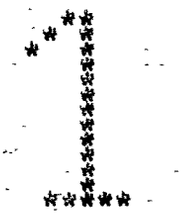
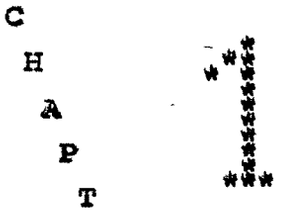


INTRODUCTION



CHAPTER ONE

INTRODUCTION

1.1 Introduction

The problem of the present investigation is to study identification patterns, motivation and school achievement of the talented students. The purpose of this investigation is to study subjects' degree of identification with models, self achievement values, models' achievement values attributed by subjects, motivation to learn and behaviour orientation in school achievement of gifted and talented students.

Interest in the identification and utilization of talents of the gifted dates back to ancient times, but the scientific

era beginning with the work of Galton (1) in the later years of the nineteenth century. With the rise of scientific interest and 'testing movement' various studies were carried out concerning the nature and development of giftedness and talent. Terman's (2) longitudinal study of more than one thousand gifted children was a fact finding enterprise and constitutes an important landmark in the investigation of giftedness and talent. Studies of this nature continued after 1930s with little change in approach. To day a good deal of information is available concerning the nature and the development of gifted and talented children.

Talented children constitute one of the most valuable resources of a nation. They are most likely to become leaders of tomorrow in all sorts of enterprise of a nation. They are the bedrock of and the pacemaker in the development, industrialization and civilization of the country. Talented individuals come from all races, socio-economic groups, geographic locales, and environments. Since all cultures are mainly dependent upon people of intellectual competence, it becomes the responsibility of all those who are concerned with the development of children to provide adequate opportunities to them so that they can develop their

potential to the full. The needs of the gifted and talented children are the same as those of other children, differing in degree and quality.

The research and development efforts of the late sixties have indicated that giftedness is multifaceted. The literature in this field is so vast and heterogeneous that it cannot be dealt with exhaustively in a thesis concerning some important and specific aspects of talented students.

Identification of talented children in our school is not an easy task. The talented children are mostly unaware about their talent, aptitudes and interests. The parents or teachers do not know the child's potentials. Talented students can easily get average achievement; hence it is difficult for teachers to demarcate the talented from average students. This, however, does not mean that the proportion of talented children is very small. It means that one has to find out talented children and this is not an easy task at present.

Talent requires encouragement for its full development. This encouragement may or may not come from

parents, teachers, peers, institutions or other models. By identifying with his parents, the child acquires the family pattern of behaviour. With the expansion of his social world, however, he finds other identification models and learns to act, think, feel like the model. Many complex behaviour patterns, ideas, values, roles, attitudes and personality characteristics are acquired through the process of identification.

The relation between identification and motivation is very close. Since identification itself may become a motivating force, one tends to identify with those who provide suitable reinforcements. The motivation of talented child is very complex and it may include such things as the desire to develop potentialities, desire to know, curiosity about oneself and the world around, to make oneself as 'good' and complete as possible, and desire to learn. Thus motivation, identification and school achievement are complexly related. It is the purpose of the present investigation to study this relationship among talented, average and below average students.

1.2. Problem of the Present Study

The present study is an attempt to assess the degree of

identification of talented subjects with mother, father, teachers, peers and to assess the school achievement values attributed by subjects to each identifying model. This study is also an attempt to assess the subjects' own achievement values, motivation to learn and behaviour orientation.

Identification begins early in life and it is a prolonged, perhaps life long, process. (3) The process is subtle and often operates without conscious awareness. In early childhood, both boys and girls tend to identify with the mother. At a later stage boys tend to identify with the father and accept him as a role model. Children tend to accept values, attitudes and behaviour pattern stressed by parents.

In developing his system of values, attitudes and motives the child is exposed to other adult models (such as teachers) and to models in peer group. At school, the child may or may not identify closely with the teachers and peers who may or may not present models resembling those of the parents. He may internalize certain attitudes, values and behaviour patterns presented by the models. Identification with other models may result in modification

of the original parental patterns. The various identifying models may or may not reflect common attributes; hence the child's own attributes may vary with the influence of the models. Therefore, the behaviour of the identifying child will vary depending upon the degree of his identification with various models. Hence, the present study attempts to assess the subjects' degree of identification with mother, father, teachers and peers.

Parents tend to support their child's academic efforts and the child tries to please them by doing well academically. A number of studies have been conducted in the area of the relationship between academic achievement and parent-child relationship. The dynamics of the parent-child relationship as related to school achievement is, however, not clear. In relation to school achievement the following possibilities could be postulated :

(1) The child may or may not value school achievement.

(2) The parents may or may not value school achievement and accordingly child's achievement motivation may or may not be reinforced.

(3) The value orientation of the child may or may not vary in a manner similar to that of the parents.

(4) The peer group with which he identifies may or may not value school achievement.

(5) The teachers may or may not value school achievement in a manner similar to those of the parents and peers.

(6) The child may find his earlier value system strengthened, or he may encounter conflicts between values stressed by parents, teachers and peers.

To the extent that an achievement oriented value system is portrayed in common by parents, teachers and peers, and to the extent that the subject identifies with each one of these figures, it may be expected that the subject will be collectively reinforced in achievement values and behaviours. But in case of conflict, the subject may reflect the values of those with whom he identifies most or he may hold values representing some sort of compromise (4).

Thus, it seems useful to know with whom the subject identifies and the achievement values he attributes to the model. Hence, an attempt is made in the present study to assess the subjects' degree of identification with mother, father, teachers, peers and to assess the school achievement values attributed by the subjects to the models.

Identification is closely related to motivation. Why some students do or do not perform well in academic situation

becomes an important issue. Striving or craving to do well in schools seems to be its important manifestation among children. Many pupils work below their capacity due to lack of motivation or boredom. Therefore, it is necessary to discover what things have important meaning and value to the individual child.

Motivation would manifest itself through an individual's personality structure, his attitudinal structure and his value structure. Motivation to learn would include such areas as attitude toward school, extent of valuing education, feeling for other people, concern for material things, determination and attitude toward the self etc.

Effort to understand motivation and its dynamics have led to a search for means of measuring it. Investigators have attempted to define motivation, and to determine behaviour which is related to it, and to predict on the basis of motivation how students will perform academically. In this study an attempt has been made to assess motivation to learn in school context by developing an objective tool based on 'Junior Index of Motivation Scale' (JIM) developed by Frymier (5). Values are assumed to be central ingrediant in academic motivation. Since it was not known

for a long time, exactly which kind of value structure will manifest itself as great desire to learn in school, several different kinds of value items were built into the early forms of the instrument.

It is considered that behaviour related to school achievement is itself related to values possessed and reinforcement offered by models. The subject's own achievement values also influences school achievement. Depending upon the values of the subject and his models, motivation for school achievement will vary. Hence in the present study an attempt is made to examine the relationship between subject's own achievement values and actual achievement. The present study also tries to examine the relationships between the subject's own achievement values on the one hand, and his identification with models, models' school achievement values attributed by subject, behaviour orientation, motivation to learn as well as actual achievement on the other.

It is thus assumed that talented, average and below average will differ with respect to the need for achievement in school - motivation to learn, behaviour orientation, degree of identification with models, own achievement values and achievement values attributed to the models.

More specifically it aims at studying the following :

(1) Identification patterns of talented, average and below average subjects.

(2) Subjects' degree of identification with mother, father, teachers and peers.

(3) Subjects' own achievement values.

(4) Models' achievement values attributed by the subjects.

(5) Subjects' motivation to learn.

(6) Subjects' behaviour orientation which includes academic achievement orientation, peer affiliation orientation, non-conformity orientation; and independence orientation.

(7) Motivation to learn in achievement of talented, average and below average subjects.

(8) Identification and modeling values which might account for achieving differences in motivating school achievement.

(9) Relationship between subjects' own achievement values and their school achievement.

(10) Relationship between subjects' own achievement values and identification with models.

(11) Relationship between subjects' own achievement values and models' achievement values attributed by subjects.

(12) Relationship between subjects' own achievement values, motivation to learn and behaviour orientation.

(13) Relationships among identification with models, models' achievement values attributed by subjects' own achievement values, behaviour orientation, motivation to learn and actual school achievement.

In short, the present study tries to examine the complex net work of relationships among identification with mother, father, teachers, peers; school achievement values attributed by subjects to each model, own achievement values, motivation to learn, behaviour orientation and actual school achievement among subjects identified as talented, average and below-average in terms of well defined criteria.

Hardly any significant work in this respect has been done in our country, though it need is most felt. The talent search study of National Council of Education Research and Training (NCERT) at New Delhi is just the beginning in this direction in the country (6). The need for a systematic study of talented students is thus completely felt.

1.3. Concept of Giftedness and Talent

Psychology during past sixty years has witnessed the emerge of new and broadened concepts of giftedness and talent. A study of the literature for talented children reveals many definitions based on IQ score or high performance on achievement measures. With expanded notions of giftedness and talent, and its multifacted nature, new assessment procedure

have been developed to supplement or replace traditional techniques. The research and development effort of late sixties helped broaden definitions of talent to include a wider range of outstanding traits; and thus to utilize a variety of means of identification.

In a section to follow, a brief historical review of giftedness and talent is presented in the concept of giftedness and talent is examined and various means of its identification are discussed.

1.3. (A) Historical Overview

Interest in gifted and talented children and their education goes back to ancient times. Early studies of gifted and talented children tended to be largely anecdotal and descriptive. Parents' reports of child prodigies appeared in the literature from 1800 onwards. Many such reports comprised the literature of the gifted throughout the last century and early part of the present century.

The scientific investigation of giftedness and talent began with the work of Galton (1). He furnished a comprehensive description of the traits of the gifted

children. His contribution was the objective observation and measurement of human traits.

The testing movement focused attention on mental variability, provided objective means for the appraisal of giftedness and superior achievements, and stimulated interest in special education. The movement has concentrated on the discovery and conservation of talent, reappraisal of the meaning of giftedness and talent, recognition of creativity, development of new techniques for the appraisal of talent, and various curriculum adjustment for gifted students (7).

Prior to the advent of mental testing, bright children were identified primarily on the basis of their performance in and out of school. In 1905, Binet-Simon (8) developed the first practical measure of intelligence and provided a tool by which children could be classified as bright, average and below average in terms of mental superiority.

In 1911, Goddard's (9) revision of the Binet-Simon Scale appeared in United States, followed in 1916 by Terman's. Terman employed the technique developed by Binet, refined the method and utilized the mental age concept.

Terman's Stanford-Binet Test (10) Revision of the Binet-Simon Scale became the model for many intelligence tests developed since than, including its revision in 1960.

Terman's (11) longitudinal study of a thousand gifted children is a classic in the field. It has answered a number of questions concerning the gifted. It also set the pattern for further investigation in this area. Hollingworth's (12) work lay in the highly organized educational experiments. She was interested in the optimum development of gifted child. Gray (13) contributed a study of young college students. Lehman and Witty (14) examined the play behaviour of gifted children. Witty (15), Barbe (16), Hildreth (17) and other investigators described the traits of the gifted children which were similar to those described by Terman (11) and Hollingworth (12). The scientific study of the gifted continued intermittently through the 1930s without little change in approach.

Cox Miles (18) summarized material on this subject upto the middle of 1950 in a comprehensive article reported in the Manual of Child Psychology. The establishment of the American Association for gifted in 1947 is an important landmark in the history of gifted children. Witty's (19)

efforts helped broaden definition of talent and the appearance, in 1951, of the ' The Gifted Child ' edited by him gave a new impetus to the movement (20. In 1954, the National Association for Gifted Children was formed in America and its publication 'The Gifted Child Quarterly' provided valuable information to teachers and parents. In the following years greater emphasis began to be placed on verbally gifted pupils as evidenced by an increasing number of publications of books, articles and monographs dealing with educational problems and difficulties of the gifted.

During recent years efforts to identify and nurture 'creativity' provided considerable excitement. Significant development is found in the search for measures of creativity. The pioneer work of J.P. Guilford (21) paved the way for establishing criteria which have been utilized by Getzels and Jackson (22) in the construction of tests of creativity. The tests have been used in a number of provocative investigation of creativity. Studies on creativity have explored the nature of creative talent, measurement of creativity and invention, as well as educational factors that foster creativity and divergent thinking.

Summaries of current researches on the gifted and talented appeared in the 'Review of Educational Research'. The amount of descriptive information about gifted is overwhelming. There exist summaries, review and bibliographies of Fliegler and Bish, 1959 (23); Holt, 1960 (24); Anderson, 1961 (25); Birch and Reynolds, 1963 (26); French, 1964 (27) ; Gowan, 1965 (28, 29); Goldberg, 1965 (30); Gallagher, 1966 (31); Frierson, 1969 (32); Marland, 1971(33) and others. Analysis of these researches reveals the trend toward which current efforts are directed.

Since 1965, research relating the gifted has shown a remarkable shift from a concern for the gifted child to a concern for the creative process. Noffsinger (34) conformed that the research on the gifted published in professional journals from 1961-66 had changed its emphasis from gifted child studies (61 percent) in 1961 to creativity studies (64 percent) in 1966. Thus, the most outstanding development of this period is the emphasis on creativity.

Study of the gifted now includes many different types of unusual children - those with all sorts of special

abilities and talents as well as creative tendencies. Increased attention have been given to background factors as determiners of achievement, interests, and ambition; and there have been new experiments with educational programmes conducted on a research basis (7).

The impetus for studying non-academic forms of talented accomplishments came from a recent serious of pioneering studies by Holland, Richards and Others (35); Wallach and Wing (36). Their interest has been to show that academic and nonacademic forms of accomplishment are minimully related to each other. Moreover, studies of non-intellective factors investigated such components of intellectual achievement as socio-economic status, family patterns, child rearing practices and self-concept.

1.3. (B) Various Definitions of Giftedness and Talent

Various terms like talented, gifted, bright, superior, brilliant, genius, exceptional, advanced, creative, rapid learner, accelerated, supernormal etc have been used by researchers from time to time to designate a person with outstanding performance. These are all subjective terms and do not refer to any standard or agreed upon criteria

of excellence. As remarked by McClelland (37), the term 'talent' is ambiguous, sometimes referring to an aptitude or ability in the person, and sometimes referring to talented performance of a person. Hildreth (38) pointed out the difference between talented and gifted, the former referring to all sorts of gifted individuals, not only those with specialized talents. In the absence of any precise definitions of these various terms, they will be used interchangeably in this investigation.

No absolute definition of 'gifted and talented' exists. Each culture and era defines giftedness to suit its own particular needs and values. A widely accepted view is that the gifted child is a star performer who can put on a good show. The gifted child was considered to be one whose level of cognitive development was advanced beyond children of comparable age as measured by Standard tests (38). Intelligence Quotient (IQ) or high performance on achievement measures has been accepted as the most effective yardstick of intellectual giftedness. A high IQ is a determining factor in the selection of gifted and talented children. The acceptance of the IQ score as an index of talent was furthered by Terman's (11) classical

longitudinal study which set the style for many researches that followed. Among the authors and research workers who had adopted varying IQ standards as the lower limit or cut-off point as the criterion for gifted and talented children are Terman (11), Hollingworth (12), Witty (15), Bently (39), Gallagher (40), Wall (41), Pegnato and Birch (42), Fliegler (43), Baldwin (44), Martinson and Lessinger(45), Laycock and Caylor (46), and others.

The use of IQ in defining giftedness and talent, however, implies some agreed upon lower threshold or cut off score, but investigators do not agree as to the location of the cut-off point in terms of IQ or percentile rank. There appears to be a wide divergence in determining the cut off point above which a child is considered gifted.

The use of IQ in defining gifted and talented child has the advantage of some objectivity. It is based on clearly defined, measurable criteria. It can also be applied early in life.

The IQ obtained from an intelligence test, however, pertains only to mental functioning and conceptual thinking

and sets up too narrow a definition of the gifted. The capacities of remarkable children can scarcely be encompassed by the 'high IQ' definition. The work of Guilford (21) demonstrated 120 different intellectual abilities, many of which are not included in IQ test, and only a few dimension of mental functioning are measured by present day standard intelligence tests. Talented non-academic accomplishment were found to be fully independent of intelligence test scores in the research by Wallach and Wing (36).

Some investigators have described the gifted as those who fall in the top proportion of intellectual ability. Here also there is wide diversity of opinion. The figures stated commonly range from one tenth percent upto fifteen or twenty percent. Hollingworth (12) for her experimental work, defined the gifted children as those who are in the top one percent of the juvenile population in general intelligence. DeHaan and Havighurst (47) defined the most extremely gifted as children in the upper one tenth percent of the general population. Conant (48) mentioned 2 or 3 percent of high school students as constituting the extremely gifted. Laycock (49) mentioned 5 percent of the child and youth population as mentally gifted. According to Fliegler(43)

definition, it includes fifteen to twenty percent of the school population.

In defining giftedness and talent, there is a current effort to avoid to rely too heavily on the IQ, but due to lack of other proper measuring devices or improved tools, most research workers still rely on standardized intelligence tests.

The trend today is toward broader definition of giftedness and talent. Paul Witty (19), defined gifted child as 'one whose performance is consistently remarkable in any potentially valuable area.' This definition is by implication broader than a definition based on limited test scores or percentile ranks, and it includes intellectually gifted, talented, superior or outstanding performance and those who possess mechanical and social skills etc. It relies solely on performance rather than potentiality for development.

Similarly, other researchers have also chosen to use broad, comprehensive definition by describing the gifted child as one who has exceptional ability in handling abstract ideas, in producing creativity; and in demonstrating social leadership.

The broadening concept of giftedness and talent is reflected in the definition of Havighurst Hersey et al (50) who maintained that the talented or gifted is one who shows consistently remarkable performance in any worthwhile line of endeavor. DeHaan and Havighurst (47) preferred to include all sorts of outstanding talents and aptitudes in their definition : 'Gifted children are those individuals, from kindergarten through high school age, who show unusual promise in some socially useful area and whose talents might be stimulated.

Sumption and Luecking (51) defined gifted children as those whose possess a superior nervous system characterized by the potential to perform tasks requiring a comparatively high degree of intellectual abstraction or creative imagination.

Fliegler (43) suggested that gifted children possess superior general intellectual potential and ability (approximate IQ 120+); a high functional ability to achieve academically and a high order of talent - in such area as art, music, mechanical ability, social leadership, creative writing, and a creative ability to develop a novel event in the environment.

Gallagher (40) reported the primary definition of 'giftedness' as based on performance in school and school associated tests. According to Passow (52), giftedness and talent always have a social referrent. Tannenbaum (53) simply required that any definition of talent must have a social reference.

Hildreth (38) described gifted child as one who shows acceleration in all aspects of mental development; or one who stands out from his classmates in academic achievement; and shows special talents, and/or creativity. In addition he maintained that the gifted child is one whose development and behaviour - apart from physical superiority - consistently demonstrate unusual traits, capacities, and achievement of his age. Although some may prefer a different interpretation of giftedness, with more emphasis on specialized talents on non-intellectual tasks, a move is already set up in the direction of adopting sufficiently broader definition to include outstanding performance on a number of socially valued tasks.

The broader definition of giftedness does not minimize the significance of attempts to provide more adequately for children who are gifted in abstract intelligence. These children

constitute one important type of gifted children. They often have other special gifts. However, there are some students whose gifts cannot be identified by intelligence tests, since the relationship between high IQ and ability in such area as art, creative, writing, and music is not necessarily close. The same is true of mechanical skill and social leadership(54).

Thompson (55) thought of the following three aspects of giftedness.

(1) The fields of attainment in which excellence may be manifest.
(2) The personal attributes underlying high attainment, and
(3) The stages of individual development in which these attributes take form and mature.

Interest in creativity and what is termed 'deviant productive behaviour' has now been growing rapidly, and in time research may prove that creativity is another criterion to be included in a broad definition (38). High motivation, capacity for self-discipline, and drive to succeed may in themselves be considered forms of talent. Study of the gifted now includes many different types of unusual children - those with all sorts of special talents as well as creative tendencies.

This changing emphasis is reflected in a definition given by the U.S. Office of Education (56): Accordingly, gifted and talented children are those identified by professionally qualified persons who, by virtue of outstanding abilities, are capable of high performance. These are children who require differentiated educational programmes and/or services beyond those normally provided by the regular school programme in order to realise their contribution to self and society. Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or combination:

(1) General intellectual ability.
(2) Specific academic aptitude.
(3) Creative or productive thinking.
(4) Leadership ability.
(5) Visual and performing arts.
(6) Psychomotor ability.

Looking to these various definitions and conceptions about giftedness and talent, it is quite clear that the term giftedness or talent is not a unitary trait or ability. It represents a number of abilities which result in high level performance both in the academic and non-academic spheres. Intelligence alone is no longer regarded as an index of talent.

Even when intelligence is used as a criterion for the identification of talented children, investigators have not shown any agreement regarding the location of cut-off point above which all children may be regarded as gifted. Increasing emphasis is now being placed on socially valued performance rather than on identification of potential on the basis of tests. Some of the non-academic factors associated with talent have also been recognized and due consideration have been given to them in the identification of talent.

1.3. (C) Identifying Talented Students

There are a number of techniques and practices of identifying talented students. Most researchers use a variety of screening techniques to search out talented students. The techniques reported may include teacher judgment, intelligence tests, scholastic aptitude tests, creativity tests, trait check lists, self-rating scales, projective devices, anecdotal records etc. Thus, the techniques range from standardized test that purpot to measure objectively and validly some specific characteristic to more subjective observations by teachers and self-ratings.

Each tool has its strength and limitations.

There is increasing evidence of broadening definition to include a wider range of outstanding traits and to utilize a variety of means involving both subjective and objective measures of identification.

According to Hildreth (57), the identification of the gifted and talented involves the following two steps :

(1) Screening the entire school population, or at least most promising segments of it, through making a systematic, inclusive survey, and

(2) selection of the most promising or the brightest by nominations and recommendations of teachers for subsequent testing and more intensive study. The common practice is to use group intelligence tests for preliminary screening and then to recheck selected cases with an individual intelligence test and supplementary ratings. A cutoff score in terms of IQ or percentile rank is set up in advance by the proportion of the school population to be selected. Achievement tests may be used as part of the original screening battery or for later check-up.

Another common procedure for selecting talented children is to request the teachers to list pupils whom they think as talented and to refer them for subsequent

testing. Teachers may include with their nominations, supporting data such as information about school performance, past records, significant incidents in the child's behaviour and home information.

In Terman's longitudinal study (11) of a thousand gifted students over a period of more than thirty five years, teachers nominations and group intelligence tests were used as screening procedures. Teachers were asked to list the three most intelligent pupils in their classes and to indicate the reasons for making nominations. The Stanford-Binet test was administered to those ranking high on the group test and nominated by teachers as most intelligent. The lower limit for inclusion in the experimental group was set at an IQ of 140, although some children with an IQ as low as 135 were later included in experimental group. In subsequent researches, following Terman's study used IQ scores and achievement test cutoffs as criteria for identification.

Hollingworth (12) for her own experimental work, put a great deal of weight on the nomination of teachers and personal interviews with children and parents. She regarded an individual intelligence test as the most important single

tool for identification of the gifted. The lower limit for admission in her experimental class was set at an IQ of 135 or above as measured by Stanford Binet Test.

Various investigators have used different intelligence tests and have adopted varying IQ standards as the lower limit or cutoff points for the selection of talented students. This lower limit varies from an IQ of 110 upward as shown below :

Intelligence Test Score	
110	Bently, 1937 (39)
110-115	Wall, 1960 (41)
120	Fliegler, 1961 (43)
125	Baldwin, 1962 (44)
130	Martinson and Lessinger, 1960 (45)
132	Gallagher, 1964 (40)
136	Pegnato and Birch, 1959 (42)
140	Terman, 1925 (11)
150	Getzels and Jackson, 1962 (22)
180	Hollingworth, 1926 (12).

High performance on intelligence tests has been accepted as the most effective yardstick of intellectual giftedness and is a determining factor in the selection of gifted children.

Other investigators have reported the use of teacher judgment, cumulative grade averages and IQ scores for identifying gifted students. In a study conducted by Hill et al (58), it was pointed out that, of the twenty four students in the final selection, 90 percent were correctly identified by teacher judgment alone. Barbe (59) found that teachers missed 25 percent of the highly gifted. Pegnato and Birch (42) while attempting to discover the relative efficiency and effectiveness of seven different commonly used identification procedures came to the conclusion that when a Stanford-Binet IQ of 136 or higher was used as the criterion of giftedness, teachers did not locate gifted children either effectively or efficiently enough to place much reliance on them for screening.

Despite what has been stated about inadequacy of teacher judgments in identifying superior students, there is considerable evidence to indicate that if teachers are given some instructions about what to look for and provided with some cautions about avoiding common errors, they can do their task very effectively. Laycock (49), Kough and DeHaan (60), and Kenneth (61) had drawn trait check-lists for the use of teachers in discovering gifted students in

their classes. Renzulli and Hartman's (62) Scale for rating behavioural characteristics of superior students merits attention as a model. This instrument gives attention to learning characteristics, motivational characteristics, creativity characteristics and leadership characteristics.

Several studies have shown that individual intelligence tests identify gifted children much more accurately than do group measures. But individual tests are too costly and time consuming to be administered to all students. Group intelligence tests often fail to identify some of those who would qualify as superior and do identify some who would not qualify on the basis of an individual test.

In the Pegnato study (42), the group intelligence test did seem to possess the best combination of efficiency and effectiveness for screening. Using an IQ 115 on group intelligence test as the cutoff point, they succeeded in discovering 92.3 percent of those who would have qualified as gifted on the Stanford Binet IQ of 136. If the cutoff point of an IQ of 120 on group test had been employed the group test located 71.4 percent; if the cutoff point of IQ 125 were used, the group test would have located 43.9

percent and more than half of the gifted children would have been missed including nine with the actual scores on the Binet ranging from 146 to 161 IQ points. With cutoff point of IQ at 130 the group test would have located only 21.9 percent of the gifted children. This study too, stressed the importance of using several criteria rather than just any one.

In the Martinson and Lessinger study (45), in which scores on group as well as individual tests were available for 332 gifted pupils. It was found that if the cutoff point of an IQ of 130 or above on a group test had been employed, 51.5 percent of those who scored 130 on Binet test would have been eliminated. If the criterion score of 125 or more on a group test had been used for selecting the gifted pupils 25.4 percent would have been eliminated. This study also, stressed the use of multiple measures including group intelligence tests, teacher judgment, achievement tests, teacher check lists and others.

Thus, it is seen that even with a limit of cutoff point as low as 115 on a group test of intelligence, 90 percent or more of the subjects identified as gifted on Binet tests are detected. Considering this a cutoff point of 120 was a

used in this investigation on a group test of intelligence for identifying gifted children.

Within the last two decades recognition has grown of the fact that there are certain characteristics of intellectual giftedness which do not emerge from the standard intelligence tests. The defects of the standard measures, particularly their inability to reach such obviously important characteristics as creativity, originality and foresight are well known to psychologists (40). The work of Guilford (21) demonstrated many different intellectual abilities, many of which are not included in an IQ test.

With the expanded notions of talent and its multi-faceted nature, new assessment procedures have been developed to supplement or, in some instance, to replace traditional techniques. As a result of the 'Creativity' boom additional identification measures were developed (61). Guilford's tests, biographical inventories, problem solving and Torrance's multifactor creativity battery are widely used in the identification of such students.

Gowan (63) has suggested multidimensional type of identification in order to select talent reservoir in the

school programme. He made use of teachers identification, group test screening, achievement batteries, and a nomination system to form a 'reservoir' or talent pool. However, for final selection, Binet test was used. Bruch (64) suggested case study identification using most of the Gowan list plus tests or ratings of specific talent and observations and records of social leadership in school and community.

Gallagher (40) summarized usefulness and limitation of the various procedures for identifying gifted children and suggested that combination of procedures would seem to provide the best answer to the problem of identification. He had also pointed out the changing view of IQ scores.

In the light of the above discussion it is seen that the various methods of identification still lack precision. No available measuring instrument is a certain predictor. To day, there is less confidence in a single test score, and the use of wide array of tests and evaluation techniques has been realized. Hence, the use of multiple criteria for identifying talented students is becoming more wide spread.

Thus, attempting to find an adequate means of identifying the gifted and talented is not an easy task. Considering the

various views regarding identification of talent, the investigator decided to utilize a variety of means in identification of talented students, involving both objective and subjective measures of identification.

The following four criteria for this purpose were used :

(1) Teachers' Nomination
(2) Group Intelligence Test
(3) Trait Check-List
(4) Non-academic Performance

Identification of talented or gifted children on the basis of these four criteria would be much more desirable than relying on any one criterion like IQ. The details of procedure followed in identification of the talented students using these for criteria are given in chapter three.

1.4 Concept of Identification

The concept of identification has been used to indicate the child's acquisition of values, attitudes, motives, ideals, roles and the conscience of the models. Identification begins early in life and continuous throughout the life of a person.

The earliest approaches to the phenomena of identification occured within the frame of psychoanalytic theory and some of

the current theories of identification still rely on these early attempts.

Freud (65) described identification as 'the endeavour to mould a person's ego after the fashion of one that has been taken as a model. He made a distinction between primary identification and secondary identification. Primary identification referred to the initial, undifferential perception of the infant in which an external object perceived as part of the self, while secondary identification began after the child has discriminated a world of objects separate from the self. Freud index of the outcome of identification was imitation of the model's behaviours.

Sanford (66) suggested that 'identification' term be applied to situation in which 'an individual may be observed to respond to the behaviour of other people or objects by imitating in fantasy or reality the same behaviour himself. He emphasized two points :

(i) Mere similarity in overt behaviour between a subject and a model was not necessarily a measure of identification.

(ii) The motive for the imitative behaviour was one of the defining characteristics of an identificatory response.

According to Kagan (67) identification is an acquired cognitive response with a person. The content of this response is that some of the attributes, motives and characteristics and affective states of a model are part of subject's psychological organization. Identification is not viewed as an all-or-none process. An identification can vary in strength and individuals can identify to differing degrees, with a variety of models. The motive for the acquisition and maintenance of the identification response was a desire for the positive goal states commanded by the model, and mastery of the environment and love-nurturance were suggested as two important goals. The reinforcement for the acquisition of the identification was perceived similarity in attributes between the person and model. Once the identification was established the individuals behaved as if the goal states of the model belonged to him and the positive affect derived from this vicarious sharing of desired goal states help to maintain identification.

Kagan described four classes of behaviour which are related to the process of identification :

(1) Imitative Learning : A person imitates and practices certain responses that are approved in his environment.

(2) Prohibition Learning : The term refers to the adoption and practice of the prohibition of the parents and parent substitutes. The major motivation is claimed to be anxiety over the possible loss of love.

(3) Identification with the Aggressor : A person adopts a behaviour similar to that of an aggressor or threating model.

(4) Vicarious Affective Experience : A person experiences the same positive or negative emotions as his model.

Bronfenbrenner (68) distinguished among three classes of behaviour to which the term identification is applied:

(i) Identification as motive, with an emphasis on disposition to act like another.

(ii) Identification as behaviour, with an emphasis on overt action.

(iii) Identification as process, with an emphasis on the psychological mechanisms through which behaviours and motives are learned.

Identification may thus be regarded as learned drive or motive to be like another individual. Identification is a fundamental mechanism of personality development and socialization (3). By identifying with his parents, a child acquires many of their characteristics and important ways of behaving, thinking and feeling. The child's identification

with parents provides him with attitudes, motives, ideals, values, taboos, and morals appropriate for his cultural group, social class and role in society. Identification with the parent of his own sex leads to the child's appropriate sex-typing - the adoption of personality traits, social and emotional behaviour and attitudes considered appropriate to his own sex.

Identification includes more than coying the activities, gestures and speech of parent. Attitudes, values are also learned through this process. The boy learns not only to act like a man, but also learns how to think and behave like a man. The girl learns not only to behave as her mother but also learns to adopt attitudes toward both her and opposite sex.

As the child's social world expands, he finds other identification models like teachers, peers (friends) and heroes, and he emulates their behaviour characteristics and ideas. Identification with others may result in modification of the original parental patterns and new, different, sometime unique modes of thought and behaviour may emerge.

Identification in the present investigation defined as a process of affiliation with one or more other persons,

groups or institutions which tend to become model. Attitudes, values and other behaviour are imitated and may be internalized by the imitator (69).

Identification; as the term ordinary used is an inferred construct. It is not directly observable. The process of developing identification with others is not completely understood. Hence various researchers explain identification process by presenting certain theories and speculation as well as facts. Out of which 'psychoanalytic theory' and 'social-learning' theory had provided the most widely accepted explanation of the identification process.

Traditional approaches generally depict identification as a pervasive and more or less unitary modeling outcome that is firmly established early in childhood life, and which results in nurturant and threating interactions with parental figures.

In contrast, according to 'social learning theory' view, identification is a continuous process in which responses are acquired and existing repertoires of behaviour are modified to some extent as a function of both direct and vicarious experience with a wide variety of actual or symbolic models, whose attitudes, values and social responses are

examplified behaviourally or in verbally coded forms (70).

Empirical research studies of identification have quite reasonably employed behavioural similarities between the child and his parents or models as measures of identification. Real and assumed similarity methods, projective techniques and direct observation are widely used to measure identification. Identification is also frequently inferred from the presence of adult-like attitudes and behaviour, sex-typed characteristics and indices of self-control based on behavioural observations, parental interview with a child.

In this study descriptive self-rating scale was used to ascertain identification between subject and the model. The tool is shown in Appendix E and described in Chapter three. In the present study, an attempt is made to assess the subjects' degree of identification with mother, father, teachers and peers and to assess the school achievement values attributed by the subjects to each identifying model.

This study postulates a social learning paradigm, in which one's identifying figures and the achievement values of those figures are presumed to be related to subjects' own achievement values, and those in turn are related to actual achievement.

1.5. Concept of Motivation

Motivation has been a matter of great concern to parents, teachers and educators since the beginning in time, but research and conceptual development have begun only in recent years. Motives relate to the 'why' of human behaviour or why do people behave the way they do is a motivational question. Psychologists look upon motives as conditions which arouse, regulate and sustain behaviour. Although motives provide both direction and intensity to behaviour, their existence could only be inferred from behaviour which they influence. Atleast three things are involved in the understanding of motivation. They are (i) motivation is an inferred construcy; (ii) direction implies selection from possible variations in purposes or goals and (3) intensity implies possible variation in terms of degree of effort or energy putforth to attain the goal. (71)

Our major concern here is with motivation in an educational sense, such as 'motivation to learn in school.' In this sense a child who develops the tendency to do that which he is asked to do may be considered as highly motivated. This type of schooling does not necessarily result in education. The emphasis here is not on schooling but on

desire to learn which gives both direction and intensity to behaviour in an educational context.

Researches have shown that motivation is a function of nature of available stimuli, openness to experiencing, perceptual styple, dissonance, anxiety and physiological functioning of an individual (71). It has also been shown that persons with strong positive concepts of self are better able to perceive and cope with a wider range of stimuli than persons with a relatively weak and negative self-evaluation. Similarly some persons place a higher conscious value on achievement than others. Those persons who see education as a means to achievement will be strongly motivated to achieve in this area.

Frymier (71) described three dimensions of academic motivation as follows :

(1) Internal-external Dimension : Motivation is regarded as partly a function of the factors within an individual and partly a function of what an individual experience in the environment, self-concept, perceptual style, belief system and the like make up the internal part of academic motivation. In the external part only those stimuli which are available within the immediate external

environment are considered relevant. The examples of external part of motivation are text-books, parental approval, peer reactions, teacher behaviour, reference material etc.

(2) Intake-Output Dimension : The dimension reflects the style or form of motivated behaviour. Some individuals tend to consume the learning world around them and continuously seek new information in all possible manner. Other individuals are producers, in the main. Their motivations propel them to active rather than passive roles.

(3) Approach-Avoidance Dimension : Approaching behaviour is observed among some individuals who move toward teacher approval, stimulus ambiguity, novelty, social acceptance and the like. Avoidance tendencies are observed among other individuals who tend to go away from the goals.

These three dimensions are interrelated and the interaction among them results in a pattern of behaviour which is crucial.

Based on this conceptualization Frymier (5) constructed an objective test known as 'Junior Index of Motivation'(JIM)

to measure academic motivation. It consisted of 80 agree-disagree projective type of items. In the present investigation an objective test consisting of 43 items have been developed with suitable modifications in the original JIM Scale. This has been described in detail in Chapter Three.

1.6. Plan of the Present Investigation

The present investigation is planned to study identification patterns, motivation, and school achievement of talented students. It is designed to assess the subject's degree of identification with mother, father, teachers and peers; to assess the school achievement values attributed by subjects to each identifying model; and to assess behaviour orientation and motivation to learn.

It aims at studying the relevance of identification and modeling variables, child's own values and motivation in school achievement of talented boys and girls of both urban and rural residence. It also tries to find out how the talented subjects differ from average and below average subjects in respect of the above variables.

It examines the complex network of relationships between subject's own achievement values, identification with models, model's values, motivation to learn, behaviour orientation and school achievement. In short the present investigation is carried out to study the possible effects of identification, motivation and achievement values of the models on self-achievement value and academic achievement.

(A) Sample :

The sample of this study consists of 960 students - 480 boys and 480 girls - selected from 24 different high schools located in Surat, Baroda, Kaira and Mehsana districts of Gujarat State. The subjects were divided into three groups in accordance with the degree of talentedness they possessed. Each group consists of 320 subjects. Equal number of boys and girls from urban and rural area were included in each group. The groups differing in talent were formed on the basis of teachers' ratings, IQs, performance on behaviour check-list and non-academic factors. Cut-Off points were set up for isolating subjects as talented, average and below-average.

(B) Tools Used :

Preparing tools for measurement of a relatively more comprehensive concepts like talent, motivation and identification, is a difficult task. Tools were constructed to assess talented behaviour, identification with models, school achievement values, behaviour orientation, and motivation to learn. The following tools were used :

(a) Identification of Talented Students : Four measures including group intelligence test, teacher judgment, Behaviour Check-List, and Non-academic performance were used for identification of talented, average and below-average subjects.

(b) Assessment of Achievement : Academic achievement was measured in terms of examination marks the subjects obtained in two tests conducted during the year. The investigator was well aware of the biases that were found in the use of marks.

(c) Assessment of Identification with Models : A tool of 20 items 'Items For Identification' was developed for assessing the subject's identification with mother, father,

teachers and peers. The subject was asked to indicate the extent to which he would like to pattern his behaviour after each of the four models.

(d) Assessment of School Achievement Values of Self and Models

A tool of 15 items 'Achievement Value Items' was developed for assessing the subject's own achievement values and to assess model's achievement values attributed by the subject. This required the subject to state the extent to which he values achievement and the extent to which he thinks his parents, teachers and peers value achievement.

(e) Assessment of Behaviour Orientation :

A tool of 40 items was developed for assessing behaviour orientation which includes 10 items for each of the four dimensions - academic achievement, peer-affiliation, non-conformity, and independence orientation. Each time the subject was required to indicate the extent of his agreement or disagreement on a statement.

(f) Assessment of Motivation to Learn :

An objective tool of 43 items 'Index of Motivation' based on JIM Scale (5) was developed for assessing motivation to learn or the desire to learn. The subject was asked to indicate whether he agrees or disagrees with the item.

Standardized group test of intelligence developed by Desai and Bhatt was used to assess intellectual level (72). Other tools as discussed above were developed. Reliability of the tools developed by the investigator was ascertained by using test-retest procedure.

(C) Analysis of Results

Results were analyzed through the computer to study the intercorrelations of identification patterns, achievement values, behaviour orientation, motivation to learn and achievement for each group of talent according to sex and residential area separately. Means and standard deviations were computed for each variable separately for each sub-group. The 't' test was used to find out the significance of the difference, if any, between means of three groups of talent, two groups based on sex and two groups based on residential area. Besides, the correlations of identification, motivation,

behaviour orientations and achievement values of models with subjects' own achievement value as well as actual achievement were computed and interpreted. Various issues concerning the interrelationships of these variables were raised and discussed in terms of correlations.

1.7. Summary

The investigation is mainly concerned with studying identification patterns, motivation and school achievement of the talented students. More specifically, it deals with the examination of relationships of motivation, academic achievement and self achievement value with the achievement values and identification of the models. In this chapter the changing and expanded notions of giftedness and talent are discussed at length. Emphasis is now being placed upon the creative child than upon the gifted child. A number of researchers are of the opinion that talentedness involves both academic and non-academic forms of talented accomplishments. The concepts of motivation, talent and identification are discussed and defined in this chapter. The criteria used by various investigators for identifying talented individuals are also briefly reviewed. Based on this information, the investigator decided to use group intelligence

test, trait check list, teachers' judgment and extra academic performance for the identification of talented individuals. The importance of a study of this nature is stressed in view of the fact that the area of talent research is relatively unexplored in this country and that the available studies are not sufficiently comprehensive.

CHAPTER 1

REFERENCES

1. Francis Galton., Hereditary Genius: An Inquiry into Its Causes and Consequences. London: Macmillan & Co. Ltd., 1892.

2. Terman, Lewis M., and Others, Genetic Studies of Genius, Vol.I-V, Stanford, California: Stanford University Press, 1925 through 1959.

3. Paul H. Mussen, The Psychological Development of the Child. Prentice Hall Inc., 1963, pp. 73-80.

4. Thomas A.Ringnes,'Identifying Figures, Their Achievement Values, and Children's Values as Related to Actual and Predicted Achievement.' Journal of Educational Psychology, Vol. 61 No.3, 1970, pp. 174-185.

5. Jack R. Frymier, 'Development and Validation of a Motivation Index', Theory into Practice; Motivation, The Desire to Learn. The College of Education, Ohio State University, Vol. IX, No.1, Feb.1970, pp. 56 - 88.

6. National Council of Educational Research and Training (NCERT), NIE Campus, New Delhi 16.

7. Gertrude H. Hildreth, Introduction to Gifted, McGraw Hill Book Company, New York, 1966, pp. 41-65.

8. Binet,A., and T. Simon, Le development de I'intelligence chez Les enfants. L'Annee Psychologique, 1908,14,pp.1-94.

9. Goddard,N.H., A Revision of Binet Scale:Vineland,NJ; The Training School Bulletin,8, 1911 pp.56-82.

10. Terman, L.M., et al.,'The Stanford Revision and Extension of the Binet Simon Scale for Measuring Intelligence', Educational Psychology Monographs; 1917, No.18.

11. _____.,'Genetic Studies of Genius; Vol. I' Mental and Physical Traits of a Thousand Gifted Children. Stanford University Press, Stanford,California, 1925.

12. Hollingworth, Leta S. Gifted Children: Their Nature and Nurture. New York : The Macmillan Company, 1926.

13. Gray, H.A. Some Factors in the Undergraduate Careers of Young College Students, Teacher College Contribution Education, 1930.

14. Lehman,H.C. and P.A. Witty. The Play Behaviour of Fifty Gifted Children: Journal of Educational Psychology 18, 1927, pp. 259-265.

15. Witty Paul A.,'A Study of One Hundred Gifted Children', A Bulletin of Education, University of Kansas,Vol.2, 1930.

16. Barbe, Walter B., Characteristics of Gifted Children, Educational Administration and Supervision,41:207-217, 1955.

17. Hildreth Gertrude.,'Characteristics of Young Children', Journal of Genetic Psychology, 53:pp.287-311,1938.

18. _____., Three Gifted Children: A Developmental Study, Journal of Genetic Psychology,85:pp.239-264,1954.

18. Catharine Cox Miles, 'Gifted Children: Manual of Child Psychology edited by Carmichael; John Wiley and Sons, Inc., New York: Second Edi., 1954, pp.984-1063.

19. Witty, P.A. 'Some Considerations in the Education of Gifted Children.' Educational Administration and Supervision, 1940, 26, pp. 512-521.

20. Witty Paul A (Ed.) Gifted Child, The American Association of Gifted Children, Health and Company, Boston, 1953.

21. Guilford, J.P. 'Three Faces of Intellect.' American Psychologist, Vol. 14, No.8, 1959, pp. 469-479.

_____., 'The Structure of Intellect,' Psychological Bulletin, Vol. 53, 1956, pp. 267-93.

22. Getzels, J.W. and Jackson, T.W. Creativity and Intelligence: Explorations with Gifted Students. New York: John Wiley Sons, 1962.

23. Fliegler, Louis A., and Charles E. Bish, 'The Gifted and Talented.' The Education of Exceptional Children, Review of Educational Research, 29, 1959, pp. 408-450.

24. Holt, E.E. A Selected and Annotated Bibliography on the Gifted, Columbus, Ohio, Publishing Company, 1960.

25. Anderson, K.E. (ed.) Research on the Academically Talented Student. National Education Association, Washington, D.C., 1961.

26. Brich, Jack W., and Maynard, C. Reynolds: 'Education of Exceptional Children,' Review of Educational Research, 33, pp. 83-98, 1963, Ch.6.

27. French, J.L. (Ed.), 'Educating the Gifted: 'The Book of Readings, New York: Holt Rinehart and Winston Inc. 1964.

28. Gowan, John C. 'An Annotated Bibliography on the Academically Talented Students, NEA Project on the Academically Talented Student, Washington, D.C., 1961.

29. Gowan, John C. Annotated Bibliography on Creativity and Giftedness. Northridge, California, San Fernando Valley State Teachers College Foundation, 1965.

30. Miriam L. Goldberg. 'Research on the Talented', Bureau of Publications, Teachers College, Columbia University, New York, 1965.

31. Gallagher, J.J. Research Summary on Gifted Child Education, State of Illinois: Office of the Superintendent of Public Instruction, 1966.

32. Edward C. Frierson. 'The Gifted': Review of Educational Research, Vol. 34, No.1, 1969, pp. 25-37.

33. S.P.Marland. Education of the Gifted and Talented. Vol.II Appendix A, U.S. Government Printing Office, Department of Health and Education, Washington, D.C. 1971, pp. A_1 to A_{79}.

34. Noffsinger, Thomas. 'Creativity; A Critique.' Science Education, 1968, In Press. Cited from Review of Educational Research, Vol. 34, 1969, p. 25.

35. Holland, J.L. and Richards, J.M. 'Academic and Non-academic Accomplishments; Correlated or Uncorrelated ? ' Journal of Educational Psychology, 56, 1965, pp.165-174.

36. Wallach, M.A. and Wing, C.W. Jr.: The Talented Student: Holt, Rinehart and Winston, New York, 1969.

37. David C. McClelland, Alfred Baldwin, Uric Bronfenbrenner, Fred L. Strodtbeck: Talent and Society: D.Van Nostrand Company, Inc. Princeton, New Jersey, Toronto, 1958, pp. 1-2.

38. Gertrude,H.Hildreth, Introduction to The Gifted, McGraw Hill Book Company, New York, 1966,pp.41-65.

39. Bently John Edward, Superior Children, W.W.Norton and Company, New York, 1937.

40. James,J.Gallagher, Teaching The Gifted Child, Allyn and Bacon, Inc. Boston, 1964, pp. 1-40.

41. Wall,W.D. 'Highly Intelligent Children. The Psychology of the Gifted', Educational Research, 1960,2, 101-110.

42. Carl W.Pegnato, and Jack W.Birch, Locating Gifted Children in Junior High Schools: A Comparison of Methods. Exceptional Children, 25, 1959, pp. 300-304.

43. Louis A. Fliegler, Curriculum Planning for the Gifted, Prentice Hall, Englewood Cliffs, N.J., 1961,pp.14-16.

44. Baldwin, J.W. 'The Relationship between Teacher Judged Giftedness - A Group Intelligence Test and Kindergarten Pupils.' Gifted Child Quarterly, 6, 1962, pp.153-156.

45. Ruth, A.Martinson and Leon M. Lessinger. 'Problems in the Identification of Intellectually Gifted Pupils.' Exceptional Children, 26, 1960, pp. 227-232.

46. Laycock, F., and Caylor, J.S. 'Physiques of Gifted Children and their Less Gifted Sibling.' Child Development, 35, 1964, pp. 63-74.

47. DeHaan, R.F., and Havighurst, R.J. Educating Gifted Children, University of Chicago Press, Chicago, 1957, p.1.

48. Conant, James B. The American High School Today, McGraw Hill Book Company, New York, 1959.

49. Laycock,Samuel R., Gifted Children: A Handbook for the Classroom Teacher, The Copp-Clark Publishing Company, Toronto, 1957.

50. Havighurst, et al. The Importance of Education for the Gifted: In N.B. Henry (Ed.), Education for the Gifted: Fifty Seven Year Book of the National Society for the Study of Education, Chicago, University of Chicago Press, 1958.

51. Sumption, M.R., and Lucking, E.M. Education of the Gifted. Ronald Press, New York, 1960.

52. A Harry Passow, The Gifted and the Disadvantaged: The National Elementary Principal Vol. LI, No.5, Feb.1972, p.28.

53. Tennenbaum, A.J. 'History of Interest in the Gifted.' In N.B. Henry (Ed.) Education for the Gifted: Fifty Seventh Yearbook of the National Society for the Study of Education, Chicago, University of Chicago Press, 1958.

54. Witty, Paul A. 'Current Concepts concerning Supervisor Students' In Working with Supervisor Students.' ed. by Bruce Shertzer, Science Research Associates, 1960, Ch.3, pp. 24 to 40.

55. Margery Thompson, Identifying Gifted: In Education for the Gifted and Talented', National Elementary Principal Vol. LI, No.5, Feb.1972, pp. 37-44.

56. Education of the Gifted and Talented. U.S. Government Printing Office, Washington, D.C. 1972 Cited from 'Career Education for Gifted and Talented Students,' Maryland University, Washington, D.C., 1973, Ch.5, p.5.

57. Gertrude H.Hildreth, Introduction to Gifted: McGraw Hill Book Company, New York, 1966, p. 41-65.

58. Hill, George E., Lauff, Reta J. and Youth, John E., Identifying and Educating our Gifted Children, Athens: Centre for Educational Services, Ohio University, College of Education, Pupil Service Series No. I, 1957.

59. Barbe, Walter B. One in a Thousand - A Comparative Study of Study of Moderately and Highly Gifted Elementary School Children. Ohio State Department of Education, Columbus, 1964.

60. Kough, Jack and Robert DeHaan: The Teacher's Guidance Handbook, Vol. I, Science Research Associates, Inc., Chicago, 1956.

61. Hoyt Kenneth B., and Hebeler Jean R., Career Education for Gifted and Talented Students, Maryland University, College Park, 1973, Ch.4, pp. 1-40.

62. Joseph S.Renzulla and Robert K.Kartmen, 'Scale for Rating Behavioural Characteristics of Superior Students out of the Classroom.' Exceptional Children, 1971, No.71, pp. 243-248.

63. Gowan, John and Torrance, E. Paul, Educating the Ablest, Illinois, F.E. Peacock Publishers, Inc., 1971, pp.153-155.

64. Bruch, Chatherine B., In Allen and Seifman (eds.). The Teacher's Handbook, Glenview Illinois: Scott, Foreman & Co., 1971, pp.120-121.

65. Freud, S. Group Psychology and the Analysis of the Ego. London: Hogarth, 1949, p.63.

_____., The Ego and the ID., London, Hugarth, 1935.

66. Sanford, R.N., 'The Dynamics of Identification', Psychological Review, 62, 1955, pp. 106-118.

67. Jerome Kagan. 'The Concept of Identification' Psychological Review, 1958, 65, pp. 296-305.

68. Bronfenbrenner: 'Freudian Theories of Identification and Their Deviation', Child Development, 1960, 31, pp.15-40.

69. Thomas A. Ringness, Identification Patterns, Motivation and School Achievement of Bright Junior High School Boys,' Journal of Educational Psychology, Vol.58, 2, 1967, pp. 93-102.

70. Albert Bandura, 'Social Learning Theory of Identifactory Processes : In Handbook of Socialization, Theory and Research, ed. by Goslin, Rand McNally and Company, Chicago, 1969, pp. 213-262.

71. Jack R.Frymier, Motivation : The Main Spring and Gyroscope of Learning : Theory into Practice, College of Education, Ohio State University, 1970, pp. 23-32.

72. Desai-Bhatt Group Test of Intelligence in Gujarati, A.G. Teachers College, Ahmedabad, 1968.