CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

INTRODUCTION

The progress of a society, to a large extent, depends upon a handful of individuals who can offer intelligent solutions to its complex problems. Eventhough all the citizens are expected to contribute to the well-being of a nation, it is more especially the duty of creative or talented individuals than of those whose capacities are limited. The tremendous strides that science and technology have made in recent years show the importance of developing the rarest of resources, namely, human resource. If society fails to recognize the importance of developing creativity, or does not give adequate opportunity to make human talents productive, it is only natural that such abilities and capacities will remain unutilized or even wasted.
To make use of this most valuable of resources, the first step is to identify such able individuals early in life, expose them to a highly stimulating environment, encourage them to become deeply concerned with the area in which they are interested and then, build up in them high degrees of skill through practice or activity within the area they choose. It may be noted here that talent will not reveal itself in the absence of stimulation and concern. Investigations show that the development of talent, to a large extent, depends upon the removal of obstacles that stand in the way of its finding an outlet. Creativity, according to many investigators, is a natural gift and the development and utilisation of it are dependent upon a variety of factors such as acceptance, recognition, appreciation and other encouraging influences at home, school or the society in general.

THE NATURE OF CREATIVITY

The word 'creative' is concerned with the invention of something or the production of something that is new, rather than the accumulation of skills or the exercise of book learned knowledge (Nunnally, 1970). Thinking becomes creative if the product of it has novelty or if it is unconventional in the sense that it requires
modification or rejection of previously accepted ideas. Thinking, again, becomes creative if it deals with or solves a problem which initially is vague and ill-defined. Though much has been written about creative ability, and several attempts at developing instruments that measure this ability have been made, the investigators, however, have not been able to arrive at a universally acceptable definition (Nash, 1970). Morgan (1953) points out that there are about 25 definitions of creativity, and that the only common feature of all these definitions is that creativity involves the development of something unique.

The present emphasis on creative ability stems mainly from the work of Guilford (1950, 1956 and 1967). The major aspect of creativity, according to Guilford, is originality. He also shows that the abilities of fluency and flexibility have significant relevance to creative thinking.

Drevdahl (1956) defines creativity as a capacity to produce compositions, products or ideas of any sort which prove new or novel and previously unknown to the producer himself. The creative deed may either be a thought-synthesis or an imaginative activity where the result is not a mere summation. It may be concerned with
forming new patterns and combinations of information derived from past experiences and transplanting old relationship to new situations.

Torrance (1962), Golann (1963), Burton, et al. (1960), Wallach and Kogan (1965) and others are some of the investigators who have made some attempts to define creativity. According to Torrance, an activity must result in something that is culturally as well as individually novel and useful if it is to be considered creative. To Golann, creativity is a process which results in a novel work that is accepted as tenable or useful or satisfying by a group at some point in time. It is a special talent or aptitude that helps the man to bring something new into birth. Burton and others consider creativity/the ability to produce something new and unique, and not something existing before. Wallach and Kogan, like most other investigators, view creativity as an aspect of thinking. They define creativity as an individual's ability to generate cognitive association in quality and with uniqueness.

CREATIVITY AND INTELLIGENCE

Even though the components of creativity relate to a manner of intellectual functioning, they are found to be independent of intelligence as measured by traditional
intelligence tests. From an examination of the previous studies, it becomes evident that in almost all creative endeavours, a certain minimum level of intelligence is necessary, below which the individual cannot function. But above that level intelligence becomes unimportant to creativity. According to Meer and Stein (1955), this cut-off point is the ninety-fifth percentile. Barron (1961) suggests a comparable figure of 120 I.Q. as the approximate point.

Some investigators emphasize that there is no distinction between creativity and intelligence. They even go to the extent of saying that originality is intelligence. Hunt (1961) and Cropley (1966) seem to share this view. Cicirelli's (1964) studies of a large group of school children, employing California Mental Maturity Test and Torrance's Measure of Creativity, show significant correlation between measures of creativity and intelligence. A fairly high correlation of 0.67 between creativity and intelligence is reported by Shaycoft (1963) in an extensive investigation of a carefully chosen sample of 7,648 fifteen-year-old boys and girls in Project-Talent. Yamamoto (1964, 1965), using Lorge-Thorndike Intelligence Tests and Visual and Figural Creativity Tests of Torrance, finds that the correlation coefficients between creativity
and intelligence range from 0.33 to 0.39. A correlation of 0.50 is reported by Perry (1966). Barron (1963) also reports a correlation of 0.40 between intelligence and creativity. Studies by Wodtke (1964), lend support to the above findings.

Some studies report positive but low correlations between creativity and intelligence (Flecher, 1963; Wallach and Kogan, 1965). In their studies Barron, et al., (1965), and Thurstone (1950) have obtained low but positive relationship between creativity and intelligence. Small positive correlation between various measures of creativity and intelligence is also reported by Dewey and Humber (1966).

This assumption, however, has been questioned by many other workers. Dearborn (1898), for example, observes that creative ability and intelligence do not go together. That creativity and intelligence are not synonymous has been shown by Torrance (1953, 1962 and 1963a) also. Relative independence of intelligence and creativity is also noted by McKinnon (1962b). On the basis of his extensive analysis of intellectual abilities using the technique of Factor Analysis, Guilford (1950, 1956) says that creativity and intelligence are two independent variables. He holds that creativity is more than intelligence and cannot be accounted
in terms of intelligence quotient. Holland (1961) seems to support this when he says that intelligence has little or no relationship to creative performance in art and science. Nash (1970) also points out that in persons of superior intelligence there is little or no relationship between creativity and intelligence.

With a view to examining the distinction between creativity and intelligence, Thorndike (1963) has analysed the data obtained by Wilson, et al. (1954), and Guilford and Christensen (1956). He finds the correlation between divergent thinking and intelligence to be 0.24.

The first systematic approach to the study of the distinction between creativity and intelligence is that of Getzels and Jackson (1962). They selected two groups of adolescents, one group high in creativity but not concomitantly high in intelligence, and the other group high in intelligence but not concomitantly high in creativity. Using correlational analysis they find that there is a slight relationship between creativity and intelligence. But since they observe clear-cut difference between these two groups of adolescents on a number of variables like family background, values, etc. they emphasize that there is a distinction between creativity and intelligence. Hudson (1963) also shares this view.
Reports by Getzels and Jackson (1962) have been severely criticized by a number of investigators (De Mille and Marrifield, 1962; Ripple and May, 1962). Using the data reported by Getzels and Jackson, McNemar (1964) has found that creativity and I.Q. in their sample correlated to the extent of 0.40. Marsh (1964) re-analysed the data obtained by Getzels and Jackson (1962) and observes that creativity is an ingredient of the general factor of intelligence. This view is supported by Burt (1962) and Vernon (1964).

However, Wallach and Kogan (1965) are the first to succeed in demonstrating the difference between creativity and intelligence. For this purpose they compute the correlation between their creativity measures, among them and also between these measures and a set of intelligence measures, namely the Wescheler Intelligence Scale for Children (WISC), the Sequential Tests of Educational Progress (STEP), and the School and College Ability Tests (SCAT). While they obtain an average intercorrelation of 0.40 between creativity measures themselves, the average correlation obtained between creativity and intelligence measures is only 0.10. From these results it may be concluded that a dimension of individual difference, which, on the one hand, possesses generality and pervasiveness, but which, on the other hand, is quite independent of the
traditional notion of general intelligence, exists and that this can be aptly termed 'creativity' (Paramesh, 1972). Studies by Ward (1968) and Wallach and Wing (1969) render experimental support to the above conclusion.

Ward (1967) factor analysed the intercorrelations of creativity and general intelligence tests given by Wallach and Kogan and found that the results supported Wallach and Kogan's claim for the dimensionality of creativity. However, Cropley's (1968) study using Wallach and Kogan's tests of creativity yielded only a partial confirmation regarding the distinction between creativity and intelligence.

Factor analytic studies by Cropley and Maslany (1969) using Wallach and Kogan creativity tests and the Primary Mental Ability Tests has indicated the existence of large loadings of creativity on intelligence and vice versa. The failure of Cropley and Maslany to establish the distinction between creativity and intelligence as assessed by Wallach and Kogan tests of creativity measures is attributed by Kogan (1971) to the failure to rotate. Kogan, using a promax method of rotation of Cropley-Maslany principal components solution, obtained a pure creativity factor and two intelligence factors.
Fee (1968) employing Multiple Group Factor Methods found that the dimension of creativity may not be as independent and complete from intelligence as Wallach and Kogan observed. Creativity, according to Fee, is clearly not undimensional.

From the studies conducted on kindergarten children, Ward (1966) found that creativity measures obtained through the adapted version of the Wallach and Kogan instruments were quite independent of intelligence.

Biller, et al. (1967) and Pankove and Kogan (1968) employing the scales derived from the Wallach and Kogan instruments, have reported substantial statistical separation of creativity and intelligence measures.

However, even now, there is disagreement among the investigators regarding the relationship between creativity and intelligence. This disagreement, according to Torrance (1967), may be attributed to the nature of both kinds of measures, the age and sex of the testees, the range of I.Q., motivational factors, etc.

CREATIVE CHILDREN AND THEIR PROBLEMS OF ADJUSTMENT

In spite of the difference of opinion with regard to the nature of creativity, research findings
show that creative individuals differ in many respects from those who are not creative. Their rare capacity to develop insights, sensitivities and appreciations together with their independence in thinking and action set them apart from the general population. Unlike the ordinary children they may be attracted to the mysterious, unknown and unexplained things of nature. They are self-assertive, dominant (Whittaker, 1970), sensitive (Bhattacharyya, 1956) and non-conforming (Cashdan and Welsh, 1966; Paramesh, 1969). They prefer to live in a world of imagination and fantasy. They tend to be aggressive, unstable and curious. They are apt to ignore orthodox expectations and break rules and regulations (Rubin, 1963). Since creativity involves qualities like independence of thought and action, non-conformity to group pressures etc. it seems inevitable that highly creative children experience some unusual problems of adjustment.

Creativity is generally regarded by the common man as something odd and unnatural. Accordingly, those who are endowed with this gift are treated as queer and silly. The consequent result will be an isolation and rejection of the creative individuals. It is natural that an individual who can think of new ideas becomes a minority of one. There are only very few persons who can bear being
a minority of one. Even though creativity is a rare gift, those children, who possess it are human beings and they crave for social acceptance. Hence, the feeling of being different and a minority of one and being rejected disturbs them. When they realize that this rejection is because of their natural talents, they either try to repress their creativity or learn to cope with the tension arising from being a minority of one. This is detrimental both to society and to the individual himself. Moreover, the person who fails to use his potential may become psychologically unhealthy or even mentally ill. Repression of creative needs, according to Torrance (1962) and others, may lead to personality breakdown, whereas their expression is likely to lead to loneliness, conflicts and other problems of adjustment.

Adjustment, as we all know, is a continuous and life-long process. Generally, it means an effective adaptation to the environment, both external and internal, including conformity to group norms, mores, ideals, values and so on (Abraham, 1968). According to Mouly (1968) adjustment is the process by means of which the individual seeks to maintain physiological and psychological equilibrium and propel himself toward self-enhancement. It represents the quality of an individual's behaviour in
relation to his environment especially in his interpersonal relations (Frandsen, 1961). A well-adjusted person, according to Cronbach (1954), is one who commits himself to socially desirable goals and uses his energies effectively in working toward them. He has a sense of security and feeling of adequacy which grow out of his feelings of belonging, being desired and appreciated.

But creative children cannot be expected to attain this level of adjustment so long as their creative potentialities are not properly recognized, approved, appreciated or encouraged. However, as a result of the awareness of the part played by the creative and the talented, several aspects of these children have been subjected to research investigations. These investigations show that the loss of creative talent chiefly occurs because they either become drop-outs or under-achievers.

The factors that operate to produce problems of adjustment in creative children may be personal, familial, educational or social. Most of these factors are also found to have their origin in the relationship of the creative individuals with their parents, teachers, siblings, classmates, friends and associates. It has been suggested that lack of acceptance at home, in school or in society,
may lead to unfavourable results (Torrance, 1966 and David, 1969). Family influences, attitudes and behaviour of teachers, administrators, etc. are reported to have a significant influence in the facilitation of creativity. It seems to be fostered by parents and teachers who value creative thinking, respect curiosity and tolerate unusual questions and interests, provide opportunities for self-initiated learning, recognize and reward unusual ideas and skills, consider the ideas of children seriously and try to provide rich and varied cultural and educational settings.

The fact that creative individuals differ from the general population and also that creativity is fostered only under certain conditions and circumstances, seems to suggest that creative children in this society, like their counterparts in other societies, are also likely to encounter numerous problems of adjustment. The present study is an attempt to see whether creative children are faced with serious problems of adjustment.

STATEMENT OF THE PROBLEM

This investigation is carried out in two parts. In the first part of the study five areas of adjustment, viz. Home Adjustment, Health Adjustment, Emotional Adjustment, Social Adjustment and School Adjustment are investigated
using the conventional type of adjustment inventories. The inventories used in the study are general purpose inventories for use with student population. Even though these inventories do not take into account the special problems of adjustment faced by creative children, it is expected that these inventories would differentiate the creative children from the non-creative in their adjustment in these areas.

The second part of the study deals with some special problems of adjustment confronted by creative children. These special problems of adjustment, as mentioned earlier, are caused by the personality make-up of creative children, characterised by originality, curiosity, independence of thought and action, liking for novel and unconventional ideas etc. Similarly, the perceptions of situations by creative children may also differ from those of ordinary children. The characteristic way in which creative children react to various situations and the problems created by their personality make-up are proposed to be investigated with the help of inventories prepared for the purpose of the investigation.

In the present study an attempt is made to see whether highly creative children differ significantly from
their less creative peers in (1) home adjustment, (2) health adjustment, (3) emotional adjustment, (4) social adjustment, (5) school adjustment, (6) adjustment to the problems created by their personality characteristics, and (7) adjustment to the problems stemming from the situation in which they find themselves.

It is also proposed to see whether better adjusted children differ from their maladjusted peers in creative performance.