

of concepts rather than facts. It should also cater to the individual needs of the students rather than to the generalized needs of every student. It should also follow the general philosophy that truth is something to be sought for rather than some thing to be revealed. It should be quite flexible and have provision for studying and doing something without the threat of evaluation. In a nut shell, the curriculum should reflect what is desired from the creative children in terms of fluency, flexibility, originality, divergent thinking, inventiveness and elaboration etc.

REFORM IN THE EVALUATION SYSTEM

Our education system is totally examination-ridden. Therefore, for making efforts to nurture creativity we must have suitable reforms in our evaluation system. The emphasis on rote memory, fixed and rigid single responses, and convergent thinking etc, which kill the creativity of the children, should be abandoned and a proper system of evaluation for encouraging complete and balanced experiences in developing their creative behaviour should be adopted.

USE OF SPECIAL TECHNIQUES FOR FOSTERING CREATIVITY

Researchers in the field of creativity have suggested some special techniques and methods for fostering creativity among children. A few of these are mentioned below:

BRAINSTORMING

Brainstorming is a strategy or technique for allowing a group to explore ideas without judgement or censure. In actual practice children may be asked to sit in a group for solving a problem and attacking it without any inhibition from many angles, in fact literally storming it by a number of possible ideas and solutions. To start with, the students may be provided with a focus, i.e. a particular problem like 'Students Unrest', 'Growing unemployment in India', 'How to check truancy in our school', 'What to do for improving school library services' and so on. The students are then asked to suggest ideas as rapidly as possible by observing the following norms:

- (i) All ideas to be encouraged and appreciated, therefore, no criticism be allowed during the brainstorming session.
- (ii) Students are encouraged to make their ideas as unusual as possible and suggest as many ideas as they can.
- (iii) They are encouraged not only to put together separate ideas but also to suggest ideas that may be built on ideas already given by the fellow students.
- (iv) No evaluation or comment of any sort should be made until the session is over. After the expiry of the session, all the ideas received (preferably written on the blackboard) should be discussed in a very free, frank and desirable environment and the most meaningful ideas should be accepted for the solution of the problem in hand.

USE OF TEACHING MODELS

Some of the teaching models developed by educationists may prove quite beneficial in developing creativity among children. For example, Bruner's Concept Attainment Model helps in developing creativity in children for the attainment of various concepts. Similarly, Suchman's Inquiry Training Model is very helpful in developing creativity among children besides imparting training in the acquisition of scientific inquiry skills.

USE OF PLAY WAY, PROBLEM SOLVING AND QUIZ

Gaming techniques, in a play way spirit, help the children in the development of creative aspects. These techniques provide valuable learning experience in a very relaxed, untimed and evaluative

situation. The stimulus material used in such techniques is both verbal as well as non verbal. For illustration in verbal transaction of ideas, the following types of questions may be addressed to the children:

- (i) Name all the round things you can think of.
- (ii) Tell all the different ways you could use a knife.
- (iii) Tell all the ways in which a cat and a dog are alike.

In non-verbal transactions, children may be asked to build a cube, construct or complete a picture, draw and build patterns, interpret the patterns of drawing and sketches, and build or construct anything out of the raw material given to them.

PROVIDING THE SELF-EXAMPLE AND IDEALS

There is a truth in the saying that 'Self example is better than precept.' Children are very imitative. The teachers and parents, who themselves travel on the beaten track and do not show any originality by taking the risk of being wrong or never experience an excitement of creating a novel act, fail to cultivate creativity among their children. Therefore, the teachers and parents must try to develop the habit of creative thinking among themselves. They should believe in change, novelty and originality, and experience the creative process themselves. Their teaching, their mode of behaviour must reflect their love for creativity. Then and only then can they inspire children for being creative.

SUMMARY

Creativity of an individual reflects one of his unique cognitive abilities or the capacity of his mind to create, discover or produce a new idea or object including the re-arrangement or reshaping of what is already known to him. It is both innate as well as acquired and a process as well as a product. It is also known for many of its specific features like open mindedness, ego involvement etc on the part of the creative person, the wideness of the field of creative expression and inner joy and satisfaction reached as a result of such expression. As a result of its such characteristics it has been found that creativity and intelligence can not travel side by side.

Psychologists have identified certain important components or factors of creativity. The main constituents of creativity thus emerged maybe named as ideational fluency, originality, flexibility, divergent thinking, persistence, self-confidence, sensitiveness, ability to see relationships and make associations. These characteristics so identified can be made into use of constructing a creative measure instrument for the identification of creativity.

For the identification of creative children we may employ two different approaches (i) making use of creativity tests like Torrance tests of creative thinking, Passi's test of creativity etc., and (ii) making use of non-testing devices like observation, interview, rating scale, personality inventory, check list etc. The test items of most of the creative tests (verbal as well as non-verbal) are highly loaded with the type of activities which are helpful in the assessment of the qualities like originality, fluency, flexibility, divergent thinking, and elaboration etc. (the typical features of one's creative expression). In making use of non-testing devices for the identification of creative children the help is generally taken from some well known distinguished characteristics found in the creative behaviour of the children.

Appropriate attempts can be made for the stimulation and nurturing of the creativity among children. Some of these measures may be named as (i) providing freedom to the children to respond with due involvement of their ego, (ii) encouraging their originality and flexibility, (iii) removal

Aptitude—Concept and Measurement

CHAPTER COMPOSITION

- Meaning and Nature of Aptitudes
- How Aptitude Differs from Ability and Achievement?
- Difference between Intelligence and Aptitudes
- Difference between Aptitude and Interest
- Classification of Aptitudes
- Measurement of Aptitudes
- Summary
- References and Suggested Readings

MEANING AND NATURE OF APTITUDES

It is an observable fact that 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. Ramesh goes to a commercial institute in order to learn typing and shorthand. He progresses rapidly with his typing and shorthand and gets a diploma in due course. Later on, when he is offered a stenographer-cum-typist's job he carries it out satisfactorily. Suresh, although not in any way inferior to the former in general intelligence takes admission to this institute but progresses very slowly and even after getting diploma proves an inefficient typist as well as stenographer. Similarly, Radha gains from musical training while Sunita despite similar training, makes little or no progress.

So, in many spheres of everyday life, we come across individuals who under similar circumstances outperform others in acquiring certain knowledge or skills and prove more suitable and efficient in certain jobs. Such persons are said to possess certain specific abilities other than intelligence, which help them in achieving success in some specific occupations or activities.

Therefore in a simple way, aptitude may be considered a special ability or a specific capacity besides the general intellectual ability which helps an individual to acquire a required degree of proficiency or achievement in a specific field. However, for having a clear understanding of the term 'aptitude', let us consider the following definitions given by different scholars:

Bingham

Aptitude refers to those qualities characterizing person's ways of behaviour which serve to indicate how well he can learn to meet and solve certain specific kinds of problems. (1937, p. 21)

Traxler

Aptitude is a condition, a quality or a set of qualities in an individual which is indicative of the probable extent to which he will be able to acquire under suitable training, some knowledge, skill 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. (1957, p. 49)

Freeman

An aptitude is a combination of characteristics indicative of an individual's capacity to acquire (with training) some specific knowledge, skill, or set of organized responses, such as the ability to speak a language, to become a musician, to do mechanical work. (1971, p. 431)

All these definitions reveal the predictive nature of aptitudes. When we say that Ram or Radha has an aptitude for teaching, we mean that he or she has the capacity or ability to acquire proficiency in teaching under appropriate conditions.

Similarly, when we say Mohan has an aptitude for music we mean that his present condition or ability reveals that if he is to learn music, he will succeed in this line. In this way the knowledge of aptitude helps us in predicting the future success of an individual, under suitable training or experience, in a particular area of activity.

Nature of Aptitudes

Are aptitudes inherited or acquired? Like so many other personality traits or characteristics, it is difficult to say that aptitude is an absolute product of heredity or environment. Certain aspects of many aptitudes may be inborn. For example, a person showing musical aptitude may have a musical throat and a person showing aptitude for typing or watch repairing may have long and dexterous hands. But this is one side of the picture. It is also equally possible that the person's aptitude for music is the result of his living in the company of good musicians or his aptitude for typing work may be due to his father or mother who happens to be a typist.

Therefore, it is safer to conclude that the aptitude of an individual at a particular moment is in all probability dependent upon both heredity and environment.

HOW APTITUDE DIFFERS FROM ABILITY AND ACHIEVEMENT?

Aptitude and present ability do not mean the same thing. You may have no present ability to drive a car but you may have a high aptitude for driving which means that your chances of becoming a successful driver are good provided you receive proper training. So, while aptitude has future reference and tries to predict the degree of attainment or success of an individual in an area or activity after adequate training; ability concerns itself only with the present condition, the potentiality or capability which one possesses at the present moment irrespective of his past and does not try to make any estimate of one's future success or failure.

Contrary to the forward-looking nature of aptitude and present-oriented characteristic of ability, achievement is past-oriented. It looks at the past and indicates what an individual has learned or acquired in a particular field.

But by this differentiation it should not be concluded that we can measure an individual's future accomplishment in any area of activity with the help of aptitude measurements. Aptitude tests, in all their forms, measure only the present ability or capacity of an individual which can be exploited for making prediction about his future attainments.

DIFFERENCE BETWEEN INTELLIGENCE AND APTITUDES

Intelligence tests as they exist usually test the general mental ability of an individual but aptitudes, as we have discussed, are concerned with specific abilities. Therefore, while with the knowledge of intelligence of an individual we can predict his success in a number of situations involving mental function or activity, the knowledge of aptitudes, acquaints us with those specific abilities and capacities of an individual which give an indication of his ability or capacity to succeed in a special field or activity. Therefore, in predicting achievement in some particular job, training, course or specialized instruction we need to know more about one's aptitudes (specific abilities) rather than of his intelligence or general ability.

DIFFERENCE BETWEEN APTITUDE AND INTEREST

To get desirable success in a given activity, a person must have both an aptitude for activity and an interest in it. Therefore, interest and aptitude usually go hand in hand. But by this co-ordination, we should never mean that interests and aptitudes are one and the same thing. A person may be interested in a particular activity, job or training but may or may not have aptitude for that. In such cases, the interest shown in a particular occupation or course of study is often the result of some other temptation or persuasion like ambition of the parents, probability of getting a job, provision of stipend or financial help, the prestige associated with the work rather than the personal aptitude. Similarly, a person may have long and dexterous fingers and can show a good performance on a mechanical aptitude test. Yet he may show little or no interest in becoming a watch maker. Therefore, a guidance or selection programme must give due weightage to the measurement of aptitude as well as of interest. Both are essential for the prediction of the success of an individual in a given activity—job or course of instruction.

CLASSIFICATION OF APTITUDES

Any manifestation of life is activity. We can manifest ourselves in too many ways and forms. Therefore, there is no end for our manifestation and as a result, the list of the activities which may be undertaken by the human beings is limitless. One may have aptitude for one activity and the other may demonstrate an aptitude in something else. In other words, we can say as the number of activities that can be undertaken by the human beings are limitless, so is the number of aptitudes. In this sense, it is quite impossible to have a fixed classification of human aptitudes. However, for the sake of their measurement and application in the field of education and professions, we have made an attempt to classify them as under:

Sensory Aptitudes

In this category, we can include all those aptitudes that are related to the sensory capacities and abilities of children. One may have aptitude in the tasks involving the use of his sense of hearing,

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other may have aptitude in the tasks using the use of the sight, smell, taste or touch. Here depending upon their present ability regarding a particular sensory capacity, we can have an idea of their future success in the area of professions where the use of such sensory ability or capacity is most demanded. Thus, in this category of sensory aptitudes, we can include the aptitudes related to the sensory abilities of the children.

Mechanical Aptitudes

Some persons have a specific bent of mind for the tasks related to the use of mechanical abilities and thus demonstrate aptitudes for all tasks and jobs that require the use of mechanical abilities. When we test their present abilities we can easily infer that a particular individual will be successful as a carpenter (provided he is given due opportunities, training etc.). In other case, we find that one can be a good mechanic looking after the repair of vehicles, engines and machines etc. Someone may have aptitude for the use and innovations in instrumentization and other sophisticated appliances etc. In this way, human beings can have different mechanical aptitudes varying in their nature and sophistication. All such aptitudes are grouped in the category of mechanical aptitude. The range of such mechanical aptitude may extend from the manipulation and use of needles to the know how of repairing and flying an aeroplane.

Artistic Aptitudes

All the aptitudes related to the expression of artistic abilities and capacities are included in this category. These activities are mostly related to the effective domain of human behaviour. The aesthetic sense is exhibited in such activities. All that is beautiful and the things that are to be appreciated belong to the demonstration of such aptitude. Generally the following types of aptitudes are kept in this category of artistic aptitude.

1. Musical aptitude
2. Aptitude for dance
3. Aptitude for graphic art
4. Aptitude for photography
5. Poetic aptitude
6. Aptitude for acting
7. Debating aptitude
8. Writing aptitude
9. Aptitude for designing, etc.

Professional Aptitudes

The aptitudes related to the activities of various professions and occupations are included in the category. These aptitudes are able to help in predicting the future success of an individual in the field or profession related to these aptitudes. For example, if one has the aptitude for teaching, we can say that he or she will be a successful teacher provided he or she gets appropriate opportunities and training for doing so. The examples of the aptitudes included in this category are as under:

1. Clerical Aptitude
2. Legal Aptitude

3. Teaching Aptitude
4. Pilot Aptitude
5. Navigation Aptitude
6. Banking Aptitude
7. Military Aptitude

Scholastic Aptitudes

The aptitudes of the scholastic and academic nature are included in this category. These aptitudes demonstrate and predict the future success of an individual in the learning of a particular subject or course in the capacity of a student. The examples of such aptitudes are as under:

1. Scientific Aptitude
2. Engineering Aptitude
3. Medical Aptitude
4. Commercial Aptitude
5. Sports Aptitude
6. Linguistic Aptitude

MEASUREMENT OF APTITUDES

Like intelligence tests, various aptitude tests have been devised to measure aptitudes of the individuals in various specific fields or activities. Generally, these tests can be classified into the following types according to the specific nature of the aptitude tested by them:

1. Mechanical Aptitude tests.
2. Musical Aptitude tests.
3. Art judgement test.
4. Professional Aptitudes tests, i.e. tests to measure the aptitudes for professions like teaching, clerical, medical, legal, engineering, salesmanship, research work, etc.
5. Scholastic aptitude tests, i.e. tests to measure the aptitudes for different courses of instruction.

In the following pages we will throw light on some of these above mentioned aptitude tests.

Mechanical Aptitude Tests

Like intelligence, mechanical aptitude is also made up of many components. Freeman explains it as—

'The capacity designed by the term 'mechanical aptitude' is not a single, unitary function. It is a combination of sensory and motor capacities plus perception of spatial relations, the capacity to acquire information about mechanical matters and the capacity to comprehend mechanical relationships.' (1971, p. 44)

Therefore, mechanical aptitude tests try to test the above mentioned qualities and capacities of an individual in order to know his mechanical aptitude. Some of the well-known mechanical aptitude tests are—

- (i) Minnesota Mechanical Assembly Test.
- (ii) Minnesota Spatial Relations Test.
- (iii) The Revised Minnesota Power Form Board (1948)
- (iv) Stenquist Mechanical Aptitude Tests (Part I and II)
- (v) L.J.O.s' Rourke's Mechanical Aptitude Test (Part I and II)
- (vi) Bennet Tests of Mechanical comprehension.
- (vii) S.R.A. Mechanical Aptitude Test.
- (viii) A battery of Mechanical Aptitude Tests (Hindi) prepared by Mano-Vigyanshala, Allahabad.

Usually these tests contain the items of the following nature:

- (a) Asking the subject to put together the parts of mechanical devices.
- (b) Asking to replace cut-outs of various shapes in their correct holes in the board.
- (c) Requiring the ability to solve problems in geometric terms.
- (d) Asking questions concerning the basic information about tools and their uses.
- (e) Questions relating to the comprehension of physical and mechanical principles.

As an illustration, Bennet Mechanical comprehension test Form AA has 60 items in pictorial form. They present mechanical problems arranged in order of difficulty and involve comprehension of mechanical principles found in ordinary situations. Two items of this test are presented in Figs. 24.1 and 24.2 for illustration.

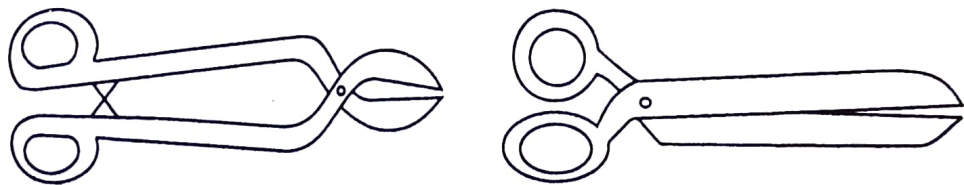


Fig. 24.1 Which would be the better shears for cutting metal?

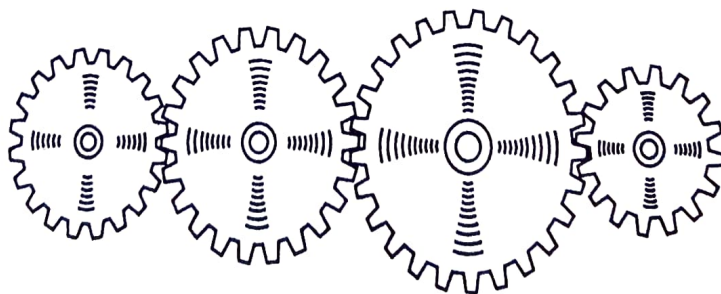


Fig. 24.2 Which gear will make the most turns in a minute?

Clerical Aptitude Tests

Like mechanical, clerical aptitude is also a composite function. According to Bingham (1973), it involves several specific abilities like—

- (a) **Perceptual ability.** Ability to perceive words and numbers with speed and accuracy.

- (b) **Intellectual ability.** Ability to grasp the meaning of words and symbols.
- (c) **Motor ability.** Ability to use various types of machines and tools like typewriter, duplicator, cyclostyle machine; punching machine etc.

Some of the popular clerical aptitude tests are—

- (i) Detroit Clerical Aptitude Examination.
- (ii) Minnesota vocational test for clerical workers.
- (iii) The Clerical ability Test prepared by the deptt. of psychology, University of Mysore, Mysore.
- (iv) Clerical Aptitude Test Battery (English and Hindi), Bureau of Edu. And Voc. Guidance, Patna (Bihar).
- (v) Test of Clerical Aptitude prepared by the Parsee Panchayat Guidance Bureau 209, Hornby Road, Bombay-1.

SPECIMEN ITEM FOR A CLERICAL APTITUDE

Samples done correctly of pairs of numbers. (Mark which one is correct)

79542	...	79524
5794367	✓	5794367

Samples done correctly of pairs of names. (Mark which one is correct)

John C. Linder	...	John C. Lender
Investor's Syndicate	✓	Investor's Syndicate

Now try the samples below and mark accordingly

- | | | | |
|------|------------------|-----|------------------|
| (i) | 66273894 | ... | 66273284 |
| | 527384578 | ... | 527384578 |
| (ii) | New York World | ... | New York World. |
| | Cargil Grain Co. | ... | Cargal Grain Co. |

This is a test for speed and accuracy. Work as fast as you can without making mistakes. Do not turn the page until you are told to.

(Reproduced from General Psychology by H.E. Garrett, 1968, p. 477)

Musical Aptitude Tests

These tests have been devised to discover musical talents. One of the important musical aptitude tests is described below:

SEASHORE MEASURE OF MUSICAL TALENT

It takes into consideration the following musical components:

- (a) discrimination of pitch.
- (b) discrimination of intensity or loudness.
- (c) discrimination of time interval.
- (d) discrimination of timbre.
- (e) Judgement of rhythm.
- (f) Tonal memory.

Test items in this battery are presented on phonograph records. The subject sits, listens and attempts to discriminate. He is required to mark his responses on an answer form supplied by the examiner. The instructions in these tests are of the following nature:

“You will hear two tones which differ in pitch. You are to judge whether the second is higher or lower than the first. If the second is higher, record H; if lower, record L.”

APTITUDE FOR GRAPHIC ART

These tests are devised to discover the talent for graphic art. The two important tests of this nature—

1. The Meier Art Judgement Test.
2. Horne Art Aptitude Inventory.

In Meier Art Judgment Test, there are 100 pairs of representational pictures in black and white. One such pair have been illustrated below. (Fig. 24.3)

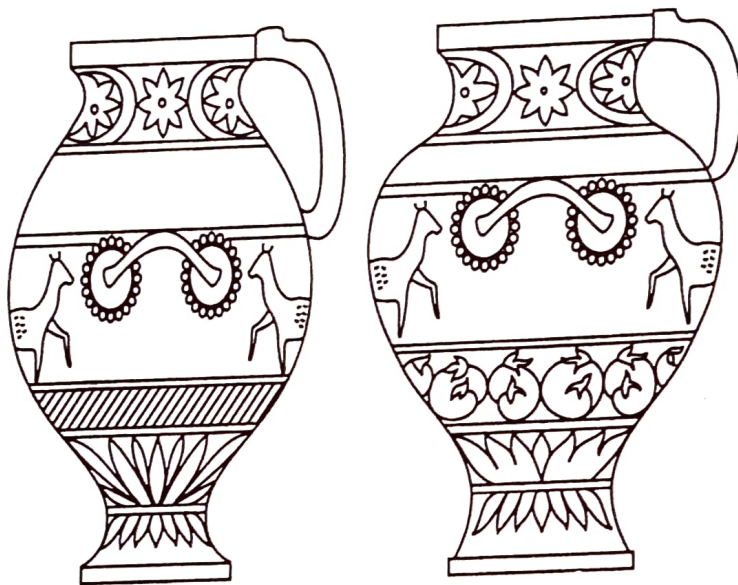


Fig. 24.3 Art Judgement Test (In this pair the subject is required to select the original and aesthetically superior work on the basis of the shapes of the pots).

One member of each pair is an acknowledged art master piece while the other is a slight distortion of the master piece. It is usually altered from the original so as to violate some important principles of art. Testees are informed about the aspect that has been altered and are asked to choose from each pair the one that is better—more pleasing, more artistic, more satisfying. For example, in the above given illustration, the examinees are required to select the original and aesthetically superior work on the basis of the shapes of the pots. The number of correct responses is taken as a measure of art judgement or aptitude for graphic art.

Another important test of measuring aptitude for graphic art is the Horne Art Aptitude Inventory. It requires from the subject to produce sketches from given patterns of lines and figures. The created sketches of the subject are then evaluated according to the standard given by the author of this test.

Tests of Scholastic and Professional Attitudes

For helping in the proper selection of students for the studies of specific courses or professions like engineering, medicine, law, business management, Teaching etc., various specific aptitude tests have been designed. Some of these tests are—

- (i) Stanford Scientific Aptitude Test by D.L. Zyve.

- (ii) Science Aptitude Test (after Higher Sec. Stage); N.I.E. Delhi.
- (iii) Moss Scholastic Aptitude Test for Medical Students.
- (iv) Ferguson and Stoddard's Law Aptitude Examination.
- (v) Tale Legal Aptitude Test.
- (vi) Pre-Engineering Ability Test. (*Education Testing Service, U.S.A.*)
- (vii) Minnesota Engineering Analogical Test.
- (viii) Coxe-Orleans Prognosis Test of Teaching Ability.
- (ix) Teaching Aptitude Test by Jai Prakash and R.P. Shrivastava, University of Saugar (M.P.).
- (x) Shah's Teaching Aptitude Test.
- (xi) Teaching Aptitude Test by Moss, F.A. & others. George Washington University Press.

Now we should lay a little more emphasis on the teaching Aptitude test as it is directly concerned with Teacher Training Programme. Such tests 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. The attempt made by Mr. Shah is a good beginning in this direction.

Utility of Aptitude Tests

Aptitude tests have a wide area of application. Firstly, they are the backbone of the guidance services. The results of these tests enable us to locate, with a reasonable degree of certainty, the fields of activity in which an individual is most or least likely to be successful. Therefore, these tests are found to be very useful in guiding the youngsters in the selection of special courses of instruction, fields of activities and vocations.

Secondly, they can be safely used for the purpose of educational and vocational selection. They help us in making scientific selection of the candidates for the various educational and professional courses as well as for the specialized jobs as Munn puts it, "*The chief value of aptitude testing is, in fact, that it enables us to pick out from those who do not yet have 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 desirable level of proficiency.*" (1967, p. 117).

Therefore, aptitude tests properly anticipate the future potentialities or capacities of an individual (irrespective of the fact whether he possesses those future capacities before the training or not) and thereby, help us in making selection of those individuals who are best fitted for a particular profession and course of instruction or those who are likely to be more benefited by pre-professional training or experiences.

In this way any reasonable guidance and counseling programme or the entrance examination to specialized, academic and professional courses or the selection procedure for specialized jobs is required to give a proper weightage to Aptitude testing. Aptitude testing, when combined with the other information received through Interest Inventory, Personality tests, Intelligence tests and cumulative record etc. can greatly help in avoiding the huge wastage of human as well as material resources by placing the individuals to their proper places and lines of work.

SUMMARY

An Aptitude related to a particular area or activity refers to certain combination of specific capacities or abilities of an individual which may help us in predicting his future success in that area or activity

under appropriate conditions. For example if Mohan has teaching aptitude, it will mean that he has the potential or capacity to acquire proficiency in teaching under appropriate conditions.

Aptitude of an individual at a particular moment is always a function of his heredity as well as that of his environment. We can't equate one's aptitude with one's ability and achievement. The ability concerns itself only with the present condition (what one possesses at present in terms of potential for doing a thing). The achievement looks at the past and indicates what an individual learned or acquired in a particular field. Aptitude, contrary to the present-oriented nature of the ability and past-oriented nature of the achievement is future-oriented (carrying strength for predicting one's success in a field).

Intelligence tests measure the intellectual or cognitive potential of an individual but are hardly appropriate in predicting success of an individual in some particular job, training or specialized instruction, the task that can be properly performed through aptitude tests.

Although both interest and aptitude are essential for getting desirable success in a field, yet these are not one and the same things. Both can function independently, which means that presence of one is not at all essential for the perpetuation of the other.

Aptitudes may be broadly classified as sensory, mechanical, artistic and scholastic aptitudes. All these types of aptitudes can be measured with the help of the suitably designed as well as standardized aptitude tests like we measure intelligence through intelligence tests.

Aptitude tests have a wide area of applications for candidates in choosing special courses of instructions, training, fields of activities and vocations according to their ability and potentialities. These are helpful in providing useful guidance and counseling to the students for planning their educational and vocational career as well as equipping the authorities with the instruments of making proper selection and placing the students/candidates at proper places.

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Attitude—Concept and Measurement

CHAPTER COMPOSITION

- Introduction
- Definition and Meaning of Attitude
- Nature or Characteristics of Attitudes
- Formation of Attitudes
- Measurement of Attitudes
- Changing of Attitudes
- Summary
- References and Suggested Readings

INTRODUCTION

The main aim of education is to modify the behaviour of a child according to the needs and expectancy of the society. Behaviour is composed of many attributes. One of these important attributes is attitude. One's behaviour, to a great extent, depends upon one's attitude towards the things—idea, person, or object—in his environment. The entire personality and development of a child is influenced by the nature of his attitudes. Learning of a subject and acquisition of habits, interests and other psychophysical dispositions are all affected by his attitudes. Therefore, it is important for a teacher to understand the meaning and nature of attitudes, the factors responsible for their formation and development and techniques of their measurement. In this chapter, we will try to understand the above aspects.

DEFINITION AND MEANING OF ATTITUDE

Various authors have defined attitude in the following ways:

Travers

An attitude is a readiness to respond in such a way that behaviour is given a certain direction. (1973, p. 337)

Meckeachie and Doyle

We define an attitude as an organization of concepts, beliefs, habits and motives associated with a particular object. (1966, p. 560)

Sorenson

An attitude is a particular feeling about something. It therefore involves a tendency to behave in a certain way in situations which involve that something, whether person, idea or object. It is partially rational and partially emotional and is acquired, not inherent, in an individual. (1977, p. 349)

Whilttaker

An attitude is a predisposition or readiness to respond in a pre-determined manner to relevant stimuli. (1970, p. 591)

According to the first definition, attitude is responsible for behaving in a particular and a definite way. If one keeps a positive and favourable attitude towards an object, he will be attracted towards it, he will admire it and try to achieve it. On the other hand, if one has negative or unfavourable attitude, one will try to avoid it and even feel hostile towards it. For example, a person having positive attitude towards democracy will respond positively to democratic practices and institutions and negatively to authoritarian procedures. His behaviour will speak about his attitude.

The second definition takes into account all the concepts, beliefs, habits and motives associated with the object. The concepts and beliefs associated with an attitude are often referred to as the cognitive component of attitude, the habit as the action component, and the motives as the affective component. In this way all that one thinks, feels and the way one reacts expresses one's attitude towards an object. For example, the formation of favourable or unfavourable attitude towards a political party is the result of his thinking and feeling towards that party and it would be exhibited overtly through some tendencies like heated discussion with associates or strangers, casting a vote in favour of the party candidate or doing active party work during the election campaign.

The third definition explains why an individual behaves in a certain way when he is needed to respond to a particular object for which he has developed a positive or negative attitude. He has an almost definite set of feelings, likes or dislikes for that object and they partly stand on rational and partly on emotional footing. But in all the cases, they are acquired and learned through varying experiences. One's attitude towards one's religion is an acquired tendency or disposition. He is not born with enthusiasm or apathy towards a particular religion. He has developed a sort of attachment or favourable feeling towards his religion due to his own experiences since his early childhood. His feeling is partly rational and partly emotional. He may be able to give very good reasons for advocating and appreciating his religion but their basis is partly beneath conscious reasoning.

The last definition accepts attitude as a predisposition or tendency to behave in a particular and definite way to a particular situation. One's attitude decides one's response to a particular stimulus. For example, in responding to all stimuli related with the congress party one has a predisposition or tendency to act in a certain way if one has developed an attitude towards that party.

In this way attitudes are to a great extent responsible for a particular behaviour of a person towards an object, idea or a person. But by this, it should not be concluded that one's behaviour is an absolute function of one's attitude. Behaviour by all means is a function of both characteristics of the behaving person and the situations in which he behaves. Hence a person may hold strong attitude and yet under certain circumstances, may behave in quite contradiction to those attitudes.

In this way, one's behaviour towards an object related to a particular attitude cannot be safely predicted through that attitude but it can be safely said that it makes the individual respond in a particular way to a particular stimulus.

Therefore, we may understand attitude *as a determining acquired tendency which prepares a person to behave in a certain way towards a specific object or a class of objects subject to the conditions prevailing in the environment.*

NATURE OR CHARACTERISTICS OF ATTITUDES

We defined attitudes as predispositions or determining tendencies to respond in a specified manner. Now the question arises: Should all the predispositions like habits, interests, traits and physiological motives be classified as attitudes? The answer is no. For a more clear distinction, an attitude should meet the following six criteria:

Attitudes have a Subject-Object Relationship

Attitudes always involve the relation of an individual with specific objects, persons, groups, institutions and values or norms related to his environment.

Attitudes are Learned

Attitudes, as pointed out earlier, are learned and acquired dispositions. They are not innate and inherent in an individual. Consequently they may be differentiated from physiological motives. Hunger, for example, is an unlearned physiological motive, while preference for a particular food, an acquired tendency, is classified as an attitude. Again, while almost any suitable member of the opposite sex may satisfy a man's sexual need, when the need becomes attached to a particular person, the attachment (acquired) becomes an attitude.

Attitudes are Re-actively Enduring States of Readiness

Attitudes represent the state of readiness to respond to a certain stimulus. Physiological motives also do the same. But in their case like hunger and sexual tension, the states of readiness disappear for a period when they are gratified. Attitudes, on the other hand, are relatively enduring states of readiness. Consequently, a wife may hold affective attraction to her husband even after the sexual tension has been resolved.

Attitudes have Motivational-affective Characteristics

Attitudes have definite motivational characteristics. Other dispositions like habit of writing with right hand do not have any motivational or affective quality; but attitudes towards one's family, nation, religion or other sacred and hallowed institutions have definite motivational affective characteristics.

Attitudes are as Numerous and Varied as the Stimuli to which They Respond

We may have a number of attitudes depending upon the number of stimuli to which we respond. Attitude is an implicit response, therefore it stands to be varied with the number and variety of the

responses which the individual makes. The change in environment and the situations further bring variety in the expression of these attitudes. Therefore, it is correct to say that attitudes are as numerous as the object towards which they are directed and the situations in which they are expressed.

Attitudes Range from Strongly Positive to Strongly Negative

Attitudes involve direction as well as magnitude. When a person shows some tendency to approach an object he is said to have positive attitude towards it but when he shows tendency to avoid the object, his attitude is described as negative. These positive or negative attitudes may involve intense feelings and vary from the large negative values to increasingly positive.

FORMATION OF ATTITUDES

Attitudes are learned or acquired dispositions. How are they formed, has been a question for investigation to the psychologists. Based on the opinion of Allport, Stagner has suggested that attitudes are formed under one of the following four conditions:

- **Integration of experiences.** The accumulation and integration of a number of related experiences about an object gives birth to an attitude towards that object. Attitudes of Hindus towards Muslims or vice versa has been formed in this way.
- **Differentiation of experiences.** When new experiences are acquired, they are differentiated or segregated from the already acquired experiences. This segregation or differentiation may tend to make certain attitudes more specific.
- **Trauma of dramatic experience.** Attitudes are formed with greater speed and intensity on account of sudden unusual, shocking and painful experiences. A shopkeeper whose shop has been burnt down by the striking students may develop intensely negative attitude towards all students.
- **Adaptation of the available attitudes.** A large number of attitudes are acquired in a readymade fashion by simply following suggestions or examples of friends, teachers, parents or adopting the mores and traditions of the community or society. Negative attitude of the children of Tamil Nadu towards Hindi has been formed through the process of adoption, rather than as a result of first hand experience.

Factors Influencing the Formation or Development of Attitudes

Attitude is unquestionably an acquired disposition and therefore conditioned by learning or acquisition of experiences. Heredity factor does not play any role in the formation or development of attitudes. Environmental force helps an individual to form and develop various attitudes. An attitude at any stage is essentially a product of the interaction of one's self with one's environment. Therefore the factors influencing the formation and development of attitudes can be divided into two parts as follows:

- A. Factors within the individual himself.
- B. Factors within the individual's environment.

FACTORS WITHIN THE INDIVIDUAL

All individuals do not respond similarly to the same situations. The effect of environmental stimuli in acquiring some predispositions is very much conditioned by the growth and development pattern of an individual child. Let us try to emphasize these developmental factors.

1. **Physical growth and Development.** In the development of attitude, physical growth and development plays a significant role. Poor physical health, low vitality and undeveloped somatic structure is responsible for poor emotional and social adjustment and poor social adjustment inevitably exercises an important effect on the formation of attitudes in many different directions. A crippled and undersized girl of fifteen years is unlikely to form the same attitudes as those formed by another girl of fifteen who is tall, well proportioned and charming for her age. Even the colour of the skin, weight of the body or bio-chemical changes in the body tissues and fluids, for example sex hormones, have a vital effect on the development of attitudes through its connection with social adjustment.
2. **Intellectual Development.** Development of attitudes is conditioned by the growth of intelligence. The components of intelligence like memory, understanding, thinking and reasoning play a significant part in attitude formation as they help in gaining perceptual experience. Due to his limited intellectual capacities, a young child is incapable of forming attitudes about remote or complex abstract things. His attitudes are always of a particular kind that are related to his own immediate problems and experiences. With the growth of intellectual capacities, an intelligent adult is capable of having more abstract and generalized attitudes.
3. **Emotional Development.** Emotional development also affects the formation of attitudes. Emotions play a dominant role in overt or covert behaviour manifestation and behaviour is related to attitudes. As the child develops with age and growth the capacity for varied emotional experiences and attitudes is gradually developed. Emotional maturity helps in social adjustment and in seeking social approval. In turn it makes an individual to develop numerous attitudes through his direct or indirect experiences.
4. **Social Development.** Attitudes are rarely individual affairs. Social interaction and group processes are the key to attitude formation at any stage of human development. Children having poor social adjustment are more likely to have antisocial attitudes and are less likely to be influenced by groups while forming attitudes. Children with healthy social adjustment easily pick up social attitudes from their respective groups.
5. **Ethical and moral Development.** Each individual develops certain ideals, values and concept of the self in which he takes pride. For enhancing his feelings of self-esteem, one tries to develop those attitudes that suit his values and ideals. A student who values historical events or objects will have a favourable attitude towards the subject of history. A man who thinks that God is one will not have unfavourable attitude towards the persons belonging to the religion other than his own.

FACTORS WITHIN THE INDIVIDUAL'S ENVIRONMENT

Besides the individual variations shown by their various personality characteristics on account of the pattern of their growth and development, attitudes are largely borrowed from the groups within one's environment to which one owes one's stronger allegiance. It has now been firmly established that environmental forces, in the shape of the social groups, institutions and community, cast a

strong influence on shaping the beliefs and attitudes of an individual. Let us try to understand a few important environment factors.

1. **Home and family.** In attitude formation, home and family environment plays a leading role. A child by identifying himself with his parents and other members of the family picks up their attitudes. The family more or less defines for the child the expected roles which he must play in various situations and thus initiates the formation of specific attitudes. A healthy family environment and positive attitudes of the parents and other family members bring desirable impact on children in picking up desirable attitudes while negative parental attitudes, for example of hostility and rejection, lead them to imbibe ascendant and aggressive attitudes. Similarly, many antisocial attitudes are said to be the product of the faulty upbringing and uncongenial environment at home and in the family.
2. **Social Environment.** While the family and home environment plays its role in the formation of early attitude, contact with the people in neighbourhood, school, community and society and mores and traditions of the community, to which one belongs, cast strong influence in reshaping early attitudes and acquisitions of many more new attitudes. As a child grows older and has wider social contacts, he is influenced by many social institutions and groups and as a result he tries to pick up attitudes of those groups for which he has stronger allegiance or that suits his own nature and motives.

In schools, factors like teachers and their behaviour, classmates or schoolmates and their behaviour, the teaching methods, curriculum, general tone and discipline of the institution all contribute towards attitude formation.

The religious groups, social clubs or constitution where one learns or earns has a definite set of emotional and intellectual environment as a result of which members of the group pick up characteristic attitudes of the group and, in this way, social groups play a leading role in attitude formation.

Mass media in the form of newspapers, radio and television, moving pictures, propaganda literature and advertisement also play a key role in shaping and reshaping the attitudes. Individuals tend to identify themselves with the views expressed through these agencies. Thereby heroes and heroines on screens and in radio programmes, attractive figures shown in the advertisements and slogans of a popular leader prove potent sources for the formation of attitudes.

MEASUREMENT OF ATTITUDES

We have defined attitudes as implicit responses or predispositions to objects, persons, ideas, values or situations in the social surroundings. Thereby they are essentially covert tendencies. If we want to measure them, there must be some means to draw them out or make them manifested in the form of overt behaviours. This can be done in the following two ways:

1. **Direct Methods.** Measuring the verbal report of the attitude.
2. **Indirect Method.** Interpretation of the attitude from the unsaturated or indirect responses. Let us discuss these methods.

Direct Methods for Measurement of Attitude

In this method, opinion of an individual about a particular subject in the form of a verbal report is collected and based on this, his attitude towards the subject is estimated. Generally the following devices are used for the purpose.

- (i) Asking the individual directly how he feels about a subject. (questioning and interview techniques)
- (ii) Asking to mark those statements from a list with which he is in agreement. (Check list etc.)
- (iii) To indicate his degree of agreement or disagreement with a series of statements dealing with the same subject. (Attitude scales)

The last mentioned devices known as attitude scales, are most widely used for the measurement of attitudes. Generally the following two types of scales are popular.

THURSTONE'S ATTITUDE SCALES

These are also known as equal-appearing intervals scales. In constructing such scales, a large number of statements representing a variety of opinions on a subject are collected. These statements are then given to a number of judges who are asked to sort the statements in two categories—say from “very favourable” to “very unfavourable”. Whenever the judges disagree significantly over an item, it is rejected. The finished scale then consists of the remaining statements or items that represent clearly defined opinions on the subject. Each of these final statements is then assigned a scale value based on the median scale position given by the judges. If half the judges, for example, had assigned a particular statement to position 4 or lower and half had assigned it to position 5 or higher, the scale value assigned to the statement could be 4.5. Some of the statements from the Thurston's scale for measuring attitude toward the church with the scale value of each statement are shown below:

<i>Items</i>	<i>Scale value</i>
I believe the church is the greatest institution in America today	0.2
I believe church membership is almost essential to living life at its best	1.5
I believe in what the church teaches, but with mental reservations	4.5
I believe in religion but I seldom go to church	5.4
I do not receive any benefit from attending church service but I think it helps some people	5.7
I think the church is a parasite on society	1.0

In administering the scale, individuals are asked to check all the statements with which they agree. For each individual, then a scale position is computed as the average of the scale values of all the items he has checked.

LIKERT ATTITUDE SCALE

This scale is more popular than Thurstone's scale. It employs a larger number of items than Thurston's scale and discards the methods of scaling by several judges. In constructing such a scale, a number of statements or items concerning a particular subject are collected. These items, each of which clearly represents either a favourable or unfavourable attitude, are then tested for internal consistency, i.e. to see all the statements or items are actually concerned with the same subject. The tested items constitute attitude scale. The individual is asked to indicate the degree of his agreement or disagreement with each item on a five-point scale. Thus for assessing attitude towards internationalism, the sample items such as follows are presented.

Encircle one of the symbols preceding each of the following statements. A stands for “Agree”, S.A. stands for “Strongly Agree”, D for “Disagree”, S.D. for “Strongly Disagree” and I for “Undecided.”

Response	Items
S.A., A, I, D, S.D.	We should be willing to fight for our country whether it is in the right or in the wrong.
S.A., A, I, D, S.D.	Our country should never declare war again under any circumstances.

For scoring the items, a value of 5 may be given to the responses indicating strong agreement, 4 for simple agreement, 3 for undecided, 2 for simple disagreement and 1 for strong disagreement. Thus each individual can be assigned a single quantitative score for the measurement of his attitude.

Indirect Method for Measurement of Attitudes

The process of inferring attitude directly from the verbal report or expressed opinion has many limitations. One may conceal one's real attitudes and may not really know what one feels and unable to know one's attitude about a situation in the abstract. Even overt behaviour is not always a true indication of one's attitude. When politicians cuddle babies their behaviour may not be a true expression of their attitude towards children.

To avoid this problem, it has been tried to make use of the measurement methods that are indirect or disguised in nature. In these methods the subjects are given opportunities to structure their own responses without letting them know the real purpose of the task. The projective techniques used for the assessment of personality are the good examples of these indirect methods. These techniques have been discussed in detail in the chapter elaborating on the measurement of personality. The essence of these techniques is that the subject expresses his covert tendencies while responding to unstructured stimuli. An intelligent interpretation of his responses may show his attitude towards a particular object or issue.

Now the question arises as to which of these two techniques—direct or indirect—should be used for measuring attitudes. Both of these are very good instruments and have their own values and limitations. Perhaps in my opinion, the best method or the procedure adopted for the measurement of attitudes is the one that combines the verbal report and the interpretive techniques. It will surely help us in getting an extensive and intensive measurement of attitudes covering their covert tendency and overt manifestation.

CHANGING OF ATTITUDES

Attitudes are by no means fixed and unchanging predispositions. They can change. The task of attitudinal changes is very much related to their formation. As discussed earlier, attitudes are formed through experiences—direct or indirect. Consequently they may be changed through acquisition of new experiences as Sorenson remarks, "*Such factors as social, experiences, propaganda, education and personal experience with different attitudes do make for modifications and shifts in people's predispositions toward objects, persons, ideas and situations in their environment.*" (1977, p. 187).

What Can Teachers and Schools Do

Let us try to utilize the knowledge of attitude formation and change in our classroom teaching. The simple question is that can our school or classroom teaching be so equipped that it develops desirable social attitude among the pupils or what should be done to bring changes in the otherwise negative or undesirable attitudes of the pupil? Let us try to think about this problem.

Whether we have to develop an attitude or modify it we have to think about the different factors contributing towards its acquisition. In brief we have to proceed in the following way:

1. Attitude formation is conditioned by the growth and development of an individual in all the dimensions like physical, intellectual, emotional, social and ethical. Therefore, efforts should be made to bring an all-round harmonious development in the personality of the child.
2. Home and family establishes the formation of early attitudes. Parents and members of the family should be educated and given proper guidance so that they can help their children pick up positive and socially desirable attitudes and family environment.
3. Attitudes towards things are very largely conditioned by one's desire to preserve or enhance one's feeling of self-esteem. Therefore, self-respect of the students should always be given due consideration while adopting any programme for the development of attitudes. They should never be let down or made to feel that by adopting such opinions or attitudes, their status or self-esteem will be lowered.
4. It should be kept in mind that it is easier to develop positive attitudes than negative ones. It is, for example, probably more effective to develop a liking for honesty or democracy than to attempt to develop a dislike for dishonesty or autocracy.
5. The attitudes are never taught, they are caught through direct or indirect experiences. Therefore, teachers should not try to teach attitudes directly as facts may be taught. They should make use of indirect suggestions or provide experiences that will naturally tend to result in the desired attitude formation.
6. Social environment as we have seen plays a dominant role in attitude formation. Therefore, attempts should be made to control and modify environmental influences in such a way that desirable attitudes may be developed.
7. Attitudes are rarely individual affairs. Group-interaction plays a key role in attitude formation. Therefore, it should be utilized for the development of desirable attitudes. A teacher should utilize his class as a well organized group for the attitude development. He should try to develop group support for expression of particular attitudes. Group discussions, seminars, skit, drama, and other social or group activities may be chosen for developing and organizing group attitudes. The important thing is to develop the attitude of a group, the attitude of the members will naturally follow because the individual tends to accept whatever his group accepts and to reject whatever his group rejects.
8. The teacher should not go too far from the opinion and attitudes of his students. Otherwise it will naturally segregate him from the group and he will cease to be a leader. Wise and successful political leaders know this fact and therefore they always carry with them the mass of voters. Teachers also should take note that they direct their efforts towards the attainment of reasonable goals.
9. The teacher should bring desirable and essential changes in their methods of instructions for developing favourable attitude towards their subjects. They should also learn to change their own behaviour according to the needs of the situations. They should try to produce their own examples for the development of desirable attitudes.
10. The audio-visual aids and mass-media may be utilized for developing desirable attitudes among the pupils. The test books should be so written that they do not encourage negative or unfavourable attitudes, e.g. disliking for a particular religion, caste, creed, colour of a

country, liking or temptation for dishonesty, corruption, war and quarrelling etc. Similarly radio, television, films, newspapers and magazines etc. should be properly controlled for developing desirable attitudes.

In this way development of desirable attitudes or reshaping of undesirable attitudes is a gigantic task. It needs cooperation of all the forces of environment. Parents, members of the society, teachers, schools and government authorities all need to join hands in this task of desirable attitude formation among the young generation. First of all they should feel the necessity of right attitude formation and then try to bring changes in their own attitudes before planning to bring similar changes in the younger generation. In brief, the overall environment, the cultural pattern of the community and outlook of the whole group need modifications and change before similar changes can be brought in the attitude of an individual child or person.

SUMMARY

Attitudes may be taken as predispositions or determining acquired tendencies which prepare a person to behave in a certain way towards certain specific objects or class of objects, subject to the conditions prevailing in the environment.

Attitudes differ from other pre-disposition or determining tendencies like habits, interests, traits and physiological motives in so many ways on account of their typical features like having subject-object relationship, their being learned and acquired dispositions, relatively enduring states of readiness, motivational-affective characteristics, being numerous and varied as the stimuli to which they refer, and their being ranged from strongly positive to strongly negative etc.

Attitude as the learned or acquired dispositions are formed under one of the four conditions like integration of experiences, differentiation of experiences, trauma or dramatic experiences and the adoption of the available attitudes in one's environment.

Factors influencing the formation and development of attitudes can be divided into two groups (i) Factors within the individual himself (like his physical, intellectual, emotional, social and moral development and (ii) Factors within the individual's environment (like his home and family, social environment outside his family etc.)

Attitudes can be measured by adopting two different means namely direct and indirect methods of measuring attitudes. In the direct approach, opinion of an individual about a subject of attitude measurement in the form of verbal report is collected and then on this basis his attitude about the subject is estimated. We usually make use of questioning and interview techniques, check list and attitude scales for seeking such opinion of the individual. However, the use of attitude scales like Thurston's attitude scales and Likert attitude scales are frequently made for the measurement of various attitudes.

In the indirect method for measuring attitudes, individuals are given opportunities to structure their own responses without letting them know the real purpose of the task. The projective techniques used for the assessment of personality are the good examples of such indirect approach.

Joint efforts should be made by the teachers, parents, members of the society, schools and government authorities through awareness propaganda, mass appeal, group appeal, and self examples for inculcating desirable positive attitudes as well as modifying and restructuring the undesirable ones. The attitudes are never taught, they are caught through direct or indirect experiences. Therefore, we should always try to plan and build such healthy and desirable environment around our children so that they can take up healthy and desirable attitudes towards persons, objects, ideas etc. automatically as a result of their interactions with such environment

Interest—Meaning, Nature and Measurement

CHAPTER COMPOSITION

- Meaning and Definition of Interest
- Nature and Characteristics of Interests
- Why are We Interested in Some Things and not in Others?
- Generating Desired Interests in Learning
- Measurement of Interests
- Summary
- References and Suggested Readings

MEANING AND DEFINITIONS OF INTEREST

Interest is the central force that drives the whole machinery of the teaching-learning process. All our attempts are aimed at making our students interested in the learning experiences given to them. Interest as a driving force not only helps the children in acquiring certain learning experiences, but also colour and fashion their attitudes, aptitudes and other personality traits. It thus directs the course of their growth and development and individualizes their personalities. Visualization has such many-sided importance of interest and it is proper to know actually what they are. Many psychologists and thinkers have tried to explain the meaning of this term. Let us have a look at a few of these definitions.

Crow and Crow

Interest may refer to the motivating force that impels us to attend to a person, thing, or an activity or it may be the effective experience that has been stimulated by the activity itself. In other words, interest can be the cause of an activity and the result of participation in the activity. (1973, p. 248)

Ross

A thing that interests us is just something that concerns us or matters to us. (1951, p. 171)

Bhatia

Interest means making a difference. We are interested in objects because they make a difference to us, because they concern us. (1968, p. 130)

B.N. Jha

Interest is that enduring mental system which sustains, contains and continues the activity called attention. (1946, p. 247)

Thus 'interest' may be referred to as the key factor and a driving force that helps us in paying attention as well as remaining engaged in our so attended activities.

NATURE AND CHARACTERISTICS OF INTERESTS

The definitions given above and the studies and experiments carried out by various psychologists give enough ground to know more about the nature and characteristics of interests. We summarize them as under:

1. Our interests are very much linked with our wants, motives, drives and basic needs.
2. Interest is a great motivating force that persuades an individual to engage in a cognitive, conative or affective behaviour.
3. Interest and attention are closely related to each other. Commenting on their relationship, McDougall writes, "*Interest is latent attention; and attention is interest in action.*" (1949, p. 277). This observation is true. Interest is the mother of attention. We attend to those objects in which we are interested and thus interest prepares us mentally to pay attention to an object, person or a thing. Attention always implies the activity, what we have in our mental structure in the form of an interest, that is given practical shape in the form of some activity, *i.e.* making one attend.
4. Interests are innate as well as acquired dispositions.
5. Interest is the personal meaning that a thing has for us. This meaning colours all the aspects of our vision. When interested in a thing, we interpret everything in line with the interest.
6. Pursuit of one's interest is always satisfying. It helps an individual realize the goals and aims set by him.
7. Interest helps in overcoming unusual or early arrival or frequent repetition of plateaus in learning. They also give enough strength to an individual to resist fatigue and avoid failure.
8. Interests and attitudes although have close similarity on the ground that both represent mental readiness or preparation for a particular behaviour pattern, yet there is a clear-cut distinction between the two. An individual usually likes the things in which he is interested and the thing that interests also seeks activity. Attitudes, on the other hand, may orient an individual either favourably or unfavourably towards certain objects, places or ideas. Also they are comparatively passive. A person may possess attitudes but may do nothing about them.

Interests are not permanent and fixed. They change as a result of maturation, learning and other internal as well as environmental conditions and factors.

WHY ARE WE INTERESTED IN SOME THINGS AND NOT IN OTHERS?

As a matter of fact, our innate or inborn tendencies are basically responsible for our peculiar interests. We are interested in the things that give satisfaction to our innate desires and urges. From the early childhood, it can be easily seen that instinctive drives (like curiosity, constructiveness, acquisition, self-assertion etc.) play a great role in making children interested in one thing or the other.

As one grows older, one's instinctive urges get developed and modified. Now in which manner and to which extent these urges develop depends upon many environmental factors. Environmental forces are responsible for giving a particular shape to the inborn or innate urges and basic drives. As a result, interests do not remain innate or inherited qualities, but change into acquired tendencies or characteristics.

Moreover, instinctive behaviour, as we grow older, gives birth to sentiments and complexes which in turn bring ideas and purposes in life. We begin to pay attention to things connected with our sentiments and complexes. Our attitudes, temperament and other personality traits also begin to influence our interest patterns. We strive for ideals and achieving some things in our lives. Such striving and struggle tries to give a new form to our interest patterns, as a result of which new interests are developed or acquired by us.

It is, therefore, not proper to consider interests purely as inborn or inherited characteristics. They are actually acquired dispositions or characteristics and the result of constant interaction between the instinctive behaviour of the organism and the peculiar environmental forces. Both internal or personal factors and external or environmental factors affect the interest patterns of an individual in the course of his growth and development. We can sum up these factors as below.

Personal Factors

- (i) Physical health and physical development.
- (ii) Mental health and mental development.
- (iii) Social development.
- (iv) Age and sex.
- (v) Emotions, sentiments and complexes.
- (vi) Wishes, ideals, motives and goals of life.
- (vii) Attitudes.
- (viii) Pattern of one's instinctive behaviour.

Environmental Factors

- (i) Socio-Economic status of one's family.
- (ii) Culture and social environment.
- (iii) Education and training.
- (iv) Opportunities available to him for exploring his potential interests.

GENERATING DESIRED INTERESTS IN LEARNING

The success of a teacher lies in his arousing and maintaining interest of his pupils. Therefore, most of their strenuous efforts are always directed in making their students interested in some or the other

learning activities. All the factors involved in teaching-learning process, namely the learner, learning material, learning environment, learning methods and teacher, have to be controlled and designed in such a way that all of them may contribute significantly towards the maintenance of proper interest in a learning activity at a particular time. Therefore, the task requires a multi-dimensional attack. However, for the general guidance of teachers, the following points may prove fruitful:

1. **Setting proper aims and objectives:** Before teaching a lesson or engaging children in a learning activity, they should be told about the need and importance of learning that activity. The aims and objectives of teaching a particular lesson or unit should be clearly defined and the students should be made to set definite goals and purposes.
2. **Proper selection and organization of learning experiences:** The unsuitability of the content makes children disinterested in a particular lesson. Therefore, the teacher should select and organize the contents to be taught or the matter to be delivered in a suitable way by keeping in view all the psychological principles.
3. **Use of appropriate methods and teaching aids:** Most of the times, it is the teaching method that makes a particular learning interested or distasteful. The teacher should adopt efficient and effective methods of teaching lesson and use suitable audio-visual aids.
4. **Exploitation of various instincts of children:** The interests of children are controlled and guided by their instincts. Therefore, a wise teacher is the one who tries to exploit their basic drives like curiosity, constructiveness, acquisition, self-assertion and sex etc. for making his students interested in a learning activity.
5. **Make proper use of sentiments and ideals:** Sentiments and ideals also control and direct children's interests. Therefore, they should be harnessed for creating and maintaining interest.
6. **Arranging proper learning situations or environment:** Learning situation or environment plays a great role in making children interested or bored and tired. Therefore, the teacher should take care of the suitability of the learning environment. The classroom furniture, seating arrangement, lighting and ventilation, the scheduled time-table for learning a particular subject or activity, general atmosphere, physical and mental state of the pupils as well as the teacher, group-climate, etc.-all should be properly considered while making attempts for arousing and maintaining interest of the pupils in a learning activity.
7. **Teacher's personality and determination:** Teacher's personality and his determined bid to make the students interested in his teaching count much in this direction. A good teacher with his proper behaviour and personality traits can motivate, inspire and make the students almost lost in his teaching. Therefore, a teacher should try to imbibe the desirable personality traits and characteristics. He should bring honesty and sincerity in his thinking, doing and feeling and make the best possible efforts to take his students along with his teaching by making them interested in his teaching.

MEASUREMENT OF INTERESTS

After the above discussion, we may conclude that interest is a great motivating force and reservoir of one's inner potential capable of moulding and shaping one's behaviour and personality make-up

in a particular direction. The measurement of one's interest in a related field may then help us in predicting his success in that field. Accordingly, we may provide educational and vocational guidance services to the students on the basis of the proper measurement of their educational and vocational interests. How this can be done may be a matter of your interest in the capacity of a teacher. This can be done properly by administering the properly standardized educational or vocational interest tests or inventories. Such tests and inventories are very much available for the use of school and college students in India as well as abroad. For illustration purpose, we are going to discuss the process of the measurement of interests with the help of a standardized vocational interest test here.

The process of administration and reporting of a vocational interest test may be explained as follows:

Object

To know about the vocational interests of a subject through the administration of a vocational interest test.

Needed Test Material and Environmental Situations

- (i) A copy of the vocational interest test construct and standardized by Dr. S.P. Kulshrestha which includes copy of the Vocational Interest Record and Test Manual.
- (ii) A subject whose vocational interests are to be measured.
- (iii) Maintenance of proper environment for the administration of the tests.

Identifying Data of the Subject

Name of the Subject	:	Deepti
Profession of the Father	:	Govt. Service
Monthly Income	:	Rs. 30,000
Belongs to Urban/Rural Area	:	Urban
Name of the School	:	DAV School, Rohtak
Class	:	XI
Age	:	18 years
Date	:	20-8-2002

Description of the Test Material

This vocational interest has been constructed and standardized by Dr. S.P. Kulshrestha. It has been published by National Psychological Corporation, Agra. The main objective of this test is to measure the vocational interests of the students in order to help them in making the right educational choices for entering into the professions of their interests.

Its test material can be properly understood through its division into:

- (i) Vocational Interest Record, and
- (ii) Test Manual.

VOCATIONAL INTEREST RECORD

It contains the instruction and test items covered in four pages. The top of the initial cover page contain columns for filling up the identifying data by the subject. It is followed by the necessary instructions regarding the test.

Material on second and third pages is so arranged that it helps the subject to express his interest or disinterest for 200 different vocations belonging to 10 main vocational areas. The material on the fourth page helps in recording the vocational interest choices of the subject and then drawing necessary interpretations and conclusions for the presentation of the test report.

TEST MANUAL

It lies with the examiner. In this manual, Dr. Kulshrestha has discussed the needs and objectives of the construction of this test, the process of its construction and standardization, nature of the test material, instructions for the administration of the test, the procedure for scoring and interpreting the test, results etc. The proper reading of this manual is a must for the examiners for deriving proper benefits from the administration of the test.

ADMINISTRATION OF THE TEST

The administration task was done in the following ways:

- (i) The environmental situations was arranged so as to provide congenial environment for holding the test. The subject was made to sit comfortably and feel at home. A good rapport was established with her and she was told clearly about the objective of her testing.
- (ii) The subject was then given a copy of the vocational interest record booklet (4 pages). She was asked to fill up the identifying data columns and read the instructions given on the front page. These instructions were also explained clearly to her by the examiner.
- (iii) The subject was then asked to turn the page and mark as (\checkmark) or (\times) for her liking or disliking of the different vocations mentioned on the second and third pages. When she marked all the 200 vocations, the test booklet was taken from her. She was clearly told that nothing was to be written on page 4 as it is meant for the examiner. While taking back the test booklet from her it was assured that she had responded to all the 200 items of the test.

SCORING OF THE RESPONSES

Each of the responses marked as \checkmark and \times were scored as 1 and zero. In this test, each of the 10 main vocational areas have been named by the first letter of their Roman names, e.g. L has been used for the literature field. It has been further divided as L_1 , and L_2 . L_1 which represents the total sources of the responses given by the subject for her likings of the 10 literature-related vocational arranged vertically while L_2 stands for the total of her scores for her likings of the other 10 literature-related vocations arranged horizontally. In this way, there were 20 vocations belonging to the field of literature. Our subject marked (\times) for all the vocations lying in the 10 vertical columns. Hence she earned her L_1 scores as zero. She repeated this with L_2 score by earning another zero. Thus her total scores $L_1 + L_2$ were zero and this score was written in front of the column L. Similar method was adopted for computing the total scores of other main vocational areas. Such scoring of the responses of our subject was tabulated as under:

S. No.	Vocational Field	Vocations in Vertical Columns	Vocations in Horizontal Rows	Total
1.	Literary	$L_1 = 0$	$L_2 = 0$	$L = 0$
2.	Scientific	$SC_1 = 2$	$SC_2 = 0$	$SC = 2$
3.	Executive	$E_1 = 7$	$E_2 = 8$	$E = 15$
4.	Commercial	$C_1 = 2$	$C_2 = 1$	$C = 3$
5.	Constructive	$Co_1 = 0$	$Co_2 = 0$	$Co = 0$
6.	Artistic	$A_1 = 6$	$A_2 = 5$	$A = 11$
7.	Agriculture	$AG_1 = 0$	$AG_2 = 0$	$AG = 0$
8.	Persuasive	$P_1 = 1$	$P_2 = 3$	$P = 4$
9.	Social	$S_1 = 7$	$S_2 = 8$	$S = 15$
10.	Houshold	$H_1 = 1$	$H_2 = 1$	$H = 2$

INTERPRETATION OF THE TEST SCORES

The interpretation of the scores earned by our subject in 10 different vocational areas was done in two different ways. Firstly these scores were represented through a Profile (The space for such profile has been given). In this, the ten points representing the respective total scores earned in the 10 vocational areas were marked and then these 10 points were joined by the straight lines as shown in Figure 27.1.

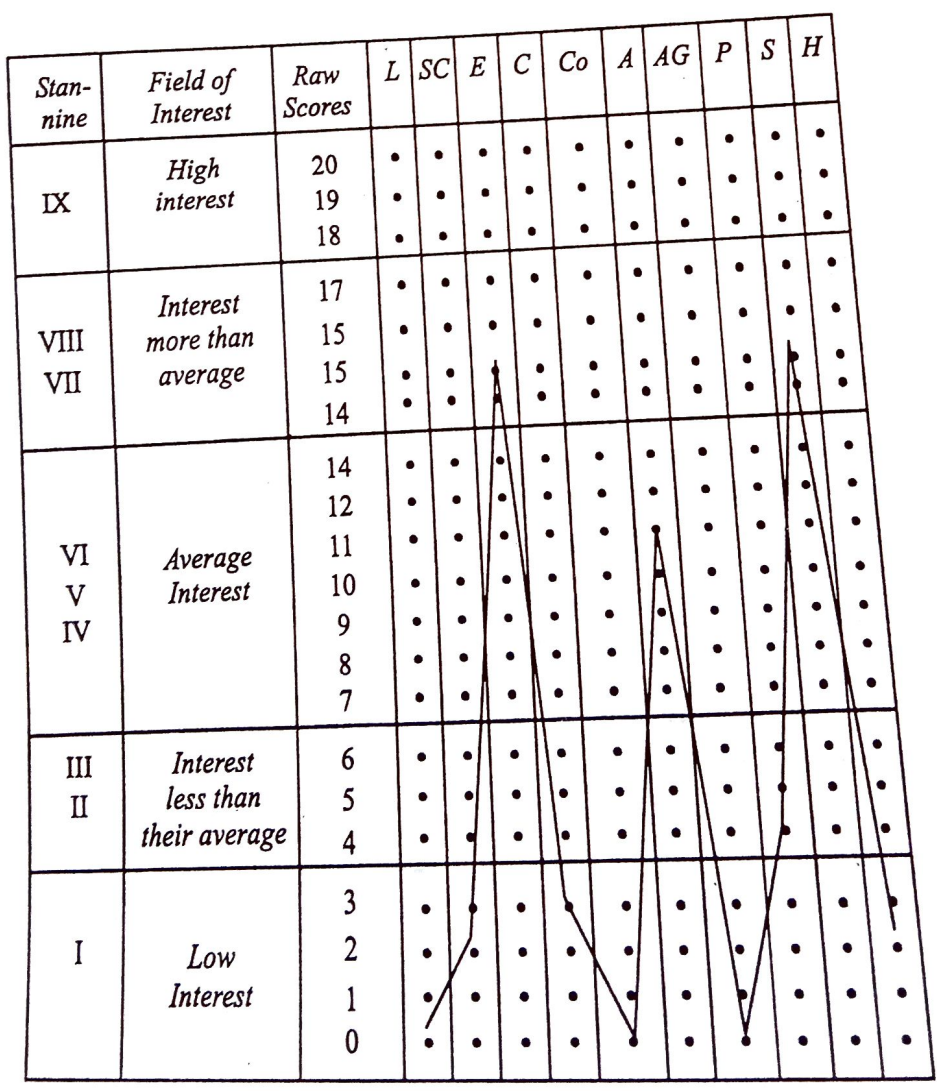


Fig. 27.1 Interest Profile of a subject

The above profile was then used for the required interpretation. The areas related to the various points of the profile were marked as the areas of high, average or low interests shown by our subject. Thus judging in this way, the areas (earning 13 as raw scores) related to executive and social fields were found to be the areas of main interests for our subject and the areas earning 0 as raw scores to literature, commerce and agriculture were the areas of the lowest interest.

The interpretation of the raw scores of our subject can also be made with the help of the stanning score marked from I to IX in the initial column of the profile.

By combining the results of both the interpretation, we can prepare the report of the test findings of our subject's vocational interests as follows:

General Report

- | | |
|-----------------------------|--|
| 1. Main Interest Area: | Executive |
| 2. Second area of Interest: | Artistic |
| 3. Third area of Interest: | Persuasive |
| 4. Lowest interest areas: | (i) Literary, (ii) Commercial, and (iii) Agriculture |

Specific Report

- | | |
|------------------------------------|---|
| 1. High Interest: | Nil |
| 2. Interest more than the average: | Executive and Social |
| 3. Average Interest: | Artistic |
| 4. Interest less than the average: | Persuasive |
| 5. Low Interest: | (i) Literary, (ii) Scientific,
(iii) Commercial, (iv) Constructive,
(v) Agriculture, (vi) Household |

CONCLUSIONS

The following conclusions can be drawn from the above two reports about the vocational interests of our subject.

1. Our subject Deepti has her main interests in executive and social areas. Demonstration of more than the average interest clearly indicates that she likes to become an executive. However, she has shown an equal interest in the social field, which means that she is interested in serving the social cause by her executive assignments.
2. Her second major interest area lies in the artistic field that reflects her hobbies and likings for artistic activities. She may adopt such artistic hobbies as a profession if she opts to do so in future.
3. Her third interest area is related to the agents like persuasive professions. She can motivate others to move in the direction she likes and this quality may prove very helpful in her socio-executive professions.
4. She has almost no interest in the professions related to literary, commercial, agriculture, scientific, constructive and household fields. Therefore, she is advised not to adopt these professions as her career.