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INTRODUCTION

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CHAPTER- I

SECTION - I

NEED AND AIMS OF TEACHER EDUCATION

Education is as old as mankind, and is the concern for all living beings in every society, ancient or modern, simple or complex, primitive or advanced, one finds provision for education. Without education, no society could last more than a generation leaders of human thought have extolled education in memorable words. Aristotle declared that 'Educated men are as much superior to uneducated as the living are to the dead.'

Education can have two different meanings. The wider meaning includes every influence in our life, not only what we do for ourselves. The more accepted meaning of the term 'education' includes the deliberate and conscious efforts exerted by the state, society, school and home towards the welfare of the growing child in order to mould him into a being who will fit in the society in which he is to live. Education is higher and finer than more instruction. Education may be formal or informal. Informal education is incidental. It is important and useful but may not be deliberately planned. Formal education is consciously and deliberately planned for the purpose of training the child through schooling and tuition. Its need increases with the increasing progress in society. Hence in developed social groups there are special agencies such as schools for imparting formal education, while in backward social groups there are no such special agencies.

THE FUNCTION OF EDUCATION

Education is not a new process, but it is receiving new interpretation. Education has been recognised by all thinkers as a manifold process of aiding the individual to come into full possession of all the desirable features of his heritage. It helps to lessen the undesirable tendencies and to initiate new ideas. The function of education is considered to be the adjustment of man to his environment, which means his adaptation to and reconstruction of his surroundings for his own benefit and that of society. It is a dynamic force and as such brings about the reorganisation and reconstruction of human experience.

AIMS IN EDUCATION

The expression of purposes for education has had a long and illustrious history. Some of the greatest writers of the east and the west have devoted their talents so describing what education should be and do. Without a knowledge of aims, the educator is like a sailor who does not know his goal and the child is like a rudderless vessel which is drifting ashore. Dewey maintains that, it is the ignorance of right aims or their absence that lies at the root of the weakness of our educational system and results in wastage of effort on the teacher's part, and of energy and talents on the part of pupils committed to their care.

Writing in the later half of the nineteenth century, Herbert Spencer singles out the full life as the one purpose of education, 'to prepare us for complete living is the function which education has to discharge'. Education should enable us to treat the mind, body and spirit in a proper way Mahatma Gandhi, similarly believed that the various innate and acquired powers should be so as to bring about complete development or perfection of nature.

Sir Percy Nunn holds that the main aim of education is 'the autonomous development of the individual'. According to the

Nunn, 'Nothing good enters into the human world except in and through the free activities of individual men and women and educational practice must be shaped to accord with that truth'. According to Rabindranath Tagore, 'education is the all-round development of the individual in harmony with the universal the supreme person, who has in himself the various levels or planes of consciousness and experience corresponding to man's self mind and soul'.

The aim of education should be social and enable the pupil to learn social good, social service and citizenship, is unheld by John Dewey. Some educators hold the acquisition of knowledge to be the aim of education. Like the Sophists, these educators emphasise the cognitive or intellectual aspects of personality. Aurobindo Ghose stated that one of the most important functions of the education is 'the recovery of the old spiritual knowledge and experience in all its splendour, depth and fullness'.

EDUCATIONAL AIMS IN MODERN INDIA

Due to the far-reaching political, social and economic changes that have taken place in India during the last twelve years, it is imperative that the goals of education be re-examined and

re-stated in terms of the needs that have arisen in society as a consequence of those changes. Training of the intellect : in a democracy, the individual has to think for himself, to express his views and to exercise the vote. He is expected to give his own independent opinion on various types of social, economic and political problems. The capacity to receive new ideas, and to think and reason correctly, needs to be included in place of the rolelearning and cramming from text-books which is so common in our schools. The aim of acquiring information and knowledge merely for the sake of passing examination should be replaced by the enquiring mind and a curiosity and desire for learning and exploring new ways of thinking. Clarity of thought is to be followed by clear speech and correct expression, for in a democracy, the individual is expected to express himself clearly in speech is well as in writing.

Physical Health and Well-being:

Education should give us a knowledge of the laws of health and right living, should develop bodily grace and harmony, is an aim which was greatly esteemed by the Greeks. Very little emphasis is laid on health and physical education in schools and

colleges. Recent investigations in psychology have revealed that the mind and body work together, and that for the proper functioning of the mind, there must be a healthy functioning of the body also.

Development of Personality and Leadership

A democracy is built on the idea that there is worth and dignity in every human being apart from all considerations of birth or rank. Therefore, in educational system, there is provision for the complete and all round development of the child's personality and potentialities. The child's intellectual and emotional life is developed by coming into direct contact with the world of art, nature and science and they can enjoy the world's culture and heritage. In fact, out of the nation, the artists, writers, poets and political or social leaders. It is only proper guidance and training through wide reading and a rich curriculum of varied activities that the individual child can be encouraged to develop and to give the best of himself to society and to the state. Besides aesthetic and scientific training, these subjects and activities will provide leisuretime occupation for the pupils.

TEACHER EDUCATION AND ROLE OF TEACHERS

According to the International Commission on the Development of Education (1972), 'the teachers duty is less and less to inculcate knowledge and more and more to encourage thinking, his formal functions apart, he will have to become more and more an adviser, a partner to talk to, some-one who helps seek out conflicting arguments rather than handling out readymade truths. He will have to devote more time and energy to productive and creative activities. interaction discussion. stimulation, understanding, encouragement'.

Regarding the importance of the role of the teacher the Commonwealth Report (1974) stated, 'The teacher has a major role in educational development whether he approaches his work actively or passively. The World Book Encyclopaedia (1984) lists four main duties of teachers :

- 1) Teachers must prepare for their classes.
- 2) They must guide the learning of students.
- 3) They must check students progress.
- 4) Teachers must set a good example for their students.

The school is the most important agency of education with which we are concerned, directs the pupils activities through its teachers. Therefore it is necessary to consider qualities and qualifications of a good teacher. According to Aurobindo Ghose, 'the first principle of true teaching is that nothing can be taught. The teacher is not an instructor or task-master, he is a helper and a guide. Herbart gives three functions that the teacher has to perform, namely teaching, government and guidance'.

The work of good teaching can only be undertaken if the teacher has sufficient academic qualifications and a teacher's training. Alongwith these, there should be an aptitude for acquiring knowledge and a keenness to increase his range of interests. Teaching is impossible without the necessary background of knowledge in different subjects to enable the teacher to guide the children in their difficulties and to help them acquire the fundamental skills with case and accuracy. A good teacher will always be eager to improve his knowledge and will read new books and journals and take an interest in varied educational activities. In addition, a teacher who is put in charge of the kindergarten or primary classes, should have an aptitude for

practical subjects like drawing, colour work, weaving, papiermache, card-board modelling and other arts, as these subjects occupy an important place in the curriculum of the lower-classes. Besides, she must have a fondness for games, songs and rhymes so as to be able to teach to the children teaching involves the creation of an environment in which the growing mind of his pupils may develop through their own activity, aided and guided by the teacher-through his suggestions persuasion and by his stimulation. The greater teacher is not a pedagogue niggling over pettifoggingpiesties, but rather a prophet or a man of vision.

The second function of teacher is that of government which means the control of children and management of a class. It is not easy task to handle a class of children of different temperaments and varying test \mathfrak{g} . There are shy children, extroverted children, mischievous children, inattentive children. The task of classmanagement requires a good personality and freedom from physical defect. They soon learn to love and respect a teacher who has a good personality and who does not easily loose his temper or get upset by their pranks. Guidance is one of the most important duties of a teacher. It is both mental and spiritual. The teacher exerts a very great moral influence on the child and this is often done through strong-telling, through direct moral talks and also by holding up the right types of heroes and great people before the child for admiration and emulation. The task of guidance can therefore, be rightly performed by a teacher possessing great sympathy, fact and insight into the child's nature and by one who has a real love for children.

Teaching is a profession which offers many opportunities. Many young men and women who enter into it hardly realize the many and varied advantages awaiting them. 1) There is opportunity to win the respect and confidence of youth, and to share in their real and enthusiasm for life. Among the greatest rewards of teaching are the feelings of appreciation and admiration which students express over the years for their teachers. 2) Teachers are in a privileged position to enjoy the respect of the community. Teachers are gurus, most parents and members of the community look up to them for high standards of scholarship, character, social and moral virtues. 3) Teachers as compared to members of other professions, have the opportunity and often the facilities to pursue in depth some scholarly pursuit of their choice. Teachers have been able to improve their qualifications and obtain higher degrees while teaching. This is often impossible to achieve in any other profession. 4) There is more security in the teaching profession, teachers work in regular and fairly uniform salary-scales based on their qualifications and experience. They get paid regularly, earn increments, provident fund and often pensions, besides, there are increases based on improved qualifications, promotions to better positions.

In the modern age, teaching has become one of the most important professions. As compulsory education extends to all areas, schools increase and are upgraded, thus creating demands for well-qualified teachers.

The New Encyclopaedia Britannica.1985, lists the following roles of a teacher :

Role in the school or University :

- Mediator of learning
- Disciplinarian or controller of student behaviour
- Parent substitute

- Confident to students
- Judge of achievement
- Organizer of curriculum
- Bureaucrat
- Scholar and research specialist
- Member of Teacher's Organization

Roles in the Community :

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- Public servant
- Surrogate of middle-class morality
- Expert in some area of knowledge or skills
- Community leader
- Agent of social change.

The National Commission on Teachers for Higher Education (1986-1985) listed the following roles of teachers in national development.

- 1) Teacher as an agent of change
- Teacher in the context of explosion of knowledge to remain up-to-date.
- Teacher to adopt new methodology of utilize interactive methods of instruction.
- 4) Teacher to use his creative ability.

- Teacher as a procurer of knowledge to enlarge the sphere of his knowledge.
- 6) Teacher as an agent of co-operation with community.
- 7) Teacher to undertake problem-solving research.
- 8) Teacher to initiate management change.
- Teacher to discharge his responsibility with an urgent sense of social purpose.

Multifarious Roles of a Teacher :

- Parent substitute : A teacher is expected to act as a parent of the students and treat them with affection and care.
- Ego-supporter : he is expected to build up and maintain a healthy and strong 'ego' and 'self concept' among children.
- 3) Helper : The teacher is expected to be a helper to students by way of providing them academic and personal guidance.
- 4) Resource person : He is expected to play the role of a resource person who possesses knowledge of the subjectmatter and skills better than the pupils.
- 5) Defective : He acts as a defective in detecting offences and role breakers.

- Facilitator of Learning : He is expected to promote significant learning among his students.
- Referee : He is expected to settle disputes among students in an objective and fair manner.
- B) Group-leader : He is expected to act as a leader in developing suitable climate and cohesion in the class as a social group.
- 9) Inspire and Exampler : He is expected to behave in a manner where by the traits exemplified by him may be emulated by the students.
- 10) Judge : He is expected to evaluate the academic and other performance of the students in an impartial manner.
- 11) Confident : He is expected to win and share the confidence of the students.
- 12) Friend and Philosopher : He is expected to play the role of a friend, philosopher and guide to the students.

- 13) Moral Educator : He is expected to inculcate the attitudes and moral values cherished by the society among the students.
- 14) Democrat : he is expected to play the role of a democrat.
- 15) Rationalist : He is expected to play the role of a rationalist by basing his actions on reason.
- 16) Secularist : He is expected to play the role of a secularist by having an open mind on the beliefs of all religious.
- 17) Initiator : He is expected to play the role of an initiator by exploiting the new technology to the best advantage of the students and the purposes of education.
- Reformer : In a country like India, where conservatism and superstitions prevail, a teacher is expected to play the role of a social reformer.
- 19) Equalizer : He should act as equalizer by working for minimising inequalities in the educative process and by building up an equalitarian, secular and socialist society.

Educational Performance of teacher

Educational performance of any student is dependent on many factors. Some factors are inherent in the individual and other factors are outside the control of the individual. Factors that influence the educational performance may be his intelligence, his study habits, his aptitude for the subject and his interest in the subject. The performance depend on the standard of the college and standard of the teaching. When a student offers a professional course, his/ her aptitude for the profession also plays an important role in his performance. Educational performance of the student may be determined by both the aptitude for the teaching profession as well as by the consistent previous academic record.

NEED AND SIGNIFICANCE OF TEACHER EDUCATION

Teachers are born, not made can be true only in a few rare cases. It is also not contended that training by itself, is sure to make a good teacher. But it is generally observed that a teacher with training becomes more mature and confident to perform his task more efficiently. Proper training and education enables the teacher to have a knowledge of how children grow, develop and learn, how they can be taught best and how their innate capacities can be brought out and developed. Teacher education is needed for kindling the initiative of the teacher. It has been aptly remarked, 'if you educate a boy, you educate one individual. If you educate a girl, you educate the whole family and if you educate a teacher, you educate the whole community'.

The Education Commission (1964-66) said, "A sound programme of professional education of teachers is essential for the qualitative improvement of education. Investment in teacher education can yield very rich dividends because the financial resources required are small when measures against the resulting improvements in the education of millions."

AIMS OF TEACHER EDUCATION PROGRAMMES

- Enabling the teacher trainee to acquire the capacity to manage a class with pupils of varying abilities.
- Enabling the teacher trainee to communicate areas logically and with clarity.
- Enabling the teacher trainee to use the technology available to make teaching effective.

- Enabling the teacher trainee to organise educative experiences outside of classroom.
- 5) Enabling the teacher trainee to learn to work with the community and help the student do so.
- 6) Enabling the teacher trainee to learn to communicate to his pupils the importance and the feeling of national integrity and unity.
- 7) Enabling the teacher trainee to develop among the pupils a scientific attitude, a commitment to excellence in standards of work and action.
- 8) Enabling the teacher trainee to have an understanding and appreciation of the human predicament, population explosion, environment pollution, the threat of a nuclear holocaust and the quest for world peace.
- Enabling the teacher trainee to imbue the right attitudes, and values, besides being proficient in the skills relating to teaching.

CHALLENGING TASKS IN TEACHER EDUCATION

Following are the major challenging tasks :

- Identifying motivated persons to enter the training institutions and devising stringent procedures to prevent indifferent and unmotivated individuals from entering.
- Developing teacher education curricula which are relevant to the new roles and responsibilities.
- Devising and using training modalities in the light of explosion in technology of teaching.
- Creating structures for implementing a programme of continual and comprehensive in-service education of teachers to meet the challenges of change.
- Streamling the procedure of recruitment of teacher educators in such a way as persons of appropriate academic calibre can enter the teaching profession.
- Planning a management system of teacher education so as to make it more dynamic and sensitive to national needs.

GENERAL OBJECTIVES OF TEACHER EDUCATION

The future teacher should -

- Develop Gandhian values of education such as nonviolence, truthfulness, self discipline, self-reliance, dignity of labour, etc.
- Perceive his role as an agent of social change in the community.
- Perceive his role not only as a leader of the children but also that of a guide of the community.
- 4) Act as liaison between the school and community and employ suitable ways and means for integrating community life and resources with school work.
- Not only use but also help in the conservation of environmental resources and preservation of historical monuments and other cultural heritage.
- 6) Possess warm and positive attitude towards growing children and their academic socio-emotional and personal problems and skills to guide and counsel them.

- 7) Develop an understanding of the objectives of school education in the Indian context and awareness of the role of the school in achieving the goals of building up a democratic, secular and socialist society.
- Develop understanding, interests, attitudes and skills which would enable him to faster all-round growth and development of the children under his care.
- Develop competence to teach on the basis of the accepted principles of learning and teaching.
- 10) Develop communication and psychomotor skills and abilities conduncive to human relations for interacting with the children in order to promote learning inside and outside the classroom.
- 11) Keep abreast of the latest knowledge of the subject-matterhe is teaching and the techniques of teaching the same.
- 12) Undertake action research and investigatory projects.

PURPOSE OF TEACHER EDUCATION

student better. The knowledge of educational psychology helps him a lot in dealing with children scientifically. Untrained teachers not familiar with the subject may create problem children in the school.

- 2) Building confidence : Teacher training builds confidence in the potential teachers. A trained teacher can essentially face the class with confidence. He is not timid or shy. He can tackle many odd situations and he does not run away from problem situations.
- 3) Using Methodology of Teaching : Through training, the future teacher becomes familiar with methodology of teaching. He also get essential knowledge of methods required for a particular subject. He teachers with a flair and not in a routine way.
- 4) Building Attitude : A sort of brain wash is also done through training. It helps in building favourable attitudes towards the teaching profession. During the course of training, many doubts of the teacher trainee stand removed. It results in creation of love and respect for teaching profession.

- 5) Making familiar with School Organisation : During the course of teacher training, we familiarise the teacher trainees with organisation and administration of the schools.
- 6) Creating Social Insight : Teacher training is a must as it is required to teach the teachers to live a community life.
 Training is essential to create social insight in them.
- 7) Improving standards : We are interested in raising the standards or the quality of education. A trained teacher can be a great help in improving the quality of education. A trained teacher can be a great help in improving the quality of education and also in checking wastage.

SECTION - II

ABOUT THE STUDY

STATEMENT OF THE PROBLEM

"THE EFFECT OF TEACHING APTITUDE AND GRADUATE ACADEMIC ACHIEVEMENT ON THE THEORY PERFORMANCE OF B.ED. STUDENTS WITH SCIENCE METHOD - A STUDY."

DEFINITIONS OF THE TERMS AND PHRASES TO BE USED IN THE STUDY

A STUDY : A research investigation

EFFECT OF: Influence of

APTITUDE :

"Aptitude is a condition or a set of characteristics regarded as symptomatic of an individual's ability to acquire with training some knowledge, or skills or set of response, such as the ability to speak a language, to produce music, etc."

- Warren's Dictionary

Innate or acquired skill or ability which is assumed to underlie and is conductive to, an individual's capacity to learn and attain a level of achievement in a specific field. Aptitude is normally interviewed from testing or observation of attained behaviour and attitude.

Innate or acquired skill or ability which is assumed to underlie and is conductive to, an individual's capacity to learn and attain a level of achievement in a specific field. Aptitude is normally interviewed from testing or observation of attained behaviour and attitude.

TEACHING:

What is being taught; any act of instructing students in an educational institution; in a broader sense, any act of providing learning situations, guidance, activities material and other facilities conduncive to learning formal or informal.

TEACHING APTITUDE :

"Any one who is to become a teacher needs an intellect capable of grasping not only the subject matter and its place in the curriculum but also the aims and processes of education."

S.D. Kapoor

One is said to have teaching aptitude when one with very less training can teach others effectively.

OPERATIONAL DEFINITION

TEACHING APTITUDE :

"For the purpose of this study teaching aptitude is what the teaching aptitude test," by S.D. Kapoor measures.

ACADEMIC :

Pertaining to school subjects, or to the fields of liberal arts, or to the sphere of ideas and abstractions.

ACHIEVEMENT :

Performance in school or college in a standardized series of educational tests. The term is used more generally to describe performance in the subject of the curriculum.

ACADEMIC ACHIEVEMENT :

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Academic achievement is knowledge attained or skills developed in the school subjects usually designated.

OPERATIONAL DEFINITION:

GRADUATE ACADEMIC ACHIEVEMENT :

The marks obtained at the graduate examination.

For the purpose of this study, it is the B.Sc. marks of the students selected for the sample (The sample constitutes the B.Ed. students with science as their first method).

OPERATIONAL DEFINITION:

EDUCATIONAL PERFORMANCE OF B.ED. STUDENTS :

For the purpose of this study, it is the final year theory marks of the B.Ed. students selected for the sample.

SIGNIFICANCE OF THE STUDY :

1) Though a large number of studies have been undertaken involving the variables, 'teaching aptitude', 'academic achievement', and 'educational performance' of students, it is found that no study has been undertaken involving all the three variables and seeing the relationship of the previous academic performance (B.Sc.) with the present (B.Ed. performance of students with science method) and the effect of teaching aptitude on their B.Ed. performance. Such a study on a large scale will reveal the levels of teaching aptitude and graduate performance conducive for high B.Ed. performance.

DELIMITATION OF THE STUDY :

Only those B.Ed. students who had science methods, with B.Sc. (Science) was covered from all the aided and non-aided B.Ed. colleges of Shivaji University, Kolhapur.

OBJECTIVES OF THE STUDY :

- 1) To find out the teaching aptitude of B.Ed. students with science as their first method.
- To find out the relationship between teaching aptitude and B.Ed. performance.
- To find out the relationship of the graduate academic achievement and the B.Ed. performance.
- To find out the effect of both teaching aptitude and graduate academic achievement on the B.Ed. performance.
- 5) To determine the levels of teaching aptitude and graduate performance conduncive for high B.Ed. performance.

- 6) To determine the levels of teaching aptitude and graduate performance responsible for average B.Ed. performance.
- 7) To determine the levels of teaching aptitude and graduate performance responsible for low B.Ed. performance.

HYPOTHESES :

- 1) The teaching aptitude and B.Ed. performance of students are independent of each other.
- 2) The graduate academic achievement and the B.Ed. performance are independent of each other.
- B.Ed. performance are independent of both teaching aptitude and graduate academic achievement.
- The levels of teaching aptitude and graduate performance are independent of high B.Ed. performance.
- 5) The levels of teaching aptitude and graduate performance are independent of average B.Ed. performance.
- 6) The levels of teaching aptitude and graduate performance are independent of low B.Ed. performance.