growth stands for one's growth and development in one's profession. In this sense Professional growth of a teacher implies the growth & development of teacher's abilities, capacities & competencies for carrying out properly all his responsibilities related to teaching profession.

Need and Importance of the Professional development for the Science Teacher

1. The teacher can acquaint himself with the update knowledge and latest development in his subject.

2. The teacher can be acquainted and acquire the latest strategies, techniques and methodology of teaching his subject.

- 3 Teacher can help himself to develop a proper positive attitude, interest and expectation from the teaching and learning of the subject.
- 4 Teacher can acquire necessary competencies in establishing and working with his students in science laboratory, computer^{kb} for the effective teaching-learning of the subject science.
- 5 He can acquire necessary skills in the preparation of needed instructional material, improvised apparatus.
- 6 He can acquire necessary knowledge, abilities & skills necessary for the organization of co-curricular activities.
- 7 Teacher can acquire necessary competency in motivating the students for the learning of science by removing their hesitation & usual fear.
- 8 Teacher can acquire necessary knowledge and understanding about the history of science alongwith the contributions of great scientists,

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9) Teacher can be able to acquire necessary skills for providing better guidance & help to his students by diagnosing their strengths & limitations.

10) He can be in a position to contribute & participate in the development & revision work of the science curriculum development.

* Professional Competencies and Programmes for Science Teacher

In-service Teacher Education programs helps a lot for the professional growth of a science teacher.

a) Refresher Courses :- Refresher courses are a means of professional growth of science teachers. Such courses should be real professional courses and should be taken into account the latest developments in theory and practice of science education.

b) Workshops :- Workshops for science teacher should be organised during summer vacations. It is the responsibility of the training colleges to organise such programmes.

- c) Study Groups: Teachers of similar professional responsibilities & interests may organise a study group. The groups may hold weekly or fortnightly meetings.
- d) Conferences: - Regional conferences can be organised yearly. These conferences will focus the attention of science teachers on topics of practical importance.
- e) Experimenting: Model schools attached to teachers' colleges should be changed to experimental schools.
- f) Seminars: A seminar is a small class or group for discussion & research. It is a meeting of teachers to discuss common problems.
- g) Extension Lectures: - The school itself or training college can arrange some lecture by experts in the field of science education.
- i) Indirect Training: - Reading educational journals, other relevant literature released by NCERT or other agencies, newspapers, TV program, visiting places of educational importance are some of the ways by which teacher can get indirect education.

Role of a teacher as a facilitator

- Representative of society
- As judge
- Resource person
- Helper
- Referee
- A model for students
- Group-leader
- As a parent
- Friend and confident
- Reducer of anxiety

Conclusion :- We conclude that the science teacher plays the vital role spreading scientific knowledge and building up habits of thought & action & these by making the teaching of science efficient & effective.

