

CHAPTER II

CONCEPT OF TEACHING APTITUDE

2.0 INTRODUCTION

People differ from one another and within themselves in their performance in one or the other field of human activity such as leadership, music, art, mechanical work, teaching etc. Many individuals under similar circumstances outperform others in acquiring certain knowledge or skills and prove more suitable and efficient in certain jobs. This is because of their natural or acquired capacity or ability. Such natural acquired capacity or ability of a teacher for teaching field is most important to be a successful teacher. However, such capacity or ability can be further developed through the appropriate training. In order to understand teachers' aptitude and inclusive education, it is essential to know about the concept of aptitude in the context of inclusive education.

2.1 CONCEPT OF APTITUDE

Human being's efficiency cannot be easily defined like that of a machine nor can be easily measured. Human being's working efficiency varies with a number of factors i.e. aptitude for task involved, adequacy of training for the task, motivation, and condition of work. The word aptitude has been defined in different ways by psychologists and its meaning varies from person to person.

In reference to person's aptitude for the particular subject, we are looking towards the future. However, his aptitude is a present condition, a pattern of traits deemed to be indicative of his potentialities. When appraising aptitudes, we are on alert for symptoms of 'ability to acquire' a genuine absorption in the work as well as a satisfactory level of competence. Indeed, a person who cannot develop a liking for an occupation along with proficiency in it cannot properly be said to have an aptitude for it because he lacks the necessary drive. Thus aptitude is a condition, a quality or a set of qualities in an individual which is indicative of the probable extent to which he/she will tend to acquire under suitable training. Aptitude points to a quality or characteristic of a person.

According to Bingham (1937), the concept of aptitude carries with it certain basic assumptions -

- (i) An individual's potentialities are not all equally strong.
- (ii) Individuals differ one from another in their potentialities.
- (iii) Differences are relatively stable.

Aptitude thus seems to be indicative of a person's power to acquire the specified behavioral pattern of interest, knowledge, and skill. The aptitude measure serves primarily to indicate what an individual will be able to learn whereas ability measure presents evidence of what the individual is able to do now (on in future without additional training) if he applies himself. However, it should be noted here that from a practical standpoint it would seem almost impossible to obtain an aptitude measure that does not indicate a certain amount of training. Customarily, it is assumed that individuals have been exposed to certain common experiences and that a person who has a greater degree of aptitude will show a higher level of performance in the standardized test included representing the aptitude.

In order to have a clear understanding of the term aptitude, a few definitions given by scholars may be considered.

2.1.1 Meaning and Definitions of Aptitude

The New Dictionary of Psychology (1947) defined aptitude as a capacity in any given skill or field of knowledge, on the basis of which a prediction can be made regarding the amount of improvement which might be affected by further training.

In a more general way, Hahn & Maclean (1955) points out aptitude as latent potentialities, undeveloped capacities to acquire abilities & skills and to demonstrate achievements.

Bingham (1937) defines aptitude as a condition that is indicative to a person's relative fitness for his readiness to acquire proficiency, potential ability and to develop an interest in exercising his potential ability.

Traxler (1957) defined aptitude as a condition, quality or a set of qualities in an individual which is suggestive of the probable extent to which he will be able to acquire under suitable training, some knowledge, skills or composite of knowledge, understanding and skill, such as ability to contribute to art or music, mechanical ability, mathematical ability or to read and speak a foreign language etc.

The Bingham's definition also finds support from Freeman (1955) as he defines aptitude as a combination of characteristics which connotes an individual's capacity to acquire (with training) some specific knowledge, skill, or set of organized responses, such as ability to speak a language, to become a musician, to do mechanical work, teaching etc.

Bennett, Seashore & Weisman (1959) points out that aptitude embraces any characteristics which is predisposed to learning including intelligence, achievement, personality, interests, and special skills.

A detailed study of all these definitions enabled the investigator to arrive at a conclusion that the definition of Bingham (1937) is acceptable for the purpose of present test construction as it covers the majority of the views expressed in other definitions.

If a person has an aptitude for teaching, that means that he/she has the capacity or ability to acquire proficiency in teaching under appropriate conditions and he/she will succeed in teaching effectively. Therefore knowledge of aptitude helps in predicting the future success of an individual, under suitable training or experience in a particular area of activity.

2.1.2 Characteristics of Aptitude

Based on the above definitions, the following characteristics of aptitude can be derived.

- (i) It is symptomatic or suggestive of one's ability for a particular work or job.
- (ii) It is a present condition with a future reference to person's potential ability to do something.
- (iii) It connotes more than potential ability in performance and implies fitness and suitability for the activities in question.
- (iv) It is innate capacities resulted from the interaction of heredity and environment.
- (v) Attitude embraces any characteristic which predisposes learning including intelligence, achievement, personality, interest and special skills.

2.1.3 Measuring Aptitude

Measuring aptitude mainly depends on differential psychology and can be measured through test. Aptitude test attempts to determine and measure a person's ability to acquire, through future training, some specific set of skills, (intellectual, motor or interpersonal and so on). Different people possess different abilities and their future achievement can be predicted through the differences in ability. Aptitude test predicts the capacities that may be expected from individuals in a particular activity. In this connection, Bingham (1937) says that they ascertain what an individual actually does in certain standardized situations, and from these measurements, the estimate of capacity for future accomplishment is an inference – a statistical probability, not a certainty. Moreover, tests cannot sample all the important aspects of behavior nor plumb the depths of vocational purpose. Even with full data in hand, an enquirer's question regarding his/her aptitudes can rarely be answered precisely with positive assurance. So, the purpose of the aptitude test is predictive and their focus often is narrowed to singular ability or small collection of related abilities. Thus, an aptitude test measures the present performance which is symptomatic or indicative of one's ability for future accomplishment in a particular work or job. Someone who has the aptitude to do clerical work has the pre-requisite skills in manual dexterity, attention to detail and speed with repetitive tasks to complete many types of clerical work effectively and efficiently.

Since human activities are infinite, it is thus, difficult to classify the human aptitude to certain extent. However, for the measurement and application purpose, it can be

classified as sensory, mechanical, artistic, professional and scholastic aptitude. Teaching aptitude falls under the professional aptitude category.

Aptitude tests have a wide area of application and the result of these tests is helpful in scientific selection of the candidates for special courses of instruction, fields of activities and vocations. The chief value of the aptitude testing is, in fact, that, it enables us to pick out from those who do not yet possess the ability to perform certain skills, those who, with a reasonable amount of training, will be most likely to acquire the skills in question and acquire them to desired level of proficiency (Munn, 1967). Aptitude tests anticipate the future potentialities of a person and the level of his/her capacities that he/she possesses before the training. It helps in making the selection of individuals who are best fitted for a particular profession or field. Thus, aptitude measurement is important to know the person's choice of vocation and his efficiency in the job as aptitude plays a very important part in developing of an individual's personality.

2.2 TEACHING APTITUDE

Teaching aptitude is the capacity to acquire proficiency with a given amount of training in teacher education. It refers to the capacity of an individual to be skilled in teaching by receiving formal or informal training. Thus, teaching aptitude is helpful in predicting the future success of an individual in teaching field after providing appropriate opportunities and training. Like intelligence tests, various aptitude tests have been devised to measure aptitude of the individuals in various specific fields or activities. In India, teaching aptitude test construction was done by Shah (1962), Pandey (1968), Sharma (1969), Gakhar & Rajnish (1971), Jai Prakash and Srivastava (1973), Upadhyay (1976), Karim & Dixit (1986), Vohra (1993) Singh & Sharma (1998) and Dahiya & Singh (2004) only.

Many factors are involved with teaching aptitude and it depends upon certain personal traits, intellect and temperament. These often enable the teacher to get over even drastic constraints are imposed on his/her performance. Research studies on teacher aptitude also revealed that many factors have dominant roles in teaching aptitude. Kaur (2007) studied and established that in addition to other factors, teaching aptitude is the predictor of

success in elementary teacher training. Colley & Lohnes (1971) argued that “yesterday’s achievement is today’s ability and tomorrow’s aptitude”. Teaching needs three qualities viz. knowledge, communication skills and aptitude (The Hindu, 2002, September 3). The ability of a teacher can be visualized in the classroom context. Good teaching looks effortless because teachers’ knowledge and experience are invisible. Teaching is a tricky blend of action - a way of contextualizing knowledge; complex and challenging; and even the best teachers also face difficulties while translating formal knowledge into effective practice (Blasé & Blase, 2006). Teachers have to find innovative and effective ways to present new concepts for motivating students. A teacher with good aptitude must be aware of the essentials of components of teaching viz. lesson planning, motivating students, content learning materials, learning subjects, teaching-learning strategies, consolidation, elaborations, group activity, continuous and comprehensive evaluation, discipline, multi-level and multi-grade activities, effective communication and interaction etc. Historically, teachers had to face innumerable problems inside and outside classrooms such as cognitive, methodological, parental, societal, administrative, managerial, communicative, interactive and students related. A creative teacher can solve new problems in a divergent manner. A teacher with creativity can arrange and implement new ideas and technologies in teaching-learning process in different ways. According to Hadfield (1952), “mental ability is the full and harmonious functioning of the whole personality”. A mentally able teacher can teach, guide and inspire his students properly to attain the goals of life. The learning experiences set up by teachers now must be tailored to the needs of pupils as they exist now; otherwise, school will be experienced as an unreal world with outdated activities and knowledge. Teacher aptitude is not something that teacher acquire at one moment in his professional development and then maintains in the same form thereafter. Rather it is an ever-changing requirement based on continuing professional development and critical reflection about one’s teaching. Teacher aptitude test is directly concerned with Teacher Training Programmes (TTPs) and it can prove very useful in the selection of trainees for a professional course of teacher training. There is a great dearth of some reliable and valid measure of teaching aptitude (Mangal, 2007).

Unlike the intelligence test that measures general factor, aptitude test measures multiple or specific factors. In a cursory examination of the test format, aptitude test somewhat looks similar to achievement test and lies for the purpose of measurement. However, the main difference lies in the fact that an achievement test is used to measure an individual's recent level of knowledge or skills or performance while an aptitude test is used to predict how well an individual may learn or perform for the required task.

2.3 INCLUSIVE EDUCATION AND TEACHING APTITUDE

There is a great need to prepare teachers for inclusive education and selection of persons with right aptitude for teaching in inclusive education. The right persons should be spotted out through proper testing and advised to join teaching profession and later on to the inclusive schools.

Prior to 2014, Arts, Science, and Commerce graduates and post-graduates used to join the teaching field. The general teacher education programmes [D.El.Ed., B.Ed. & M.Ed.] are focused on preparing teachers for general schools and they merely teach inclusive education as a subject wherein pre-service teachers are equipped with theoretical knowledge but practical practice is not given its due. Thus, the pre-service teachers often find themselves not trained enough for inclusive schools and thereby hesitate to join such schools. This is one of the main reasons for the shortage of the teachers for inclusive education. Thus, selecting right personnel for the inclusive education to undertake teacher education course through the application of suitable scientific techniques is the need of the hour.

Teacher education and school leadership are considered as essential components by many academicians for implementing the inclusive education in classroom (Ainscow, 2005; Sandhill & Singh, 2005; Booth et al, 2003; and Ainscow, 1991). The general teacher education diplomas and degree courses available nationwide, are offering 'special education' as an optional paper to train and prepare teachers to identify and assess disability but it is not an integral part of the training and it does not train teachers to deal with the challenge, diversity and negative attitudes (Singhal, 2005a). This may lead to the

distrust in both special and mainstream education systems and results into keeping the CwSN at home due to fear of abuse or neglect in the classroom (Zulka, 2005). If the teachers' attitude towards inclusion is not positive (Ellins & Porter, 2005) and they lack concern then they find themselves unprepared for inclusion and for teaching all learners (Forlin, 2001). Since the NCTE guidelines (2014), inclusive education is an integral part of curriculum. As pointed earlier that general teacher education courses are mainly focused to prepare teachers for general schools, there is need to make correct selection of candidates who can be helpful for the inclusive education programme. The persons with high teaching aptitude towards inclusive education should be spotted out through proper testing and advised to join inclusive school after providing the training. Thus, admitting candidates with aptitude for inclusion can benefit in making the inclusive education successful.

As pointed earlier, different persons possess different types of aptitudes and thus, different types of tests need to be constructed for measuring different aptitudes. The measurement of aptitude has already been discussed and acceptable definition for the present work has also been given.

When we say that a person possesses an aptitude for teaching in inclusive education, it is assumed that he has a good proportion of the traits which are required for becoming successful as an inclusive education teacher. The magnitude of these traits may differ from person to person or even the number of traits possessed by each person may also differ as some may possess more traits while some less. A number of traits required for being successful teacher in inclusive education, compose as a whole the aptitude for teaching in inclusive education. Thus the high or low aptitude for teaching in inclusive education is in proportion to the number of traits possessed by an individual. It also depends on the nature of traits possessed.

Estimating the aptitude for teaching in inclusive education, the factors that contribute to the success in teaching in inclusive education should be measured through proper tests. The aptitude for teaching in inclusive education is in proportion to the number of such

factors and also in proportion to their magnitude. Such factors are also important in conditioning success in teaching in inclusive education. By constructing the present inclusive education teaching aptitude test, an attempt is made to satisfy a felt need of such test. Unlike other tests constructed so far meant for general teaching aptitude, the Inclusive Education Teaching Aptitude Test [IETAT] specifically prepared to measure aptitude for teaching in inclusive education and termed as IETAT. The importance and usefulness of such a test at this stage are beyond question.

Hence, the present investigation was an attempt towards the direction to measure inclusive education teaching aptitude and the problem is stated as Construction and Standardization of IETAT.

2.4 SCOPE OF THE PRESENT INVESTIGATION

The present IETAT is the first of its kind in India. It will be the only tool to measure teaching aptitude for inclusive education possessed by the pre-service secondary school teachers. The test is constructed in English so that it can be applicable to all states across the country. It can be given to all English knowing graduates and post-graduates. For the present investigation, the population selected for standardization of IETAT is from amongst the graduates and post-graduates teachers from Arts, Commerce and Science streams from Gujarat state but due to similar educational as well as social conditions prevail throughout the country, the test can be used in any part of India either in English or translating the test in regional language of particular part where the test is to be implemented.

2.5 REVIEW OF TEACHING APTITUDE TESTS CONSTRUCTED SO FAR IN INDIA

The investigator had collected information related to the following teaching aptitude tests available in India by referring National Psychological Corporation Catalogue (2014) and Rupa Psychological Centre Catalogue (2016-17) and thereby from the internet.

(i) Teaching Aptitude Test Battery (English) by M. M. Shah (1962)

This test measures teaching aptitude of prospective teachers of secondary schools. The test consists of 120 items under the following sub-tests.

- ☐ Mental ability
- ☐ Attitude towards children
- ☐ Adaptability
- ☐ Professional information
- ☐ Interest in the profession

(ii) Teaching Aptitude Test Battery (Hindi) by K. P. Pandey (1968)

The test consists of following four sub-tests.

- ☐ Intelligence test
- ☐ Interest inventory
- ☐ Personality inventory
- ☐ Attitude scale

(iii) Teaching Aptitude Test (Hindi) by S. N. Sharma (1969)

The test constructed for elementary school teachers with following sub-tests.

- ☐ Mental ability
- ☐ Attitude towards children
- ☐ Adaptability
- ☐ Professional information
- ☐ Interest in the profession

(iv) Teaching Aptitude Test (English) by S. C. Gakhar and Rajnish (1971)

This test consists 35 items and standardized on 400 B.Ed. trainees.

The test used six areas:

- ☐ Teaching profession
- ☐ Interest towards students
- ☐ Social contexts

- ☐ Innovations regarding activate standard
- ☐ Professional ethics
- ☐ Teaching potentialities current knowledge

(v) Teaching Aptitude Test (Hindi) by Jai Prakash and R. P. Srivastava (1973)

This test is prepared for selection of pupil as well as teachers. It contains a total of 150 items belonging to ten sub-tests:

- ☐ Cooperative attitude
- ☐ Kindliness
- ☐ Patience
- ☐ Wide interest
- ☐ Fairness
- ☐ Normal character
- ☐ Discipline
- ☐ Optimism
- ☐ Scholarly taste
- ☐ Enthusiasm

(vi) Teaching Aptitude Test (Hindi) by B. M. Upadhyay (1976)

This test was developed for secondary school teachers.

(vii) Teaching Aptitude Test Battery (Hindi) by Shamim Karim and A. K. Dixit (1986)

This test is constructed with 80 items and applicable for the age groups ranging from 19 to 33 years.

(viii) Teaching Aptitude Scale (English) by Sanjay Vohra (1993)

This test consists of 119 items distributed under eight areas:

- ☐ Communication
- ☐ Intelligence
- ☐ Maturity
- ☐ Perspective

- ☐ Persistence receptive
- ☐ Social warmth
- ☐ Teaching interest

(ix) Teaching Aptitude Test Battery (Hindi and English) by R. P. Singh and S. N. Sharma (1998)

This test measures teaching aptitude of elementary school teachers. The test consists of 120 items. It was standardized on 1090 pupil teachers reading in primary teachers training institutions.

The test used five sub-tests:

- ☐ Mental ability
- ☐ Attitude towards children
- ☐ Adaptability
- ☐ Professional information
- ☐ Interest in the profession

(x) Teaching Aptitude Test (English) by S. S. Dahiya and L. C. Singh (2004)

This test consists of 50 items and was administered on a sample of 820 B.Ed. student teachers. The test measures an individual's knowledge, understanding, attitude and his ability to acquire with training for teaching work.

The study of these tests helped the investigator to get an idea about traits that are supposed to condition success in teaching in general and teaching in inclusive education in particular. The review of materials on teaching in inclusive classroom also served the purpose of listing the traits for the success in teaching in inclusive education.

All the factors in the present test had to be constructed anew as the similar test was not available in India or abroad. Even if similar test is available abroad it cannot be used without any modification due to the difference in the educational, social, cultural, and other conditions. Thus an attempt is made to construct the required test. The construction of the items for the present IETAT has been discussed in detail in the next chapter.