CHAPTER I

Introduction

The prediction of future success of students in scholastic courses has been a challenging problem of continuing interest to educational administrators and psychologists. Recourse has ordinarily been had to tests of ability and capacity. Since the introduction of intelligence tests by Binet, it has almost been taken for granted that intelligence alone would be a sufficient predictor of educational success. The experimental and statistical evidences, however, have failed to give an equivocal support to this contention. The imperfect nature of the correlations between intelligence and academic achievement, ranging between 0.20 and 0.60, as reported by Stead (1925), Gates (1929), Lindgren & Guedes (1963) and Madan (1967), has left much scope for explanations other than intelligence to account for academic success. At the same time, intelligence is the only variable which appears to be definitely related to scholastic success. But cases of surprises are not nonexistent and in them academic levels of achievement deviate from, if not actually contradict, ascertainable intelligence levels.

Coleman & Cutron (1957) pointed out that a good scholastic achievement test of reading and arithmetic measured essentially the same combination of functions as a typical group-intelligence test—the overlap being 95 per cent. This point implies that in those cases where intelligence is correlated with academic achievement to a highly significant extent, the intelligence tests may be more of the nature of scholastic aptitude tests (Weisman, 1968), thereby rendering spurious the deduction that intelligence is a sufficient predictor of academic
success. Hence it leaves enough scope for seeking explanations for academic achievement in quarters other than intelligence. Moreover, to quote D.W. Dates (1929), the discrepancy that prevents complete agreement between our measures of scholastic achievement and intelligence does not arise entirely from errors in our measurement of these two qualities, but is probably due to the presence of factors in scholastic achievement other than intelligence. Therefore recently there has been a growing realization that other non-intellectual factors must be assessed if the margin of predictive error is to be diminished appreciably.

Accordingly, there is a shift in educational emphasis from the acquisition of information (Rossi, Raphael & Davis, 1959) to the other broader functional (non-academic) goals of education. This change in perspective has shifted the focus of attention of educators and teachers from native ability as the sole determiner of achievement to other non-intellectual factors which may be broadly classified into psychological factors and environmental factors, such as motivation, interest, initiative, attitudes and background factors. Owing to the vast extent and variety of individual differences among children in respect of intelligence, and in every other important dimension of personality and sphere of environment, every phase of their teaching and guidance requires due recognition and appraisal of individual differences. There are, of course, innumerable factors pertaining to the pupils, the teachers, the school and the home. These factors are related to the academic achievement of the pupils. Some psychologists (Cain, Michaels & Eulich, 1952), therefore, have expressed the opinion that attention should be paid to such factors as social development.
and attitudes, as are reflected in the drive to learn, the ability to
attend, perceptual ability, physical development, conceptual background
and emotional stability.

It is now accepted that academic achievement being a function
of the total personality in the socio-physical environment, the cognitive,
conative and affective aspects have roles to play. It has been felt
that certain personality and environmental factors prevent students
from utilizing their inner resources fully in the proper direction and,
hence, they fail to work to their capacity. Click (1972) observed that
eyearly academic performance had consequences in the social-emotional
domain which perpetuated and generalized the patterns of future success
or failure. The existence of a relationship between academic performance
and subsequent changes in the socio-emotional characteristics suggest
that educators are, in fact, directly involved in the socio-emotional
as well as in the intellectual development of pupils regardless of
their philosophical position on the question. If academic achievement
is considered to be a part of the total behaviour, human personality
must be an important dimension determining scholastic success.

According to Crano, Kenny & Campbell (1972), to many of the
early psychologists, two possibilities were immediately apparent
that intellectual advancement was a function of an organism's progression
from the acquisition of concrete or specific skills to the generation
of higher-order abstract rules (which we shall define as intelligence)
contrasted with the view that the ability for abstract thought was a
constant quality whose development was facilitated by the organism's
interaction with the environment. Thorndike (1903) observed that a human being was the sum of an original nature acted on by antenatal influences and the later environment. The first problem of educational science is concerned with the relative share of these agencies in determining human thought and conduct. Galton (1892) saw clearly the importance of environmental influences in the development of potential. Inherited mental 'powers', however, were seen to be the preponderant causal component in the intelligence-achievement sequence. But McClelland (1969) believes that man is not as pre-determined in what he can do as social scientists and historians sometimes think. He has greater freedom to act, to change the structure of his response and to find opportunities in his environment than the traditional forms of social analysis would lead him to believe.

In the opinion of Cole and Bruce (1950), the process of human development cannot be understood without embracing at one moment the simultaneous action of two contributory processes—the maturing of the organism and the development of its capacities into skills through learning. As a physical organism, the individual grows and matures, nourished by his enclosing environment. But his development is also brought about by his 'learning' from the moment-by-moment impact of the environment upon the organism. Kerckhoff (1956) feels that maturation and learning are not separate and distinct causes of development. Instead, they are closely interrelated and one influences the other. Maturation is stimulated and influenced to some degree by the different environmental factors with which the individual comes into contact. Maturation provides the raw material for learning and determines
to a large extent the more general patterns and sequences of the individual's behaviour and, hence, influences his total personality.

Coles and Bruce (1960) stress that the goal of education is a 'Mature Person'. The mature personality is pre-eminent in the adolescent determination to live but to live well. Nothing less than traits of dogged persistence, combined with intelligently planned strategy, can make the strivings fruitful in the face of grave difficulties. These qualities an ideal personality should have in large measure. Thus a mature person is a master craftsman of the art of design for living; having made an adequate adjustment between his own capacities and the social conditions of the time and of the community, so education should prepare people to take life in their stride (Davis, 1948). It should enable them to capitalize on their opportunities and profit from their failures. This educational need of all individuals for controlling themselves in the daily circumstances of effective social living has led schools everywhere to provide measures for the emotional and social guidance of their pupils.

Keeping in view the latest thinking and the goal of education, and the stemming (if not eliminating) of 'educational wastage' by locating the best predictor of academic success, an attempt has been made in the present study to evaluate the relative importance of intelligence, emotional maturity and the socio-economic status as factors indicating success in scholastic achievement of the school students of the age-group 14 and 15+, i.e., students of ninth and tenth classes, of the present Punjab State.
It is expected that this study will help in the qualitative and quantitative improvement of the outcomes of education and also will help in the reappraisal of the curriculum contents to the extent of re-evaluating the what and why of different items of the subject-matter therein. The outcomes of this study may go a long way in contributing to the sphere of guidance in education and to the sphere of employment. Moreover, on the basis of the results of this study it may be possible to view in the right perspective the idea of meeting the educational needs or expenses of the poor, but capable and prospective, students.

In this study the index of intelligence is derived from the scores from the Intelligence Test (Punjabi Version) by Jalota & Singh (1967) for the age-group 11 to 16 years. The index of emotional maturity is determined with the help of an adapted form of 'Emotional Maturity Scale' formulated by Willoughby (1932) and translated into Punjabi. The index of socio-economic status is determined with the help of a fact-finding questionnaire. The index of scholastic achievement is determined by taking the average scores from the percentage of marks earned by a student in the public and school examinations for two years (current and previous) along with the internal assessment maintained in the school records.

The scores obtained from measuring intelligence, emotional maturity, socio-economic status and scholastic achievement were subjected to statistical treatment to test the hypotheses as under:

(a) Intelligence and emotional maturity contribute equally to success in scholastic achievement.

(b) A close relationship exists between intelligence and
(a) A close relationship exists between the socio-economic status and the scholastic achievement.